

Final Environmental Impact Statement for

**Decommissioning and/or Long-Term Stewardship at the
West Valley Demonstration Project and
Western New York Nuclear Service Center**



Volume 3

Comment Response Document

J
NYSERDA



AVAILABILITY OF THE
FINAL EIS FOR DECOMMISSIONING AND/OR LONG-
TERM STEWARDSHIP AT THE WEST VALLEY
DEMONSTRATION PROJECT AND WESTERN NEW YORK
NUCLEAR SERVICE CENTER

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Reader's Guide

This Comment Response Document (CRD) for the *Final Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center* consists of four sections:

- Chapter 1 – Overview of the Public Comment Process

This section describes the public comment process for the Revised Draft EIS; the format used in the public hearings on the Revised Draft EIS; the organization of this CRD and how to use the document; and the changes made by the U.S. Department of Energy (DOE) and the New York State Energy Research and Development Authority (NYSERDA) to the Final EIS in response to the public comments and developments that have occurred since publication of the Revised Draft EIS.

- Chapter 2 – Major Issues

This section presents summaries of the major issues identified from the public comments received on the Revised Draft EIS and the DOE and NYSERDA response to each issue.

- Chapter 3 – Public Comments and the DOE and NYSERDA Responses

This section presents a side-by-side display of the comments received by DOE and NYSERDA during the public comment period and the DOE and NYSERDA response to each comment. The comments were obtained at four public hearings on the Revised Draft EIS and by fax, electronic mail, Website, and U.S. mail. Each comment document was assigned a sequential log number as it was received. When the same comment document was submitted by many individuals, it was designated as a campaign. The campaigns were grouped together for the purpose of responding to comments. This section also contains index tables of public officials, organizations, and individuals that commented on the Revised Draft EIS.

- Chapter 4 – References

This section contains the references cited in this CRD.

To Find a Specific Comment and the DOE and NYSERDA Response

Refer to the “List of Commentors” immediately following the Table of Contents. This list is organized alphabetically by commentor name and shows the corresponding page number(s) where commentors can find their comment(s). Public officials, organizations, and interest groups appear first on the list, followed by individuals. City and state government bodies are listed under “City of ” or State of.” Members of Congress are listed alphabetically under “Members of Congress.” A separate table listing public officials and the page(s) where their comments and associated DOE and NYSERDA responses appear are also provided in Section 3 of this CRD.

DOE and NYSERDA have made a good faith effort to interpret the spelling of names that were either hand-written on comment forms and letters, or transcribed from oral statements made during public hearings.

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ACRONYMS LIST

ACRONYMS LIST

ALARA	as low as is reasonably achievable
CDDL	Construction and Demolition Debris Landfill
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	<i>Code of Federal Regulations</i>
CMS	Corrective Measures Study
CRD	Comment Response Document
DCGL	Derived Concentration Guideline Levels
DOE	U.S. Department of Energy
EA	Environmental Assessment
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
FR	<i>Federal Register</i>
IDA	intentional destruction acts
LCF	latent cancer fatality
NDA	NRC-Licensed Disposal Area
NEPA	National Environmental Policy Act
NRC	U.S. Nuclear Regulatory Commission
NYCRR	New York Code of Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
NYSERDA	New York State Energy Research and Development Authority
OSHA	Occupational Safety and Health Administration
QRA	Quantitative Risk Assessment
RCRA	Resource Conservation and Recovery Act
rem	roentgen equivalent man
RFI	RCRA Facility Investigation
ROD	Record of Decision
SDA	State-Licensed Disposal Area
SEQR	State Environmental Quality Review Act
SPDES	State Pollutant Discharge Elimination System
SWMU	Solid Waste Management Unit
TEDE	total effective dose equivalent
USFWS	U.S. Fish and Wildlife Service
WMA	Waste Management Area
WNYNSC	Western New York Nuclear Service Center
WVDP	West Valley Demonstration Project

SECTION 1

OVERVIEW OF THE PUBLIC COMMENT PROCESS

1.0 OVERVIEW OF THE PUBLIC COMMENT PROCESS

This section of the Comment Response Document (CRD) describes the public comment process for the *Revised Draft Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center (Revised Draft EIS)*, as well as the procedures used to respond to those comments. Section 1.1 describes the public comment process and the ways in which comments on the Revised Draft EIS were received. This section also identifies the comment period and the locations and dates of the public hearings on the Revised Draft EIS. Section 1.2 describes the public hearing format. Section 1.3 explains the organization of this document, including how the comments were identified and addressed. This section also includes indices of organizations and public officials that commented on the Revised Draft EIS. Section 1.4 summarizes the major changes made to the EIS including those that resulted from the public comment process. Section 1.5 summarizes the steps the Department of Energy (DOE) and the New York State Energy Research and Development Authority (NYSERDA) will take after publication of the Final EIS.

1.1 Public Comment Process

DOE and NYSERDA prepared the Revised Draft EIS in accordance with the National Environmental Policy Act of 1969 (NEPA) and the New York State Environmental Quality Review Act (SEQR) to examine the environmental impacts associated with three alternatives for the decommissioning and long-term stewardship of the West Valley Demonstration Project (WVDP) and the Western New York Nuclear Service Center (WNYNSC), and the No Action Alternative. An important part of the NEPA process is solicitation of public comments on a draft environmental impact statement (EIS) and consideration of those comments in preparing a final EIS. DOE issued the Revised Draft EIS in November 2008 for review and comment by other Federal agencies, the State of New York, American Indian Tribal Governments, local governments, and the public. Copies of the Revised Draft EIS were distributed to those organizations and government officials who were known to have an interest in WVDP and WNYNSC, as well as those organizations and individuals who requested a copy. Copies were also made available on the Internet and in regional DOE public document reading rooms and public libraries.

DOE and NYSERDA solicited comments on the Revised Draft EIS during a 9-month public comment period, which began on December 5, 2008 when DOE and the Environmental Protection Agency published Notices of Availability in the *Federal Register* (73 FR 74160; 73 FR 74170). A Notice of Completion of the Revised Draft EIS and Public Hearings was also published on December 10, 2008 in the *New York State Environmental Notice Bulletin* in accordance with SEQR requirements. DOE's December 5, 2008 Notice of Availability announced a 6-month public comment period (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE), through June 8, 2009. In response to stakeholder requests, the public comment period was extended another 90 days, until September 8, 2009.

During the public comment period, DOE and NYSERDA jointly held four public hearings to provide interested members of the public with opportunities to learn more about the content of the Revised Draft EIS from exhibits, factsheets, and other materials; to hear DOE and NYSERDA representatives present the results of the EIS analyses; to ask clarifying questions; and to provide oral or written comments. A website (<http://www.westvalleyeis.com>) was established to further inform the public about the Revised Draft EIS, how

Comment Document – A communication in the form of a transcript or written comment from a public hearing, a letter, or an electronic communication (e-mail, fax) that contains comments from a sovereign nation, government agency, organization, or member of the public regarding the Revised Draft EIS.

Comment – A statement or question regarding the Revised Draft EIS content that conveys approval or disapproval of proposed actions, recommends changes in the Final EIS, raises a concern or issue, or seeks additional information.

to submit comments, the public hearings, and other pertinent information. Comment submission mechanisms and public hearing dates, times, and locations were announced in the *Federal Register* and *New York State Environmental Notice Bulletin* notices, in local newspapers, and on the website. Members of the public who expressed interest and are on the DOE and NYSERDA mailing list for the *Revised Draft EIS* were notified by U.S. mail regarding hearing dates, times, and locations.

Public hearings were held in Albany, Irving (on the Seneca Nation of Indians Reservation), Ashford, and Buffalo, New York on March 30 and 31, and April 1 and 2, 2009, respectively. The December 5, 2008 *Federal Register* notice announced the times and locations for three public hearings. However, in response to stakeholder requests, another meeting was added in Albany, and the Buffalo meeting was moved from the original Blasdell location to a more central downtown Buffalo location. These changes to the hearing schedule were announced in the *Federal Register* on March 17, 2009 (74 FR 11364), and advertised in local newspapers. A court reporter recorded the oral comments made at each hearing and prepared a transcript for each.

In response to public concerns about some of the alternatives in the Revised Draft EIS, especially after the August 9 and 10, 2009, heavy rainfall events, the DOE Assistant Secretary for Environmental Management and the President of NYSERDA initiated planning for a videoconference to discuss those concerns. The videoconference was held on September 4, 2009, with participation by the Assistant Secretary and the President of NYSERDA and various stakeholders. This ‘meeting’ was also transcribed by a court reporter and the comments are included in the *Comment Response Document*.

In addition, Federal, state and local governmental agencies; American Indian Tribal Governments, and the general public were encouraged to submit comments by U.S. mail, e-mail, a toll-free fax line, and the DOE website. DOE and NYSERDA received approximately 420 submittals containing approximately 1,900 comments addressing a wide range of issues. **Table 1–1** lists the numbers of submittals received by method of submission.

Table 1–1 Comment Submission Method

<i>Method</i>	<i>Number of Submittals</i>
Hearings (written and oral)	60
U.S. Mail	113
E-mail	43
Website	117
Toll-Free Fax Line	87
Total	420

DOE and NYSERDA considered all comments, including those received after the comment period ended, in its evaluation of the accuracy and adequacy of the Revised Draft EIS to determine whether corrections, clarifications, or other revisions were required. Spoken and written comments were considered equally. Upon receipt, all written comment documents were date-stamped and assigned a document number for tracking during the comment response process. Each message left on the website and each speaker at the public hearings was assigned a document number. All comment documents were then processed through the comment analysis and response sequence. The text of each comment document was delineated into individual, sequentially numbered comments. The comments were re-evaluated throughout the course of the response process as new information became available. Comments were reviewed and responded to by policy experts, subject matter experts, and NEPA specialists, as appropriate. The originally submitted comment documents and public hearing comments are preserved as part of the Administrative Record. **Figure 1–1** illustrates the process used to collect, track, and respond to the comments.

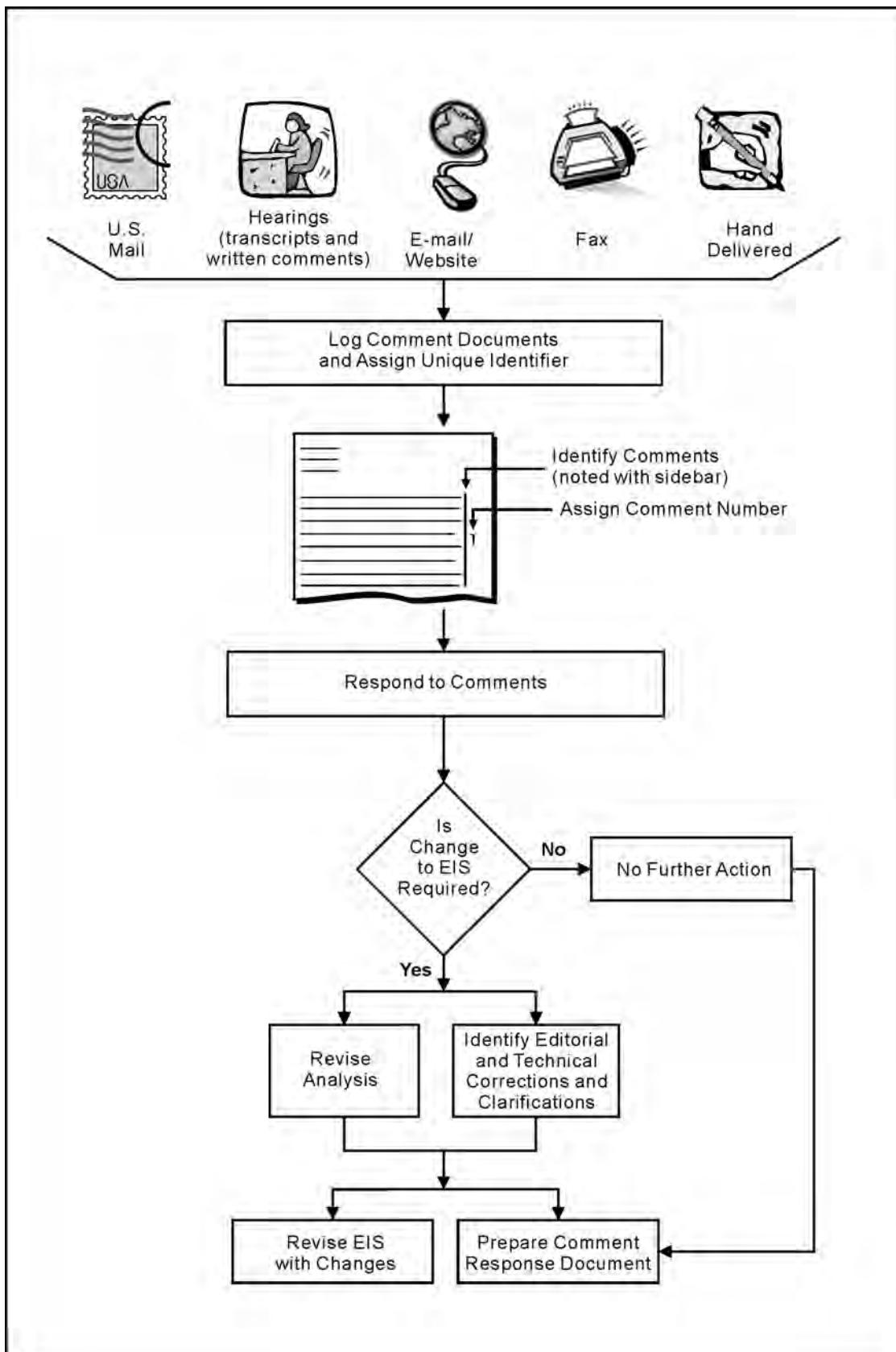


Figure 1–1 Comment Response Process

The comments and DOE/NYSERDA responses have been compiled in a side-by-side format, with each delineated comment receiving a separate response. Each was scanned as it was received. All comments and responses are numbered with a comment identification number to facilitate matching a comment with its response. Topics of broad public interest or concern that may require a more detailed response were characterized as major issues and addressed in Section 2 of this CRD.

The comment response process was integral to preparation of the Final EIS because it was used to focus revision efforts and to ensure consistency throughout the final document. For example, comments were evaluated to determine whether the analyses presented in the Draft EIS should be modified or augmented; whether information presented in the Draft EIS was incorrect or out of date; and whether additional or revised text would clarify or facilitate better understanding of certain issues. Vertical bars alongside the text in the Final EIS indicate where such changes were made.

1.2 Public Hearing Format

The public hearings were organized to encourage public comments on the Revised Draft EIS and to provide members of the public information about the NEPA process and the proposed actions. A court reporter was present at each hearing to record and prepare a transcript of the comments spoken publicly at the hearing. These transcripts are included in Section 3 of this CRD. Written comments were also collected at the hearings. Comment forms were available at the hearings for anyone wishing to use them.

At each of the public hearings, there were poster displays staffed by DOE and NYSERDA subject matter experts. Members of the public were invited to view the displays and ask questions of the subject matter experts either before or after the formal hearings were conducted. The displays addressed the NEPA process and the alternatives included in the EIS.

Management representatives from the DOE WVDP Site Office and NYSERDA opened the hearings with welcoming remarks. The DOE EIS Document Manager and the NYSERDA West Valley Program Director then provided an overview of the Revised Draft EIS and the NEPA process. Following the overview presentation, a meeting facilitator opened the public comment session. To ensure that everyone interested in speaking had the opportunity, a time limit was established based on the number of people who had indicated a desire to speak. As part of the comment response process, the transcripts and written comments collected at the hearings were reviewed for comments on the EIS, as described in Section 1.1 of this CRD.

1.3 Organization of this Comment Response Document

This CRD is organized into the following sections:

- Section 1 describes the public comment process, the public hearing format, the organization of this document, and the changes made to the Revised Draft EIS.
- Section 2 presents summaries of major issues raised in the comments and responses from DOE and NYSERDA. These major issues include comment topics that appeared frequently in the comments or may have required lengthy or detailed responses.
- Section 3 presents transcripts of the oral comments and scanned copies of the comment documents received during the four public hearings, as well as by U.S. mail, e-mail, the Internet website, and a

toll-free fax line during the public comment period. The comments are presented side-by-side with DOE's and NYSERDA's responses.¹

- Section 4 lists the references cited in this volume.

1.4 Changes from the Revised Draft Environmental Impact Statement

In preparing this Final EIS, DOE and NYSERDA made revisions to the Revised Draft EIS in response to comments received during the comment period from Federal and state legislators, other Federal agencies, state and local government entities, American Indian Tribal governments, and the public. In addition, this EIS was revised to provide additional and updated environmental baseline information, to include the results of additional analyses, to correct editorial errors, and to clarify text. This EIS was also updated to reflect events that occurred, notifications that were made for other NEPA documents, and changes in applicable regulatory requirements or guidance since the Revised Draft EIS was issued for public comment in December 2008. The following paragraphs summarize the more important changes made to this EIS.

1.4.1 Incorporation of Updated Environmental and Site-specific Information

This EIS was updated to include another year of environmental monitoring data for WNYNSC, primarily as provided in the *West Valley Demonstration Project Annual Site Environmental Report for Calendar Year 2007* (WVES and URS 2008) and from revisions in the Site Technical Reports (WSMS 2009a, 2009b, 2009c, 2009d, 2009e), including reassessment of the amount of certain wastes that would be exhumed under the Site Removal Alternative and reclassification of other waste from low specific activity radioactive waste to demolition and debris waste. The updated environmental monitoring data was used to update the environmental baseline in Chapter 3. The revised engineering data is reflected in the descriptions of alternatives in Chapter 2 and used in the impact analyses presented in Chapter 4 and the various supporting appendices.

The near-field hydrologic analysis was revised to reflect the current understanding of the structure of the North Plateau slack-water sequence and Lavery till-sand unit and updated to incorporate design parameters for the as-installed NDA slurry wall and geomembrane cover. These changes and the results of the analysis are described in detail in Appendix E of this Final EIS. The results are used in the revised transport and dose analyses in Appendix H, Sections H.2.2.2 and H.2.2.3, and Chapter 4, Sections 4.1.10.3.1 and 4.1.10.3.2.

1.4.2 Changes Made in Response to the NYSERDA View in the Revised Draft EIS

Changes were made in this EIS in response to the NYSERDA View, which appeared as the Foreword to the Revised Draft EIS. The View has been revised for this Final EIS, but additional analyses were performed by DOE between the Revised Draft and this Final EIS to address some of the issues raised in the initial View. In addition to revising the text in this EIS to incorporate new analyses and clarify certain discussions, text boxes have been added at the beginning of the applicable sections of this EIS to indicate NYSERDA's View and DOE's response. Specifically, NYSERDA identified eight issues, five of which (issue numbers 1, 2, 3, 4,

¹ By a letter dated December 27, 2008, Ms. Barbara Warren, Executive Director of the Citizens' Environmental Coalition, requested that *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* be included in the public comment record for this EIS. This report has been addressed in accordance with Council on Environmental Quality NEPA regulations (40 CFR 1503.4[b]) in Issue Summary 5, "Conclusions of the Synapse Report," in Section 2.5 of this CRD. This issue summary is divided into three major portions: a high-level overview of the information contained in the report and its appendices; a section in which DOE presents perceived shortcomings in the report; and the final section which identifies comments relevant to the 2008 Revised Draft EIS that were inferred by DOE and NYSERDA from the information presented in the report and its appendices, and provides responses to those comments.

and 8 in the View) relate to the nature and use of the long-term performance assessment information. These issues present NYSERDA's opinions that:

- **Issue 1.** The erosion analysis in the Revised Draft EIS is not scientifically defensible and the predictions do not show gully penetration into the Main Plant Process Building or Waste Tank Farm, nor is gully advancement on the North Plateau at a rate or in a direction acceptable to NYSERDA.

Change in EIS: The erosion analysis was modified by calibrating the erosion code using the Monte Carlo method. These updated results were then used for unmitigated erosion scenario predictions. These changes to the erosion analysis are described in detail in Appendix F of the Final EIS. The results are used in the revised dose analysis in Appendix H, Section H.2.2.4; and Chapter 4, Section 4.1.10.3.3. A text box has been added to Section 4.1.10.3.3, to address this issue.

- **Issue 2.** The analysis of contaminant transport by groundwater in the Revised Draft EIS, while sound, needs improvement. In particular, NYSERDA questioned why the one-dimensional transport model was used for environmental consequence analysis rather than the three-dimensional model.

Change in EIS: The one-dimensional model was used for contaminant transport analysis in the EIS because test runs showed that the one-dimension model predictions of strontium-90 concentrations at various locations in the North Plateau Groundwater Plume centerline are comparable to the three-dimensional model (STOMP) prediction, both of which are similar to field observations. In addition, the one-dimensional model has a much shorter run time than the STOMP model when analyzing site-specific transport and is easier to integrate with both the release models and the dose consequence models. The hydrologic parameters used in the one-dimensional transport analysis are drawn from the three dimensional hydrologic analysis discussed in Appendix E, Section E.4 of this EIS. The use of the one-dimensional model also introduces an element of conservatism because it does not allow for lateral dispersion, which would lower the plume centerline concentrations. A more detailed discussion of the rationale for the use of the one-dimensional model for transport analysis is provided in Appendix E, Section E.4.1.1. A text box has been added to Chapter 4, Section 4.1.10.3, to address this issue.

- **Issue 3.** The assumptions used in the Revised Draft EIS for the performance of engineered barriers such as caps, slurry walls, reducing grout, and other engineered materials intended to keep contamination physically and chemically bound in place have not been substantiated and may be overly optimistic.

Change in EIS: The discussion of assumptions used for the performance of engineered barriers in Appendix H, Section H.2.2.1 of this Final EIS has been expanded. A text box has been added to Chapter 4, Section 4.1.10.2, to address this issue.

- **Issue 4.** The Revised Draft EIS does not address uncertainty in a manner that provides decisionmakers with information about the critical contributors to uncertainty or the importance of uncertainty in site cleanup decisions. In particular, NYSERDA is of the opinion that assertions of conservatism in analyses and assumptions in the Revised Draft EIS are not adequately supported, and that the long-term analysis is not presented in enough detail or with enough clarity to be properly understood or independently replicated.

Change in EIS: Appendix H, Section H.2.2.1, of this Final EIS has been expanded to provide a detailed discussion of assumptions used in the long-term performance analysis and how the assumptions relate to the conservatism of the analysis. This section has been expanded and revised to clarify how uncertainty is considered in the long-term performance assessment. A text box has been added to Chapter 4, Section 4.3, to address this issue.

- **Issue 8.** The long-term performance assessment is not adequate to support a decision for in-place closure of the Waste Tank Farm or any other facilities.

Change in EIS: This last issue in the View is a summation of four other issues related to the long-term performance assessment effort presented in the Revised Draft EIS: erosion, hydrologic contaminant transport, performance of engineered barriers, and the presentation of information about the uncertainty of the long-term performance assessment and the use of this information in decisionmaking. A text box has been added to Chapter 1, Section 1.5, of this Final EIS to discuss this issue.

Issues 5, 6, and 7 of the NYSERDA View pertain to other, individual topics:

- **Issue 5** indicates that the connection between the Revised Draft EIS analyses and the applicable regulatory framework must be strengthened. In this issue, NYSERDA discusses its position that the Nuclear Regulatory Commission's low-level radioactive waste disposal regulations (10 CFR Part 61) were used to guide the long-term performance assessment rather than NRC's License Termination Rule and implementing guidance (NUREG-1757). NYSERDA further states that 10 CFR Part 61 should generally not be used as part of the analytical framework for the EIS.

Change in EIS: The long-term performance assessment in this *Decommissioning and/or Long-Term Stewardship EIS* meets DOE NEPA guidance and precedent. The analysis also uses the requirements of NRC's License Termination Rule (10 CFR Part 20, Subpart E) and Policy Statement for the WVDP (which prescribes the License Termination Rule as the decommissioning criteria for WVDP) and the implementing guidance for the WVDP Policy Statement in NUREG-1757 for the long-term performance analysis for this EIS. A text box discussing this issue has been added to Chapter 1, Section 1.3, of this Final EIS.

- **Issue 6** of the initial View indicates that the approach for exhumation of the SDA, NDA, and Waste Tank Farm described in the Revised Draft EIS may be overly conservative and based on extreme conditions rather than those that are more likely to be encountered during exhumation. This issue is primarily in the context of how this approach affects the estimated cost of the Sitewide Removal Alternative. NYSERDA also suggests that the disposal costs, in particular those for Greater-Than-Class C waste, should be reevaluated.

Change in EIS: The pre-conceptual engineering approach to implementing the Sitewide Removal Alternative was reviewed and revisions were made to reduce the conservatism in some of the assumptions. Costs were recalculated consistent with the revised approach and also using two different cost estimates for disposal of Greater-Than-Class C waste as described in Chapter 4, Section 4.2, of this Final EIS. A text box has been added to Section 4.2.1, to address this issue.

- **Issue 7** suggests that nonradiological fatalities from waste transportation rail accidents appear to be over-estimated because the analysis in the Revised Draft EIS uses "railcar-kilometers" to assess the number of expected accident fatalities.

Change in EIS: Chapter 4, Section 4.1.12, and Appendix J of this Final EIS have been revised to reduce conservatism in the transportation analysis. However, the only acceptable reference for railcar accident data reports the data in railcar-kilometers. Therefore, no change in the transportation analysis was made to specifically address this issue. Other changes were made in the transportation analysis to reduce conservatism. Chapter 4, Section 4.1.12, and Appendix J of this EIS have been revised to incorporate the new analyses. A text box was also added to Section 4.1.12, to explain this issue and the changes made to the analysis.

Revised Description of Alternatives

The description of the Interim End State, the starting point for analyses in this EIS, has been updated to reflect new information about when activities to achieve the Interim End State are expected to be completed.

The descriptions of the proposed alternatives have been revised to reflect the current plan for implementing each of the alternatives. For example, the discussion of monitoring and maintenance during decommissioning and for any post-decommissioning activities was expanded for each of the alternatives.

The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the Record of Decision (ROD), if that alternative were selected. In response to public comments that expressed concern over the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered the timeframe for making Phase 2 decisions. As a result, the Phased Decisionmaking Alternative presented in the Final EIS specifies that Phase 2 decisions would be made no later than 10 years after issuance of the initial DOE ROD and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected. The overall effect on the potential impacts associated with the Phased Decisionmaking Alternative of this change in the timeframe for making Phase 2 decisions is to eliminate the impacts associated with years 11 through 30 of Phase 1. The specific changes in the impacts are discussed qualitatively for each resource area in Chapter 2, Section 2.6 of this EIS, which summarizes and compares the impacts among the evaluated alternatives. The near-term impacts of the modified Phased Decisionmaking Alternative would generally be less than the impacts identified in Chapter 4 of this EIS, which are based on a decision 30 years after the initial DOE ROD and NYSERDA Findings Statement documenting selection of the Phased Decisionmaking Alternative. The long-term impacts of the modified Phased Decisionmaking Alternative would generally be bounded by the long-term impacts of either the Sitewide Removal or Sitewide Close-In- Place Alternatives, depending on the Phase 2 decisions. If the Phase 2 decision for the State-Licensed Disposal Area (SDA) is continued active management, the impacts for some activities are expected to be bounded by the No Action Alternative.

1.5 Next Steps

One or more DOE RODs may be published for this Final EIS, but no ROD will be published sooner than 30 days after the Notice of Availability is issued. The RODs will explain all factors considered by DOE in reaching its decisions, including environmental impacts, and identify the environmentally preferred alternative or alternatives. If mitigation measures, monitoring, or other conditions are adopted as part of DOE's decisions, these will be summarized in the RODs and included in Mitigation Action Plans that will be prepared and issued with the DOE RODs. The Mitigation Action Plans will explain how and when any mitigation measures will be implemented and how DOE will monitor the effectiveness of these measures over time.

In accordance with SEQR requirements, NYSERDA will issue a separate Findings Statement no sooner than 10 days after issuance of the Notice of Availability for the Final EIS. This Findings Statement will certify that SEQR requirements have been met; demonstrate that the action chosen avoids or minimizes any adverse environmental impacts presented in the Final EIS; and weigh and balance the impacts with social, economic, and other essential considerations.

SECTION 2

MAJOR ISSUES

2.0 MAJOR ISSUES

Six topics identified in the public comments on the *Revised Draft Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center* (Revised Draft EIS) are of broad interest or concern, and may require a more detailed response than could be effectively presented in the side-by-side format in Section 3 of this Comment Response Document (CRD). These topics have been characterized as major issues and are addressed in this section. These issues are:

- Modified Phased Decisionmaking Alternative
- Support for Sitewide Removal of All Radioactive and Hazardous Wastes
- Concerns about Potential Contamination of Water
- Questions about Long-term Erosion Modeling
- Questions about Cost-Benefit Analysis
- Conclusions of the *Synapse Report (The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site prepared by Synapse Energy Economics, Inc.)*

2.1 Modified Phased Decisionmaking Alternative

Issue:

A variety of comments revealed a need to clarify the nature of the Phase 2 actions and associated impacts. A specific comment requested clarification that Phase 2 of the Phased Decisionmaking Alternative would involve only removal or in-place closure for those facilities remaining after completion of the Phase 1 decommissioning actions.

Several commentors also expressed concerns about the delay in the timing of the Phase 2 decisionmaking. Some expressed a concern that the Phase 2 decision would not be made. Others pointed out the loss in technical expertise and socioeconomic impact that would occur if there were many years between the completion of the Phase 1 decommissioning actions and the initiation of the Phase 2 decommissioning actions.

Response:

Under the Phased Decisionmaking Alternative, decommissioning would be completed in two phases. This alternative involves substantial removal actions in the first phase. In addition, during this first phase, this alternative provides for additional site characterization and scientific studies to facilitate consensus decisionmaking for the remaining facilities or areas.

The intention behind the Phased Decisionmaking Alternative, as presented in the Revised Draft EIS, was to make the Phase 2 decision as soon as possible, but no later than 30 years after issuance of the initial U.S. Department of Energy (DOE) Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative were selected. The 30-year timeframe was selected in part because it is a common

duration for permits/licenses and it was the timeframe anticipated (at the time of publication of the Revised Draft EIS) in which the canisters of vitrified waste would be shipped to a repository.

During the period between the issuance of the Draft and Final EIS, NYSERDA and DOE considered the input received during the nine-month public comment period. A number of stakeholders (including members of the West Valley Citizen Task Force and local community leaders) voiced concerns over the potential length of time required to make the Phase 2 decision. In response to these concerns, DOE and NYSERDA have reconsidered the timeframe for making the Phase 2 decision. The Preferred Alternative in this Final EIS now specifies that Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.

In reevaluating their position on the timeframe, NYSERDA and DOE also considered the current schedule to complete Phase 1 actions. The schedule calls for an 8- to 10-year time period to complete major decommissioning activities (e.g. demolition of the main plant, removal of plume source area, lagoon removal) under Phase 1. In order to allow the cleanup work to move directly from the Phase 1 activities to the Phase 2 activities, and ensure that work interruptions at the site would be minimized, project momentum (including funding) would be maintained, and to avoid the loss of the highly-trained workforce, DOE and NYSERDA have now agreed to make the Phase 2 decision within a 10-year timeframe, if the Phased Decisionmaking Alternative is selected.

To that effect, both agencies have clarified their intention in this Final EIS for their Phase 2 decisionmaking, if the Preferred Alternative is selected. DOE has affirmed that it intends to complete its decommissioning decisionmaking with its Phase 2 decision and, therefore, would select either removal or in-place closure or a combination of the two for those portions of the site for which it has decommissioning responsibility. Specifically, Phase 2 would complete the decommissioning or long-term management decisionmaking process for the WVDP, implementing the approach determined through review of the currently existing information and any additional studies to be the most appropriate. As such, the impacts of Phase 2 are bounded by those of the Sitewide Removal and Sitewide Close-In-Place Alternatives.

NYSERDA has clarified that alternatives that would be considered for the Phase 2 decision on the State-Licensed Disposal Area (SDA) would range from complete exhumation to close-in-place to continued active management consistent with SDA permit and license requirements. For the balance of Western New York Nuclear Service Company (WNYNSC), the Phase 2 decision would range from license termination with unrestricted use to continued management under the U.S. Nuclear Regulatory Commission (NRC) license.

Phase 1 activities would make use of proven technologies and available waste disposal sites to reduce potential near-term health and safety risks from residual radioactivity and hazardous contaminants at the site. In order to facilitate interagency consensus, additional studies would be conducted to possibly reduce technical uncertainties related to the decision on final decommissioning and long-term management of the site, particularly the uncertainty associated with long-term performance models, viability and cost of exhuming buried waste and tanks, and availability of waste disposal sites. During Phase 1, DOE and NYSERDA would seek and evaluate information about improved technologies for in-place containment and for exhuming the tanks and burial areas for use in decisionmaking for Phase 2. NYSERDA believes that an 8 to 10 year period is reasonable for conducting additional studies on the technical issues discussed in the “Foreword” to this Final EIS. See Chapter 2, Section 2.4.3.1, of the Final EIS for more information regarding the process and types of studies that could be used to facilitate consensus on the Phase 2 approach.

The description of the Phased Decisionmaking Alternative was modified in the Final EIS to state that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.

The Chapter 4 analysis of environmental consequences of the Phased Decisionmaking Alternative still presents the environmental consequences for a 30-year maximum duration for Phase 1 as was done for the Revised Draft EIS. Chapter 2, Section 2.6, discusses the changes in Phase 1 environmental consequences from making the Phase 2 decision within 10 years after the Phase 1 Record of Decision and Findings Statement, in context with the impacts of making the Phase 2 decision within the original bounding time limit of 30 years.

2.2 Support for Sitewide Removal of All Radioactive and Hazardous Wastes

Issue:

A majority of commentors stated a preference for sitewide removal of all radioactive and hazardous wastes from the WNYNSC as soon as possible. In many cases, these commentors expressed specific support for the Sitewide Removal Alternative over other alternatives. Reasons for this preference generally centered on concerns about contamination migrating from WNYNSC to groundwater and surface water in the region due to erosion or earthquakes. Some commentors also stated that the Sitewide Removal Alternative is more cost-effective than the other alternatives, citing information published in *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site*, by Synapse Energy Economics, Inc.

Response:

The U.S. Department of Energy (DOE) and New York State Energy Research and Development Authority (NYSERDA) acknowledge the commentors' preference for sitewide removal of all radioactive and hazardous materials from WNYNSC.

The health and safety of populations in nearby communities and workers on site would be protected under all of the alternatives analyzed in this environmental impact statement (EIS), assuming that institutional controls remain in place. However, each of the alternatives would result in risks and benefits that DOE and NYSERDA will consider in making their respective decisions. Projected short-term and long-term impacts for each alternative are presented in detail for each environmental resource area (e.g., human health and safety, ecological resources, water resources) in Chapter 4, Section 4.1, and summarized in a comparative presentation in Chapter 2, Section 2.6, of this EIS.

In general, the Sitewide Removal and Sitewide Close-In-Place Alternatives represent bounds in possible decommissioning options, i.e., either removing the remaining waste and contamination, or largely stabilizing the remaining radioactive and hazardous waste in place. Comparing the two alternatives, the Sitewide Removal Alternative would incur larger radiological doses and risks to the public and workers from onsite and transportation activities (including accidents), as well as higher costs, during decommissioning activities. The Sitewide Removal Alternative would also incur smaller long-term doses and risks to the public in the vicinity of WNYNSC. Phase 1 of the Phased Decisionmaking Alternative has short-term radiological doses and risks that are less than those for the Sitewide Removal Alternative, but larger than those for the Sitewide Close-In-Place Alternative. Phase 2 impacts are expected to be generally bounded by those identified for the Sitewide Removal and Sitewide Close-In-Place Alternatives. If the Phase 2 decision for the SDA is continued active management, Phase 2 impacts for some resource areas are expected to be bounded by those for the No Action Alternative. Therefore, a qualitative statement can be made about the range of impacts for the Phased Decisionmaking Alternative.

DOE and NYSERDA have identified the Phased Decisionmaking Alternative as the Preferred Alternative in this EIS. Implementation of Phase 1 of the Phased Decisionmaking Alternative would result in substantial cleanup of the site within approximately 8 years. The cleanup that would take place during Phase 1, as explained in Chapter 2, Section 2.7, of this EIS, would reduce or eliminate the sources of much of the potential health or environmental impacts by removing major facilities (such as the Main Plant Process Building and

lagoons). In addition, the source area for the North Plateau Groundwater Plume would be removed, thereby reducing the source of radionuclides that are a potential contributor to human health and environmental impacts. DOE and NYSERDA agree that, under Phase 1 of this alternative, a variety of studies would be performed to aid consensus decisionmaking for the Phase 2 actions. Phase 2 actions could include removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives.

DOE and NYSERDA acknowledge that erosion is a concern at WNYNSC. Each of the “Surface Water Flow and Quality” subsections of Chapter 4, Sections 4.1.4.1, 4.1.4.2, and 4.1.4.3 includes a discussion of the erosion anticipated while decommissioning actions are being performed under each of the proposed action alternatives. This EIS also evaluates the potential long-term human health impacts from a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS.

As stated in this EIS, some erosion could be expected to result under all of the proposed alternatives. A comparison of the Sitewide Removal Alternative and Phase 1 of the Phased Decisionmaking Alternative demonstrates that both would have a short-term potential for material movement due to erosion as areas are excavated and filled before re-establishment of ground cover. Natural erosion would also occur after area restoration is complete. The nature of any longer-term erosion under Phase 2 of the Phased Decisionmaking Alternative would range between that anticipated under the Sitewide Removal and the Sitewide Close-In-Place Alternatives, depending on the decisions made. Whichever alternative is selected in DOE’s Record of Decision and NYSERDA’s Findings Statement, potential short-term and longer-term erosion would be minimized by the erosion control measures described in Chapter 6, Section 6.2, of this EIS.

The seismology of WNYNSC is discussed in Chapter 3, Section 3.5, of this EIS. The consequences of potential accidents, including earthquakes, are discussed in Chapter 4, Section 4.1.9.2. Table 4–20 presents the consequences and annual risks for the dominant accident scenarios associated with each of the alternatives. For the Phased Decisionmaking Alternative, it should be noted that only Phase 1 accident consequences and risks were analyzed. Accident consequences and risks for Phase 2 of this alternative could be greater than those for Phase 1, depending on the decision about further actions. However, the Phase 2 accident consequences and risks would be no greater than those for the Sitewide Removal Alternative. The absolute magnitude of accident consequences and risks for all alternatives is estimated to be very small and is not expected to present a major health risk to the general population. Table 4–22 compares the relative risks of the decommissioning alternatives. As indicated in this table, the Sitewide Removal Alternative poses the highest annual risk to both the population and the maximally exposed individual on site during decommissioning activities. The annual risks under the Phased Decisionmaking and Close-In-Place Alternatives would be comparatively low.

As stated in Chapter 4, Section 4.1.4, water resource impacts would result from some of the proposed decommissioning actions. The impacts of each alternative on water resources are presented in Chapter 4, Table 4–6. The “Concerns about Potential Contamination of Water” Issue Summary below provides a discussion of radiological impacts to regional and Lake Erie water users.

Chapter 4, Section 4.2, of this EIS presents a discussion of the costs associated with each alternative. In addition, DOE and NYSERDA have reviewed the report cited in many of the comments, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* (Synapse Energy Economics 2008). The Conclusions of the *Synapse Report* Issue Summary in this Major Issue Summaries section provides a discussion of the information presented and inconsistencies identified in the *Synapse Report*, as well as responses from DOE and NYSERDA to comments received.

It should be noted that costs are not normally required in DOE EISs. If costs are an important consideration in the decisionmaking process, the agencies will disclose this and discuss it as part of their selection rationale in DOE's Record of Decision and NYSERDA's Findings Statement.

2.3 Concerns about Potential Contamination of Water

Issue:

Commentors expressed concerns that, because streams nearby WNYNSC eventually discharge into Lake Erie, contaminated liquid effluents resulting from WNYNSC could enter the streams and adversely affect regional water users in Western New York and the Great Lakes region. Concerns were also expressed about the use of water from nearby streams. In addition, some commentors were specifically concerned about the potential effects of erosion on water quality.

Response:

DOE and NYSERDA recognize that potential radiological releases resulting in water contamination are a major concern in the region of WNYNSC. The potential impacts of the proposed actions on water resources are addressed in this EIS in Chapter 4, Section 4.1.4 (Water Resources); Section 4.1.9 and Appendix I (Human Health and Safety During Decommissioning Activities); Section 4.1.10 (Long-term Human Health); and Appendix H (Long-term Performance Assessment Results). These impacts represent conservative estimates of potential impacts to receptors that include members of the general population and hypothetical individuals who are assumed to be in locations and conduct activities that result in conservatively large impacts. For example, all receptors are assumed to use untreated water, that is, no reduction in contaminants is assumed as a result of water treatment prior to use by the receptors. Receptors addressed in this EIS include:

- *Cattaraugus Creek receptor*—an individual assumed to drink untreated water from Cattaraugus Creek, eat local fish, and, for the long-term impacts analysis, consume produce from gardens irrigated with water from the Creek. (DOE and NYSERDA are not aware of any actual persons who currently use Cattaraugus Creek as a source of drinking water.)
- *Seneca Nation of Indians receptor*—an individual assumed to drink untreated water from the lower reaches of Cattaraugus Creek on the Seneca Nation of Indians Cattaraugus Reservation, eat local fish (in larger quantities than the Cattaraugus Creek receptor), and, for the long-term impacts analysis, consume produce from gardens irrigated with water from the Creek. (DOE and NYSERDA are not aware of any actual persons who currently use Cattaraugus Creek as a source of drinking water.)
- *Lake Erie and Niagara River receptors*—a large population assumed to drink untreated water from Lake Erie or the Niagara River, to eat fish from Lake Erie, and, for the long-term impacts analysis, to consume produce from gardens irrigated with this water.

This EIS analysis accounts for contaminants that are assumed to flow into Cattaraugus Creek, Lake Erie, and the Niagara River and quantitatively assesses impacts to receptors at these locations. Contaminated water that flows through the Niagara River would mix with the waters of Lake Ontario. This mixing and the large volume of water would result in dilution of the contaminants well below the concentrations that would occur at the Lake Erie and Niagara River water treatment plants. As a result, the impacts to receptors farther away, such as at Lake Ontario and St. Lawrence River locations would be less and therefore bounded by the impacts presented in this EIS for the closer, upstream locations.

During decommissioning activities, erosion is not expected to have a significant effect on the quality of the water in site streams or in water taken from Lake Erie or other regional water bodies because appropriate control measures would be taken by onsite personnel to minimize erosion.

To estimate the potential environmental impacts of the proposed actions, assumptions were made about daily water and local fish consumption, as well as about sedimentation and dilution rates as postulated contaminants pass from local streams to Great Lakes water treatment plants. Doses to receptors were calculated based on estimated peak annual liquid releases from the site. It was assumed that the calculated radionuclide concentration in Cattaraugus Creek as it enters Lake Erie would not be diluted by Lake Erie water before the contaminated water would be drawn by the Sturgeon Point Water Treatment Plant, located downstream on the Lake. Dilution of contaminants in water drawn by water treatment plants on the Niagara River was based solely on the east channel flow rate without accounting for the dilution effects of Lake Erie. During radionuclide transport from WNYNSC through Buttermilk Creek and Cattaraugus Creek, it was assumed that no deposition of radionuclides would occur during the 64 kilometers (40 miles) of travel to Lake Erie. All of these conservative assumptions were designed to provide conservatively high estimates of radiological impacts from liquid releases to the environment during decommissioning operations at WNYNSC.

Further, during decommissioning activities, Lake Erie or Niagara River receptors were assumed to consume untreated water from the drinking water system (no credit was taken for any treatment that would occur before water distribution) and to consume an average of 0.1 kilograms (0.22 pounds) per year of contaminated fish taken from Lake Erie. The peak annual total effective dose equivalent (TEDE) to an average member of the population (derived from Appendix I, Table I-9, of this EIS, data for the Lake Erie water treatment plant) was estimated to be about 0.0044 millirem for the Sitewide Removal Alternative, 0.046 millirem for the Sitewide Close-In-Place Alternative, 1.6×10^{-5} millirem for Phase 1 of the Phased Decisionmaking Alternative and 0.025 millirem for the No Action Alternative.¹

The Cattaraugus Creek and Seneca Nation of Indians receptors were assumed to consume untreated water from the creek, as well as larger quantities of fish from the creek (9.0 kilograms [20 pounds] per year for the Cattaraugus Creek receptor and 62 kilograms [137 pounds] per year for the Seneca Nation of Indians receptor). These receptors would receive higher peak annual doses, primarily from the assumed fish consumption (see Appendix I, Section I.4.3.5, of this EIS). The largest peak annual TEDE from liquid releases for any receptor and decommissioning action alternative was 0.12 millirem for the Seneca Nation of Indians receptor for the Sitewide Close-in-Place Alternative.

After decommissioning activities are completed, contaminant migration could result in contamination of regional waters. The potential effect of contaminant migration, including erosion-related contaminant movement, on offsite receptors was modeled for time frames up to 100,000 years for the No Action and Sitewide Close-In-Place Alternatives (see Appendix H of this EIS). Under the Sitewide Removal Alternative, removal of onsite contamination during the decommissioning operations would preclude any long-term dose effects of migration on water users. The same receptors were used for the long-term analysis as for the short-term analysis, with the exception that, because of uncertainties about future societal conditions and customs, the daily water consumption rate was slightly increased for all receptors. In addition, all receptors were assumed to consume crops taken from a garden irrigated with untreated water.

If institutional controls were continued indefinitely as planned, the average annual potential dose received by a Lake Erie or Niagara River water user in the year of peak impact would not exceed about 0.2 millirem TEDE. As noted above, these doses include contributions from other exposure pathways in addition to drinking water received through the water distribution systems.

¹ For the Sitewide Removal and Close-In-Place Alternatives, the bulk of the potential decommissioning population dose through the water pathway would result from the assumed discharge of hydrogen-3 (tritium), which has a half-life of 12.3 years, from the Leachate Treatment Facility through a permitted outfall. The same quantity of tritium would be discharged under both alternatives, but the discharge would occur over 60 years under the Sitewide Removal Alternative and 7 years under the Sitewide Close-In-Place Alternative, resulting in a larger dose under the latter alternative. Tritium discharge during Phase 1 decommissioning activities under the Phased Decisionmaking Alternative is projected to be much smaller than that under either of the other two decommissioning alternatives.

If it were assumed that institutional controls were lost for hundreds of years, leading to unmitigated erosion, receptors using water from the Sturgeon Point Water Treatment Plant on Lake Erie would receive a peak annual TEDE of approximately 0.4 millirem under the Sitewide Close-In-Place Alternative and approximately 2.7 millirem under the No Action Alternative. These doses would be respectively received about 860 years and 200 years after loss of institutional controls. It should be understood that these doses are very conservative. Institutional controls are anticipated to be maintained as long as necessary and implementation of the mitigation measures as described in Chapter 6 of this EIS would greatly limit actual erosion under all alternatives. In addition, the analysis does not take credit for processing at water treatment plants to meet drinking water standards.

Doses to receptors that could use Cattaraugus Creek as a source of water over the long term were also calculated (see Section 4, Section 4.1.10.3.3, of this EIS). The highest dose would be received by the postulated Seneca Nation of Indians receptor under the unmitigated erosion scenario. Under the Sitewide Close-In-Place Alternative, this receptor would receive a maximum annual TEDE of 4 millirem about 490 years after loss of institutional controls; under the No Action Alternative, this receptor would receive a maximum annual TEDE of 34 millirem after about 200 years following loss of institutional controls.

For perspective, these doses can be compared to the average radiation dose in the U.S. and to dose limits. The average annual radiation dose in the U.S. is 620 millirem from ubiquitous background and other sources of radiation unrelated to WNYNSC operations (see Chapter 3, Section 3.11.1.2, of this EIS). The DOE all-pathways dose limit to a member of the public is 100 millirem per year (DOE Order 5400.5). The NRC License Termination Rule dose standards for license termination with restrictions are 25 millirem per year assuming institutional controls and in the event of loss of institutional controls, 100 millirem per year (500 millirem per year if certain conditions are met) (10 CFR 20.1403). The NRC License Termination Rule also provides for a dose standard for license termination using alternate criteria of 100 millirem per year from all man-made sources other than medical (10 CFR 20.1404).

2.4 Questions about Long-term Erosion Modeling

Issue:

Some commentors, referring to statements in the NYSERDA Foreword to the 2008 Revised Draft EIS, expressed their opinion that the long-term erosion analysis presented in the Revised Draft EIS is not scientifically defensible. Others questioned some of the assumptions used to calibrate the erosion model and expressed concerns about predictions of gully advance rates. Several commentors pointed out the erosion that occurred in the region following the heavy rainfall events of August 9 and 10, 2009, as an illustration of the potential for sudden and dramatic topography changes in the region. Commentors also expressed views regarding the Revised Draft EIS's lack of predictions regarding the timing of the Buttermilk Creek capture of Franks Creek. Many commentors asked questions concerning the erosion modeling and analysis conducted for the Revised Draft EIS, including:

- Is the Channel-Hillslope Integrated Landscape Development (CHILD) model a reasonable tool for making erosion predictions?
- Are the methods used to calibrate the CHILD model, including the use of the optically stimulated luminescence (OSL) measurements, reasonable?
- What were the climate assumptions used during calibration?
- What were the criteria used to judge the success of calibration?

Response:

Erosion is an important process to consider when estimating environmental consequences at WNYNSC. It is recognized that future erosion can be either accelerated or slowed by human actions. It was considered reasonable and informative for this EIS to analyze two erosion-related cases. The first case assumed that human actions mitigate erosion so there are no erosion-related releases of radioactive or hazardous material, consistent with the agencies' objective. The second case addressed unmitigated erosion under the assumption that no specific future human actions to address the problem were taken. The results of these analyses, coupled with proper explanations, are considered informative to the agency decisionmakers.

DOE is of the opinion that the methods used for developing estimates of long-term unmitigated erosion for this EIS are scientifically defensible, as well as consistent with the requirements of the National Environmental Policy Act (NEPA). These methods use analytical tools that are based on a theoretical approach to evaluating long-term erosion that is generally accepted in the scientific community.

The CHILD landscape evolution model is the analytical tool used for erosion prediction in this EIS and is considered a state-of-the-art landscape evolution model. The CHILD model uses a limited number of algorithms that have been found to reasonably represent the multiple processes involved in erosion. While some scientists advocate the reductionist approach for geomorphology modeling (dissection and understanding of erosion processes on the smallest scale), such an approach demands the development of smaller-scale models, some of which exist, the integration of these smaller-scale models into larger-scale models, and much more data than is currently available to support site-specific calibration of the models. Landscape evolution models have, of necessity, used simpler relationships when analyzing erosion over long time frames.

The CHILD analysis presented in this Final EIS presents a refined analysis that updates the CHILD analysis in the 2008 Revised Draft EIS. This refined analysis involves model recalibration that uses available site data in conjunction with probabilistic methods (Monte Carlo method) and more detailed calibration criteria to determine the sets of calibration parameters that most accurately reproduce the current topography. The calibration criteria include matching with exposure time for the two well-dated stream terraces (see Appendix F, Section F.2.2.1, for a discussion of OSL dating efforts); longitudinal profile matching; and development of an aggregate score that reflects the degree of matching between the model predictions and measurements of key existing conditions (i.e. long profile, hypsometry, slope-area index, width function, and area index). The calibration used climatological parameters that reflect current storm frequencies and severities and includes the effects of storms comparable to, as well as more severe than, the one that occurred in the region in August 2009. The calibration used current storm data because there is no long-term geo-historical record of precipitation statistics for the region over the calibration timeframe. As a result, the effects of weather variability over the calibration period are captured in the parameters determined by the calibration process. The calibration process also captures the indirect effects of any historical earthquakes on erosion in the Buttermilk Creek watershed. Direct effects (e.g., peak ground acceleration strong enough and frequent enough to measure an increase in the rate of hill-slope sediment transport) are considered to be insignificant. The calibration effort produced 5 parameter sets out of 1,000 runs that produced topography predictions that resemble current conditions.

After calibration of the CHILD model using probabilistic methods, the model was used to develop topography predictions for the erosion scenario for both the Sitewide Close-In-Place Alternative and No Action Alternative using a smaller grid scale around the areas containing waste or contamination. Topography predictions were developed using the parameter sets that were determined by the calibration process to most accurately reproduce the current site topography. Topography projections were developed for both current climatic conditions as well as wetter climatic conditions that might occur as a result of climate change. The short-term predictions of gully advance rates were consistent with historical measurements at the site (see Appendix F,

Section F.3.1.6.10). Short-term sheet and rill erosion predictions were comparable to other near-term studies (see Section F.3.2.1).

The predicted topography changes for the unmitigated erosion analysis showed channel widening, as well as the development and advance of gullies. Overall, however, the erosion estimates presented in this Final EIS for the North Plateau are similar to those in the Revised Draft EIS. The Final EIS erosion estimates for the South Plateau are slightly lower than those shown in the Revised Draft EIS. The higher Final EIS erosion rate predictions, including faster gully advance rate predictions that are associated with wetter conditions, were used in the estimate of dose consequences to onsite and offsite receptors, including downstream water users.

This Final EIS acknowledges the uncertainty in the unmitigated long-term erosion predictions and in the erosion-driven human health consequences (see Chapter 4, Section 4.3.5), consistent with NEPA and the New York State Environmental Quality Review Act (SEQR) requirements. Section 4.3.5 also points out that conservative estimates for many of the factors were used in estimating the erosion-driven human health consequences.

2.5 Questions about Cost-Benefit Analysis

Issue:

Several commentors stated that the cost information presented in Chapter 4, Section 4.2, of the Revised Draft EIS does not accurately represent the total costs of the alternatives or that the cost-benefit information (also presented in Section 4.2) is misleading. Some commentors expressed their opinion that there could be large releases of hazardous constituents that would require expensive mitigation actions if waste remained on site. Some commentors were also critical of the assumptions in the cost-benefit methodology, stating that discounting was not appropriate when evaluating long-term costs.

Response:

Chapter 4, Section 4.2, of this EIS presents cost and cost-benefit information in response to an NRC request for the inclusion of cost-benefit information, which is included in NRC EISs. (DOE does not require cost or cost-benefit information in its EISs, although it may consider cost as a factor in its decisionmaking.) The specific analysis uses the information available in this EIS to evaluate cost-effectiveness in a manner that is generally consistent with NRC guidance for conducting as low as is reasonably achievable (ALARA) analyses, which is an element of compliance with the License Termination Rule (NRC 2006a). The NRC guidance calls for discounted costs to be used in the ALARA analysis. The analysis in Section 4.2 was developed and included in this EIS so that NRC could use more of this EIS for its NEPA needs.

The decisions of the lead agencies are not dictated by or limited by the cost or cost-benefit information presented in Chapter 4, Section 4.2. The agencies can select any alternative that would allow the respective agency to best meet its mission. Consistent with NEPA and SEQR requirements, DOE's Record of Decision and NYSERDA's Findings Statement will identify and discuss the factors that were balanced in the agencies' decisionmaking process.

Chapter 4, Section 4.2, of this Final EIS was revised to clarify that the purpose of the section is to provide a preliminary cost-benefit analysis consistent with the guidelines of NRC's license termination ALARA analysis. This Final EIS uses a range of discount rates in its analysis.

2.6 Conclusions of the *Synapse Report*

Issue:

Several commentors specifically cited or alluded to the conclusions of a report titled, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)*, which was prepared by Synapse Energy Economics, Inc., and issued on December 2, 2008. Reflecting statements made and conclusions drawn in the *Synapse Report*, these commentors expressed a preference for the Sitewide Removal Alternative, stating that it is the most cost-effective alternative or represents the least risk and lowest cost. In addition, some commentors stated that the *Synapse Report* analysis was supported by NYSERDA. This latter assertion is not totally accurate according to NYSERDA's comments on the report (see the following discussion). The report and its appendices are posted on several websites including http://westvalleyctf.org//Full_Cost_Study.html and <http://www.besafenet.com/campaigns/wvreport.shtml>.

The *Synapse Report* presents the results of a study funded by a grant from the New York State Legislature and administered by the New York State Department of Environmental Conservation to four groups: the Citizens' Environmental Coalition; the Coalition on West Valley Nuclear Wastes; the Center for Health, Environment & Justice; and the Nuclear Information and Resource Service. The study draws on information from the 1996 *Draft Environmental Impact Statement for Completion of the West Valley Demonstration Project and Closure or Long-Term Management of Facilities at the Western New York Nuclear Service Center (Cleanup and Closure Draft EIS)* and a September 2005 Multiagency Review Draft of the *Draft Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center* (Multiagency Review Draft), along with its supporting engineering studies. The Multiagency Review Draft and supporting engineering studies were prepared for DOE, NYSERDA, and cooperating agencies (the U.S. Environmental Protection Agency, U.S. Nuclear Regulatory Commission, New York State Department of Environmental Conservation, and New York State Department of Health) to help the agencies understand the environmental consequences of the alternatives presented in that document and to facilitate lead agency selection of a preferred alternative. As noted in Chapter 1, Section 1.2, of this EIS, the agency discussions on the 2005 Multiagency Review Draft shaped the content of the Revised Draft EIS that was prepared and issued for public review. The Multiagency Review Draft was never issued for public review.

There are three major sections in this issue summary. The first section, "Synapse Report Summary," presents a high-level overview of the information contained in the report and its appendices, as well as a summary of the major conclusions of the report. The second section, "Agency Discussion of the *Synapse Report*," identifies DOE's perceived shortcomings in the report, including instances where its authors misread information in the Multiagency Review Draft or its supporting engineering studies. This discussion also notes major comments developed by DOE and NYSERDA following their review of the report. The third section, "Inferred Comments," identifies comments relevant to the 2008 Revised Draft EIS that were inferred from the information presented in the *Synapse Report* and its appendices and presents DOE's and NYSERDA's responses to those comments. It was necessary to infer comments because the *Synapse Report* was not based on the 2008 Revised Draft EIS that was made available for public review and comment on December 5, 2008 (the *Synapse Report* was issued on December 2, 2008).

Synapse Report Summary

The *Synapse Report* comprises nine chapters and three appendices, which are summarized below. Summary information is presented in greater detail for those sections that address population dose and risk, erosion, and full cost estimates, because this information is related to the analysis in the Revised Draft EIS and is cited in the comments that mention the *Synapse Report*.

Executive Summary – Summarizes the information in the *Synapse Report*, including findings and recommendations.

The major conclusion presented in the Executive Summary of the *Synapse Report* is that the Waste Excavation Alternative presents the least risk to a large population and has the lowest economic, social, and project cost. The report recommends removal of all waste and contamination to another site where it would be stored (rather than disposed of) in monitored, aboveground storage facilities.²

Chapter 1 – Presents a brief discussion of site history and setting.

Chapter 2 – Presents a discussion of the legal framework and agency responsibilities.

Chapter 3 – Presents information on various WNYNSC facilities and their inventories and summarizes the alternatives presented and analyzed in the 2005 Multiagency Review Draft.

The two alternatives addressed in detail in the *Synapse Report* are the Waste Excavation Alternative (called the Entire Site Unrestricted Release/Clean Closure Alternative in the Multiagency Review Draft) and the Buried Waste Alternative (called the North Plateau Unrestricted Release/Clean Closure Alternative in the Multiagency Review Draft). The Waste Excavation Alternative is similar to the Sitewide Removal Alternative in the November 2008 Revised Draft EIS. The Buried Waste Alternative involves removal of major sources on the North Plateau along with decay of the non-source area of the North Plateau Groundwater Plume, coupled with a close-in-place strategy for the NRC-Licensed Disposal Area (NDA) and State-Licensed Disposal Area (SDA).

Chapter 4 – Presents an estimate of doses and risks to the public from assumed catastrophic releases from the WNYNSC. (Additional information is presented in Appendix B of the *Synapse Report*.)

The *Synapse Report* reviewed and compared dose estimates presented in the 1996 *Cleanup and Closure Draft EIS* and 2005 Multiagency Review Draft and presented the results of its own calculations of drinking water dose and risk for members of the public (Section 4.5 and Appendix B of the *Synapse Report*). The *Synapse Report* evaluates two scenarios: the first assumes a 1 percent inventory release at specific intervals and the second assumes that 1 percent of the remaining inventory is released each year for a series of years. The analysis considers releases from the Waste Tank Farm, NDA, and SDA. It should be noted that, although the analysis considers the consequences of releases from the Waste Tank Farm, the Buried Waste Alternative identified in previous *Synapse Report* chapters assumes that the waste tanks are removed (see Chapter 3, Section 3.2.2, of the *Synapse Report*). A more detailed description of the analysis is presented in Appendix B of the *Synapse Report*, which presents probabilistic estimates of doses; however, the variables used in the analysis and the distribution of these variables are not identified.

Chapter 5 – Provides information on the evolution of language and a discussion of cost discounting when dealing with transgenerational issues.

Chapter 6 – Discusses erosion at WNYNSC. (Additional information is presented in Appendix A of the *Synapse Report*).

Chapter 6 reviews various erosion measurements at the site and other locations the authors of the *Synapse Report* considered relevant. The chapter states that the authors expect 20 percent of the plateau surfaces that are currently not gullied to erode within 10,000 years based on a bench-scale experiment. The chapter

² Particular attention was paid to the Findings and Recommendations of the *Synapse Report* when inferred comments were developed in the third part of this issue summary.

concludes that the disposal areas could be breached in as quickly as 150 years if there were no erosion controls. The chapter also provides independent estimates of erosion control features and associated costs for protection of the site for 1,000 years.

Chapter 7 – Discusses the devaluation of properties near the WNYNSC site and the potential costs for providing replacement drinking water.

Chapter 8 – Presents an evaluation of the full cost for two decommissioning alternatives addressed in detail in the report. (Additional information is presented in Appendix C of the *Synapse Report*.)

As analyzed in Chapter 8 of the *Synapse Report*, the total cost for the Waste Excavation Alternative, which is similar to the Sitewide Removal Alternative in the November 2008 Revised Draft EIS, would be \$9.9 billion, which is slightly lower than the \$10 billion reported in the 2005 Multiagency Review Draft. The *Synapse Report* assumes lower cost contingency factors than those assumed for the Multiagency Review Draft and accounts for the loss of revenue over 1,000 years due to temporary unavailability of some WNYNSC land for productive use. (The second *Synapse Report* alternative, Buried Waste, is not similar to any alternative analyzed in the November 2008 Revised Draft EIS.)

The *Synapse Report* provides two cost estimates for the Buried Waste Alternative. The first estimate is \$27 billion over 1,000 years, assuming larger costs than those estimated in the Multiagency Review Draft for the expanded initial removal actions; construction and maintenance of erosion control features; and installation, maintenance and operation of security systems. In addition, \$14 billion is assumed for replacing contaminated water supplies for Lake Erie water users and for an assumed loss of revenue over 1,000 years because of the assumed permanent unavailability of WNYNSC land for productive use. The second estimate is \$13 billion over 1,000 years, subtracting the cost of replacing contaminated water supplies for Lake Erie water users.

Agency Discussion of the *Synapse Report*

DOE reviewed the *Synapse Report* to determine whether it provided: (1) information that would help DOE more accurately represent the environmental consequences of the alternatives analyzed in the 2008 Revised Draft EIS or (2) insight into the cost comparison of the alternatives.

The only environmental consequence information presented in the *Synapse Report* is long-term radiation dose and risk to downstream water users. DOE does not believe the methods used in the *Synapse Report* would be useful in improving the understanding of environmental consequences for alternatives that leave the waste on site (the Sitewide Close-In-Place Alternative and the No Action Alternative). The *Synapse Report* dose analysis uses what DOE considers to be simplistic and overly conservative (high) release rate assumptions for its analysis. The release estimates are not based on actual current tank and waste conditions or the physical performance of the additional engineered barriers that would be installed if the Waste Tank Farm or the burial areas were closed in place. These engineered barriers would retard the migration of radionuclides through the environment, thereby allowing more decay to occur. For these reasons, DOE believes that the *Synapse Report*'s analytical methods provide overly conservative dose estimates and the methods do not appear to be suited to discriminating between the consequences of the Sitewide Close-In-Place Alternative and the No Action Alternative.

NYSERDA's review of the *Synapse Report* concluded that several assumptions used in the report (concerning the Buried Waste Alternative) could lead to an overestimate of health impacts.³

³ March 25, 2009, letter from Paul J. Bembia of NYSERDA to Anne Rabe of the Center for Health & Environmental Justice, Subject: NYSERDA Comments on The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (NYSERDA 2009).

DOE reviewed the cost information presented in the *Synapse Report*. DOE considers the *Synapse Report*'s adjustment of waste disposal costs for the Waste Excavation Alternative to be incorrect. The adjustment ignores the differences in low-level radioactive waste disposal costs for different waste classifications (e.g., Class A low-level radioactive waste, Class B low-level radioactive waste). The *Synapse Report*'s adjustment of contingency factors so that all contingency factors for the Waste Excavation Alternative are the same reflects a different costing philosophy than that used by DOE, where more uncertain (i.e., higher-risk) activities such as waste exhumation were assigned a higher contingency factor. DOE acknowledges that an argument could be made for lost revenue (opportunity cost) if all or large portions of WNYNSC were not available for other uses. DOE notes, however, that the assumption concerning alternative economic use of the site may not be valid. Further, DOE notes that the report does not consider the issue of opportunity cost for any site to which waste from WNYNSC would be taken. In any event, DOE notes that these opportunity costs make small contributions to the overall estimated cost, and their inclusion or omission does not substantially change the cost estimate for a specific alternative. Overall, DOE notes that the changes in estimated cost for the Waste Excavation Alternative as presented in the *Synapse Report* are relatively minor (less than a 7 percent change) with most of the difference resulting from unsupported adjustments in unit waste disposal costs.

DOE also reviewed the *Synapse Report* cost estimate for the Buried Waste Alternative. Chapter 8, Section 8.4, of the *Synapse Report* identified five major cost adjustments for their Buried Waste Alternative. These are reviewed and discussed here:⁴

1. Expansion of the removal phase of the alternative to remove the entire North Plateau Plume rather than just the source area (*Synapse Report*, Chapter 8, Section 8.4.1). These additional removal costs added almost \$1.5 billion to the *Synapse Report* estimate. This change is not the result of any error that the *Synapse Report* authors identified, but results from changing the definition of the Buried Waste Alternative to remove more contamination.
2. Increase in the estimated cost for installation and maintenance of erosion control features (*Synapse Report*, Chapter 8, Section 8.4.2). The *Synapse Report* authors proposed very extensive erosion control measures and estimated a high annual cost for maintaining these features for 1,000 years. The DOE cost estimate for installing its proposed erosion control features is about \$29 million, with an average annual maintenance cost of about \$170,000. The *Synapse Report* cost estimate for installing erosion control features is about \$360 million, with an average annual maintenance cost of about \$7.8 million. The erosion control measures proposed in the *Synapse Report* appear to be designed to reduce erosion across the entire site and include multiple erosion control features along Buttermilk Creek, as well as some on a creek on the east side of Buttermilk Creek. This represents a much larger objective than the DOE erosion control design, which is intended to reduce erosion in those areas of the site where the waste would be managed. DOE notes that, when the *Synapse Report* authors compared their cost estimate to the 2005 DOE cost estimate, they failed to recognize the long-term erosion control costs estimated by DOE and, therefore, under-reported the DOE estimate.⁵
3. Site security costs (*Synapse Report*, Chapter 8, Section 8.4.3). The DOE estimate for security costs is based on three security personnel on site 24 hours per day, 7 days a week, as long as the vitrified waste canisters remain on site. After the canisters are removed, the security staffing would be reduced to three security personnel for 8 hours per day, 5 days a week, until the multi-layered caps are installed. After the

⁴ This discussion includes numbers extracted from the *Synapse Report*. It is noted that there is inconsistency in some of the numbers presented in different sections of the *Synapse Report*. As a result, a reviewer focusing on one section or table may identify a number different from a reviewer focusing on a different section or table.

⁵ It may also be noted that, despite the assumptions that extensive erosion control features would be installed at a cost of \$360 million and that \$7.8 million would be spent maintaining these features over 1,000 years (at a cost of \$7.8 billion), the *Synapse Report* takes no credit for these features in its catastrophic dose analysis.

caps are installed, security inspections would be reduced to 2 hours per day, 5 days a week, with routine inspection support from local law enforcement officials. The estimate in the *Synapse Report* assumes three security personnel on site 24 hours per day, 7 days a week, in perpetuity. The *Synapse Report* estimate also does not reduce the security effort as the inventory decreases or the physical isolation of the waste increases.⁶

4. Addition of costs because the land is unavailable for use (*Synapse Report*, Chapter 8, Section 8.4.4). As noted in the review of the Waste Excavation Alternative, the validity of these estimated opportunity costs is uncertain. Regardless of the validity of the assumption, the value estimated in the *Synapse Report* is a very small part of the total cost.
5. Addition of cost for the replacement of water, assumed to be a purchase of bottled water followed by development of alternative systems for supplying water to the Erie County Water Authority and the Buffalo Water Authority (*Synapse Report*, Chapter 8, Section 8.4.5). This estimated cost is over \$14 billion. DOE considers this cost to be extremely high, and there is no adjustment or qualification of the cost estimate for what is considered to be a very low-probability event. While DOE has no quantitative estimate of the probability of the scenario linked to the cost estimate, it does consider the probability to be very low, particularly if all of the erosion management actions and security staffing assumed in the *Synapse Report* were in place. DOE also notes that the *Synapse Report* added this cost element to the Buried Waste Alternative without considering or even acknowledging the potential for some conceptually comparable costs at sites that would receive WNYNSC waste under the Waste Excavation Alternative. This is not consistent with a balanced comparison of decommissioning costs.

A general bias in the development of cost comparison information in the *Synapse Report* is the failure to recognize the DOE estimates for long-term monitoring, maintenance, and security for the Buried Waste Alternative. The *Synapse Report* authors only used the cost information presented in Section 4 of the Closure Engineering Report, i.e., the cost of reconfiguring the site over about 200 years in preparation for long-term monitoring and maintenance. They ignored the annual monitoring, maintenance, and security cost information presented in Section 5 of the Closure Engineering Report. As a result, the *Synapse Report* compares DOE's cost estimate for a period of about 200 years with its own estimate for a period of 1,000 years.

Ultimately, DOE does not find the *Synapse Report* conclusions about the relative cost of exhumation versus onsite management convincing. The *Synapse Report* cost estimates for the Buried Waste Alternative are inflated by exhuming a large volume of short-lived contamination (about \$1.5 billion more), adding and maintaining extensive sitewide erosion control features (about \$8 billion more over 1,000 years), making overly conservative assumptions about security requirements (about \$800 million more over 100 years), and making some extreme assumptions about the need to replace water supplies as a result of what appears to be a highly unlikely event (about \$14 billion more).⁷ In addition, the inconsistency in the analysis (i.e., addition of cost for a catastrophic release under the Buried Waste Alternative, but not under the Exhumation Alternative) further undermines the validity of the *Synapse Report* cost comparison. DOE's assessment includes points made by NYSERDA, whose review of the report concluded that there were elements of the analysis that both overestimated and underestimated long-term costs for the buried waste option.

DOE believes that the *Synapse Report* conclusion that removal is the most appropriate management option is based on (1) an overestimate of long-term dose and risk, (2) an overestimate of the costs of long-term

⁶ The *Synapse Report* assumes the costs for three security personnel assumed to be on site at all times, over a 1,000-year period. Despite the assumed presence of these onsite personnel, however, the *Synapse Report* assumes that catastrophic erosion would continue unnoticed and unchecked at the site for hundreds of years.

⁷ The *Synapse Report* assumes that unmitigated erosion, leading to extensive release of radioactivity offsite, would continue unnoticed and unchecked; yet, simultaneously, officials in affected jurisdictions would take action to provide alternative water supplies to many thousands of individuals.

management of waste on site, and (3) no recognition of the environmental impacts of waste removal, packaging and shipment or the limited availability of disposal sites for some of the waste.

Inferred Comments and Responses:

In its review of the *Synapse Report*, DOE identified the following comments that could be inferred as applicable to the 2008 Revised Draft EIS:

Comment: Alternatives that leave waste on site (i.e., the Sitewide Close-In-Place Alternative) pose an unacceptable risk to residents and the downstream public if institutional and erosion controls fail while dangerous radionuclides are buried at WNYNSC.

Response: DOE and NYSERDA acknowledge that the Sitewide Close-In-Place Alternative may pose risks to downstream individuals and populations, as discussed in detail in this EIS. DOE and NYSERDA note, however, that the estimate of risk reported in the *Synapse Report* is overly conservative and does not provide meaningful insight into the long-term risks to the downstream public. DOE believes that its more realistic, mechanistically based, yet conservative analysis of concentrations of radionuclides in downstream and Lake Erie water supplies indicates that the concentrations of radionuclides in drinking water, assuming a loss of institutional controls and resulting unmitigated erosion, would be far lower than that predicted by the “worst case analysis” scenario presented in the *Synapse Report*. DOE and NYSERDA believe that the *Synapse Report* analysis uses multiple conservative parameters that lead to overly conservative results that do not represent estimates of reasonably foreseeable consequences, contrary to the objectives of NEPA.

Comment: The *Synapse Report* states a preference for an alternative that removes the waste from the site. It further states that, while this would pose a risk to onsite workers during the relatively short period of time for remediation activities and does not solve the problem of WNYNSC nuclear waste disposal, it would prevent further contamination, as well as what the *Synapse Report* calls a catastrophic release that could cause severe damage to populations in the Great Lakes region, and mitigate the problem by transferring the waste to a less risk-prone site.

Response: DOE and NYSERDA acknowledge the preference for the removal of the waste from WNYNSC. This EIS analyzes the consequences of releases from WNYNSC using models that account for the effect of engineered barriers. The results are considered to be moderately conservative estimates of reasonably foreseeable consequences and are not as “catastrophic” as those reported in the *Synapse Report*.

Comment: This EIS should consider alternatives that remove the waste from WNYNSC and place it in retrievable, monitored, aboveground storage at a more suitable site.

Response: As addressed in Chapter 2, Section 2.5.1, of this EIS, DOE and NYSERDA did consider retrievable storage of all the waste at WNYNSC, but decided not to analyze this alternative because it was considered inconsistent with NRC decommissioning requirements. In addition, DOE has made programmatic decisions to dispose of waste at sites that have disposal capabilities. For these reasons, removal of the WNYNSC waste for retrievable storage at another site would not be a reasonable alternative. In addition, removal of Class B, C, and Greater-Than-Class C waste that was buried prior to the start of WVDP activities by DOE is not currently practical because there are no sites offering disposal services for these wastes from New York. DOE and NYSERDA do not consider such alternatives to be reasonable because they do not meet the agencies’ stated purpose and need.

Comment: The waste should be excavated and removed while the lead agencies still know what is in the ground, how to handle it, and have some chain of responsibility still available.

Response: It is the intent of DOE and NYSERDA to make decisions about decommissioning and/or long-term stewardship in the near term. The agencies have knowledge of what is in the ground and, if exhumation is selected, additional characterization would occur as part of exhumation to characterize the waste for offsite disposal or onsite storage. The agencies intend to fully discharge their responsibilities for protection of human health and safety and the environment.

Comment: The long-term performance assessment should be more of a risk analysis that considers the probability of scenarios that include loss of institutional controls and loss of erosion controls.

Response: Comprehensive probabilistic risk assessments for long-term performance are not considered to be a credible method for estimating risk for this EIS because there are elements of the analysis, including the nature and timing of future human actions, for which reliable probabilities are not available. Use of multiple scenarios, a spectrum of receptors, and conservative parameters for the long-term performance assessment is considered to be a more reasonable and appropriate method for providing insight to the agency decisionmakers about the long-term impacts of the various alternatives. The impacts of loss of institutional controls and unmitigated erosion are addressed in Chapter 4, Section 4.1.10, of this EIS.

Comment: This EIS should address the cost of managing contaminated Lake Erie drinking water and the lost opportunity cost of site development for those alternatives where waste remains on site.

Response: DOE NEPA documents do not usually include detailed cost information or analysis of the type suggested by the *Synapse Report*. However, Chapter 4, Section 4.2, of this EIS does include estimates of the costs of implementing decommissioning actions as well as estimates of the annual costs of long-term management of any remaining waste or residual contamination. These estimates are used as part of a preliminary cost-benefit consideration. The estimates and analyses were included in this EIS to accommodate NRC requests for such information.

This Final EIS indicates that, even with loss of institutional controls and conservative, unmitigated erosion conditions, long-term drinking water contamination levels for Lake Erie water users would be low and the types of mitigation measures proposed in the *Synapse Report* would not be warranted. Recognizing there is a limited potential for the need for such future mitigating measures, DOE revised the discussion in Chapter 4, Section 4.2, of this Final EIS to acknowledge that there could be some additional future costs of mitigating contamination releases if natural and engineered barriers and administrative actions are not as effective as expected, but specific dollar estimates are not presented.

Any cost considerations that enter into DOE and NYSERDA decisionmaking, including the potential for future mitigating costs or lost opportunity costs, will be acknowledged in DOE's Record of Decision and NYSERDA's Findings Statement, respectively. On the specific issue of lost opportunity cost, the analysis in the *Synapse Report* indicates that lost opportunity costs are small contributors to total cost. In addition, there would be lost opportunity costs at any sites used for waste management, which would appear to further reduce the importance of this cost element.

Comment: The EIS erosion analysis is questionable and disposal areas could be breached more quickly than reported in the Revised Draft EIS. This could occur as soon as in 150 years if there are no institutional controls and in less than 1,000 years if there are institutional controls.

Response: The erosion analysis in this Final EIS is considered to be consistent with state-of-the-art analytical capabilities. The uncertainties in the erosion analysis are acknowledged in the discussions on erosion (see the Erosion Modeling discussion in Section 2.3 of this CRD and in Appendix F of this EIS).

Comment: The site cannot rely on long-term institutional controls. The risk of losing institutional controls at the site sometime after closure must be considered.

Response: This EIS includes an analysis that assumes that institutional controls fail, although it is not possible to quantify the likelihood of failure. This analysis provides the decisionmakers with insight into the environmental consequences that could result from a loss of institutional controls.

Comment: It is not reasonable to expect erosion control structures to last more than 10 to 20 years.

Response: This comment is based on the design life of culverts that are not typically designed to accommodate severe storms. The erosion control systems identified in this EIS would be designed to accommodate severe storms, including a Probable Maximum Precipitation rain event, and would therefore be expected to last for many decades with minimal maintenance.

SECTION 3

PUBLIC COMMENTS AND DOE AND NYSERDA

RESPONSES

3.0 PUBLIC COMMENTS AND DOE AND NYSERDA RESPONSES

This section presents a side-by-side display of the comments received by the U.S. Department of Energy (DOE) during the public comment period on the *Revised Draft Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center (Decommissioning and/or Long-Term Stewardship EIS)* and the DOE and NYSERDA response to each comment. Letters have been reproduced as they were received. To find a specific commentator or comment in the following pages, search **Table 3-1, Index of Public Officials** or the List of Commentors that follows the Table of Contents, to identify the page numbers on which the appropriate comments and DOE and NYSERDA responses appear.

If a commentator provided comments through a postcard or form letter campaign, that commentator is referred to a copy of that postcard or form letter. This section only contains one copy of each unique postcard or form letter.

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State of New York, Legislature of Erie County	Robert M. Graber	3-194
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U.S. Department of the Interior	Andrew L. Raddant, Regional Environmental Officer	3-277
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Commentor No. 1: James R. White**December 12, 2008****James R White****J. R. White Consulting****300-5 El Capitan Drive****Islamorada, FL 33036-4146**

The “No Action” consequences seem so small as it makes me wonder why taxpayer money is being considered on more expensive alternatives. It was stated in section 4.1.10.1.that “ Assuming indefinite continuous institutional controls, the peak annual dose to reasonably foreseeable offsite individuals who are postulated to use the contaminated water of Cattaraugus Creek just outside the site boundary for drinking, irrigation, and a source of contaminated fish would be about 0.22 millirem for both the No Action and Sitewide Close-In-Place Alternatives.” 0.22 millirem represents a negligible risk. A chest X-ray gets you about 10 millirem . . . a CT scan can get you about 580 millirem. You get about 0.5 millirem for every hour you fly in a commercial jet. If the government used a risk-based approach for allocation of resources for cleanup of hazardous waste sites, West Valley would probably be so far down on the list as to be not even under consideration. There are plenty of other toxic places to clean up, including government military bases and the like.

I-1**1-1**

As explained in Chapter 1, Section 1.3, of this Final EIS, DOE is required by the West Valley Demonstration Project Act to decontaminate and decommission the waste storage tanks and facilities used to solidify high-level radioactive waste, as well as any material and hardware used in connection with the WVDP, in accordance with such requirements as NRC may prescribe. The No Action Alternative would not meet this requirement for DOE action. NYSERDA needs to determine how it will manage or decommission the facilities and property for which it is responsible in accordance with applicable Federal and state requirements. The decision on a selected course of action and supporting rationale will be documented in DOE’s Record of Decision and NYSERDA’s Findings Statement.

Commentor No. 2: Diane D'Arrigo

January 28, 2009

Diane D'Arrigo

NIRS

6930 Carroll Ave Suite 340

Takoma Park, MD 20912

Request for extension of comment period until October 30, 2009 and Request for additional hearings in Buffalo, Rochester and Albany on revised DEIS and on the DOE Decommissioning Plan for West Valley.

2-1

2-1

In response to requests from the public, DOE and NYSERDA extended the original 6-month comment period (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE) for an additional 90 days, through September 8, 2009. An additional public hearing was held in Albany, New York, and the hearing originally scheduled for Blasdell, New York, was moved to a more central downtown Buffalo, New York, location.

Commentor No. 3: Barbara Warren, Executive Director
Citizens' Environmental Coalition

Center for Health, Environment and Justice www.besafetynet.com
Citizens' Environmental Coalition www.cectoxic.org
Coalition on West Valley Nuclear Wastes www.digitup.org
Nuclear Information and Resource Service www.nirs.org

Bryan Bower, West Valley Project Director
Catherine Bohan, EIS Document Manager
Ben Underwood, Atty., Office of Gen. Counsel
Department of Energy
West Valley Demonstration Project
P.O. Box 2368
Germantown, MD 20874

December 27, 2008

RE: Comment on Draft Decommissioning and/or Long-Term Stewardship EIS
→ Thank you for 12/2/08 meeting re West Valley Full Cost Accounting Study
→ Confirming inclusion of the West Valley Full Cost Accounting Study with appendices
as **Comment on Draft Decommissioning and/or Long-Term Stewardship EIS**
→ Request for Additional NYS hearings + Comments Period extension to 10/30/09

Dear Mr. Bower, Ms. Bohan and Mr. Underwood,

Thank you for meeting with us on December 2nd, 2008 to discuss the findings of the report titled "*The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site.*" We officially request that this report and the report's three Appendices be included in the public comment record on the Revised Draft Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center (DOE/EIS-0226D Revised). We had provided you with copies of the report and a CD with the appendices at our December 2nd meeting.

The final resolution of the West Valley cleanup plan is an extremely important issue which will have a major impact on the future of the Great Lakes and Western New York's environment, public health and economic vitality. We respectfully request two amendments to the Department's public comment plan to ensure there is adequate and comprehensive public participation on this critical issue.

First, the clean up of the West Valley site has been a statewide issue and of interest to groups, citizens and policymakers throughout the state for many years. Therefore, we request that public hearings also be held in Buffalo, Rochester and Albany, New York, in addition to Irving, West Valley and Blasdell, NY.

Second, the Revised DEIS is voluminous and highly technical and citizens and groups will need time to adequately review it and consult with experts and their membership, before formulating comments. Therefore, we request an extension on the public comment period to Friday, October 30, 2008.

- | | | |
|------------|------------|---|
| 3-1 | 3-1 | The report, <i>The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)</i> by Synapse Energy Economics, Inc., including the three appendices, has been entered into the public comment record for this EIS. The substance of the <i>Synapse Report</i> has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for "Conclusions of the Synapse Report" in Section 2 of this CRD for discussion of the report's issues and DOE's and NYSERDA's response. |
| 3-2 | 3-2 | In response to requests from the public, DOE and NYSERDA extended the original 6-month comment period (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE) for an additional 90 days, through September 8, 2009. An additional public hearing was held in Albany, New York, on March 30, 2009, and the hearing originally scheduled for Blasdell, New York, was moved to a more central downtown Buffalo, New York, location. |

Commentor No. 3 (cont'd): Barbara Warren, Executive Director
Citizens' Environmental Coalition

Thank you for considering our requests. You can contact us through Barbara Warren, CBC, 33 Central Avenue, Albany, NY 12210, and she will share the response with all of us. Or you can email us each at warrenba@msn.com, annerabe@msn.com, jeinach@yahoo.com and dianed@nirs.org.

Sincerely,

BJW (dd)

Barbara Warren
Citizens' Environmental Coalition
warrenba@msn.com
518-462-5527

ge gft (dd)

Judith Einach and Joanne Hameister
Coalition on West Valley Nuclear Wastes
jeinach@yahoo.com
716-316-5839

AR (dd)

Anne Rabe
Center for Health, Environment & Justice
annerabe@msn.com
518-732-4538

Diane D'Arrigo

Diane D'Arrigo
Nuclear Information and Resource Service
dianed@nirs.org
301 270 6477 x 16

Response side of this page intentionally left blank.

Commentor No. 4: Tim Mayerat

From: Tim Mayerat [mailto:mayerat@winsmith.com]
Sent: Thursday, February 12, 2009 4:37 PM
To: Bohan, Catherine
Subject: Extension of comment period

Ms. Bohan, this will be short and to the point. As usual the government takes their good old time about preparing a report on West Valley and then limits the comment period. Please extend the comment period to October 30th .

from June.

Thank you,
Tim Mayerat

4-1

4-1

In response to requests from the public, DOE and NYSERDA extended the original 6-month comment period (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE) for an additional 90 days, through September 8, 2009.

3-8

**Commentor No. 5: Robert M. Ciesielski,
Sierra Club, Niagara Group**

From: Robert Ciesielski [mailto:rmciesie@yahoo.com]
Sent: Friday, January 30, 2009 2:42 PM
To: Bohan, Catherine
Subject: West Valley clean-up hearings

Dear Ms.Bohan:

I am Chair of the Sierra Club, Niagara Group which represents Western New York. At our Executive Committee meeting of January 27, 2009 our Board adopted a resolution requesting the Department of Energy and the New York State Energy Research and Development Authority to extend the deadline for public comments concerning the clean-up of the West Valley nuclear waste site from June 8, 2009 to October 30, 2009. We are also requesting that additional public hearings be scheduled in other venues affected by the outcome of the review process, including Buffalo and Rochester, New York.

Thank you.
Robert M. Ciesielski
Sierra Club, Niagara Group, Chair

5-1 5-1

In response to requests from the public, DOE and NYSERDA extended the original 6-month comment period (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE) for an additional 90 days, through September 8, 2009. An additional hearing was held in Albany, New York, on March 30, 2009, and the hearing originally scheduled for Blasdell, New York, was moved to a more central downtown Buffalo, New York, location.

**Commentor No. 6: Candace Head-Dylla,
Bluewater Valley Downstream Alliance**

From: CANDACE HEAD-DYLLA [mailto:cuh148@psu.edu]
 Sent: Saturday, March 21, 2009 11:54 PM
 To: the.secretary@hq.doe.gov; Bohan, Catherine
 Cc: annerabe@msn.com
 Subject: West Valley cleanup

Dear Dr. Chu and Ms. Bohan,

I am writing on behalf of the Bluewater Valley Downstream Alliance, a community organization located near Grants, New Mexico, organized to fight against further damage to our communities by the Homestake/Barrick Gold uranium mill tailings Superfund site. As people who live with the effects of uranium mining and milling, we have come to understand the substantial problems associated with nuclear waste. We are writing in support of other community organizations working to bring about a cleanup of the West Valley Nuclear Waste Site in the Western New York Great Lakes region.

We understand this is a complex problem at a complicated site. However, we have read the DEIS and support a full cleanup decision, which would mean full waste excavation and removal. This appears to us to be the only real alternative since it is the only one that is permanent and safe given the problems with erosion that have been identified. In the long run, it also seems like the most cost effective solution since it takes into consideration the future health and safety of the community.

We watched your confirmation hearing with great interest Dr. Chu. You are obviously very knowledgeable and you seem to have the country's best interests at heart. However, unless you have lived near one of these sites and have been forced to deal with related health issues, worrying constantly what the future holds for you and your children, it is difficult to understand the real costs of the nuclear industry. The risks are enormous. In the case of West Valley, you have an opportunity to minimize those risks and even though we cannot travel from New Mexico to New York to testify on behalf of these communities, we are with them in spirit because we understand the psychological and physical toll these sites have taken.

Please turn over a new leaf for the Department of Energy and begin by implementing full waste excavation and removal at West Valley.

Sincerely,

Candace Head-Dylla

Bluewater Valley Downstream Alliance
bvdownstreamalliance.org
 #6 Ridgerunner Rd.
 Grants, NM 87020

6-1

6-1
cont'd

3-9

6-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

The principal purpose of preparing this EIS is to evaluate the environmental impacts of the alternatives, which are presented in Chapter 4. Section 4.1.10 presents the long-term radiological doses and risks to the population and hypothetical individuals living near the site. In addition, Section 4.2 provides a cost-benefit comparison of the alternatives including analysis of the cost-effectiveness of each alternative. If cost-benefit considerations are part of DOE's and NYSERDA's rationale for decisionmaking, this will be acknowledged and discussed in DOE's Record of Decision and NYSERDA's Findings Statement.

Commentor No. 7: Ann Eberle

March 31, 2009

Ann Eberle

494 New Salem Rd.

Voorheesville, NY 12186

The dangers from nuclear waste and/or spent uranium have long been known. I know that the US uses spent uranium to harden missiles etc. but the dangers from even that endanger our own troops and civilians unlucky enough to encounter the material, which vaporizes in an explosion. Since the govt. has long known the inherent dangers of these materials, it is long past time to eliminate them from our landscape and cease producing them. Cancer is a growing health concern and may well be one of the "by-products" of nuclear production and waste. We need to clean it up now - not leave it to infiltrate our ground water and reservoirs and poison our natural resources.

7-1

7-1

DOE and NYSERDA acknowledge the commentor's support for cleanup now. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 8: Amy Harlib**March 31, 2009****Amy Harlib****212 West 22nd St. #2N****New York, NY 10011-2707****1) Support Sitewide Removal Alternative**

The Sitewide Removal is the only Alternative that achieves the following objectives.

- Provides a complete and comprehensive cleanup of the entire site through excavation of radioactive and toxic waste.,.
- Provides a permanent and safer solution that removes radioactive waste from a site with serious erosion problems, earthquake hazards, and a sole source aquifer.
- Prevents any catastrophic releases which could cause polluting of community drinking water supplies, Lakes Erie and Ontario, harm public health and cost billions of dollars.
- Significantly lowers health risks to nearby communities, with all waste removed after 64 years
- Provides the most cost-effective approach over the long term according to a recent study. An independent, state-funded study, The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site, revealed leaving buried waste at the site is both high risk and expensive while a waste excavation cleanup presents the least risk to a large population and the lowest cost. Over 1000 years, waste excavation costs \$9.9 billion (new DEIS estimates 9.7 billion) while leaving onsite buried waste costs \$13 billion, and \$27 billion if a catastrophic release occurred.

2) Oppose Leaving Buried Waste On Site: It is Expensive and a Serious Environmental and Public Health Risk.

- Erosion is a powerful and fast moving force at the West Valley site as it sits on a geologically young landscape which is undergoing a relatively rapid rate of erosion. Michael P. Wilson, Ph.D., SUNY Fredonia Professor of Geosciences found in the FCA study that “Nuclear wastes, radioactive for tens of thousands of years, will be consumed by erosion and discharged downstream to Lakes Erie and Ontario in less than 3,000 years and may be dangerously exposed in less than 200 or 300 years.”

8-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative, as well as opposition to leaving waste on site and to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes," "Concerns about Potential Contamination of Water," and "Conclusions of the *Synapse Report*" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

8-2 Please see the Issue Summaries cited in the response to Comment no. 8-1 for further discussion of these issues and DOE's and NYSERDA's responses. The additional issues cited by the commentor are discussed in the following paragraphs:

Erosion: DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

Long-term monitoring and maintenance: As acknowledged in this EIS, long-term monitoring and maintenance would be required for alternatives that would leave waste on site. This EIS provides a summary description of current and potential future environmental monitoring programs. The descriptions of the alternatives were revised to further describe the use of engineered barriers and long-term monitoring and maintenance. Long-term monitoring and maintenance are described in Chapter 2, Sections 2.4.2.6 and 2.4.3.8. Long-term monitoring and institutional controls are also discussed in Chapter 6. Additional information about current and proposed monitoring and institutional controls is provided in Appendices C, H, and I. Chapter 2, Table 2-4, includes estimates of the environmental consequences if (1) monitoring and maintenance are successful (institutional controls remain in place) and (2) monitoring and maintenance programs fail (institutional controls are lost). Chapter 4, Section 4.2, of this EIS includes monitoring and maintenance costs for the alternatives that would leave waste on site.

Detailed information regarding long-term monitoring and maintenance programs and institutional controls under alternatives that would leave waste on site has

Commentor No. 8 (cont'd): Amy Harlib

- Scientists found the site poses a significant danger to people who live along nearby creeks, Buffalo residents and people living along the shores of Lakes Erie and Ontario. If just 1% of radioactivity leaked from the site, Lake Erie water users would be exposed to substantial radiation, causing hundreds of cancer deaths, and Buffalo and Erie County water replacement would cost hundreds of millions of dollars.
- The DEIS ignores the fact that the site must be maintained into perpetuity if buried waste is left on site. In this case, perpetuity is not a dozen years, or even two or three generations—the buried radioactive waste would have to be monitored, tracked, and maintained in place for hundreds of thousands to millions of years with burdensome and expensive maintenance costs. The EIS failed to analyze long term costs of monitoring and maintaining controls at the site for even 1,000 years.
- NYSERDA Raised Serious Problems with Key Aspects of DEIS. Essentially NYSERDA stated that the DOE's environmental assessments are scientifically indefensible for long term erosion, engineering controls and health impacts, as summarized below from the Forward of the DEIS (volume 1).
 - The soil erosion analysis over the long term is not scientifically defensible and should not be used for long-term decision making. Using the current erosion models, predictions of population doses will not be accurate for the long term.
 - The groundwater contaminant transport analysis and modeling cannot be relied on in predicting public radiation doses and long term cleanup decisions.
- Engineered barriers performance has not been substantiated and may be overly optimistic. Such barriers (caps, slurry walls, etc.) are critical to waste containment, and over the long term public radiation doses could be underestimated.
- The DEIS should be reframed to reflect the applicable federal requirements. The DEIS should be reframed to reflect the applicable federal requirements. The License Termination Rule (LTR) is the applicable federal regulation, not portions of NRC's low-level disposal regulations. It is not logical to assess the impacts from decommissioning actions that must meet the LTR requirements, but use other, not applicable regulations, to structure the analysis.
- The waste exhumation analysis is overly conservative and based on extreme conditions, resulting in maximal costs. Alternative methods could reduce the costs of exhumation and waste disposal.

8-2
cont'd

not been specifically defined at this time. Such definition would occur after an alternative is selected for implementation and would include consultation with appropriate regulatory authorities. An element of the long-term programs would be the development of plans and procedures for responding to emergencies. These plans and procedures would include coordination and agreements with local police and fire departments and medical facilities.

NYSERDA's View in EIS Foreword. DOE disagrees with many of the points raised in NYSERDA's View, which is included as the Foreword to this EIS. At the core, differences between DOE and NYSERDA center on different views about the nature of analysis required for an EIS and the attendant level of acceptable risk associated with any uncertainties in that analysis as it relates to decisionmaking. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, this EIS (1) acknowledges the information limitation and its relevance to environmental consequence, (2) summarizes existing credible scientific evidence, and (3) presents an analysis using a theoretical approach that is generally accepted by the scientific community involved in such analyses. This Final EIS contains text boxes in the relevant subject matter areas that acknowledge the differences of opinion between DOE and NYSERDA. In general, DOE's position is that the Agency spent much time and effort engaging highly qualified and respected experts in hydrology and hydrological transport, landscape evolution (erosion), human health and environmental risk analysis, and other technical fields, and stands behind the analyses performed for this EIS.

The analysis presented in Chapter 4, Section 4.1.10, complies with the requirements of NEPA and was not structured to reflect the requirements of NRC's low-level radioactive waste disposal regulations. Appendix L of this EIS discusses compliance with NRC's License Termination Rule.

The approach to estimating costs and the resulting cost estimate for the Sitewide Removal Alternative were reviewed and revised for the Final EIS. The revised cost estimate is presented in Chapter 4, Section 4.2.

As noted above, DOE disagrees with many of the points in NYSERDA's View, including the opinion that the long-term performance assessment for the Sitewide Close-In-Place Alternative is "seriously flawed and scientifically indefensible." Chapter 1, Section 1.8, of this EIS provides a roadmap of DOE's response to the

Commentor No. 8 (cont'd): Amy Harlib

- The long-term performance assessment for the in-place Closure alternative is “seriously flawed and scientifically indefensible.”

3) Oppose Phased Decision Making Preferred Alternative

Under this Alternative, Phase 1 would include moving solidified high-level waste to a new storage facility. The Phase 1 new cleanup work includes demolishing the process building in order to excavate the strontium plume source area, cleaning up the lagoons and installing barriers for groundwater contamination. Some question whether the plume is from leaking tanks. All of this new cleanup work addresses only 1.2% of the total radioactivity on the site. Decisions on a majority of the waste, or 99% of the radioactivity, will be addressed in Phase 2 including high-level waste tanks, and both radioactive waste burial areas (NDA and SDA), or approximately 600,000 curies. Public participation on the Phase 2 decision making process is not explained or guaranteed.

- The potential environmental and health impacts of leaving 99% of the radioactivity on site for another 30 years was not studied. For instance, the high-level waste tanks, with 320,000 curies of radioactivity, are nearing the end of their useful life (50 years) and any leaks could seriously pollute the sole source aquifer. The Decommissioning Plan (DP) claims that the high-level waste tanks will be empty at the start of Phase I, yet neither the DEIS or DP state how and when the tanks would be actually emptied.
- Given the past record of decades of delay, the two phased approach with a lengthy 30 year timetable is not responsive or responsible in addressing dangerous contamination. The site sits on top of a sole source aquifer and has been plagued with problems, such as radioactive contaminated groundwater, and radioactivity from the site has been found as far away as the shore at the juncture of the Niagara River and Lake Ontario demonstrating a potential for the leaking site to contaminate drinking water supplies. For instance, the buried high-level waste area (NDA) has been undergoing measures to limit water flow, and a large amount of high-level radioactive waste is buried in deep holes 50 to 70 feet deep which pose a significant risk of leaks to the sole source aquifer.
- The public was provided with almost no information on the data collection under Phase I, which is essential to determining the extent of future decontamination work in Phase 2. If data collection is inadequate, a safe cleanup in Phase 2 is less likely. There is no plan for future public participation on Phase 2 activities.

|| 8-2
cont'd

8-3

specific issues raised in the NYSERDA View that are the basis for NYSERDA's assertion.

DOE and NYSERDA note the commentor's opposition to the Phased Decisionmaking Alternative. Please see the Issue Summaries cited in the responses to Comment nos. 8-1 and 8-2 for responses to portions of this comment. The additional issues cited by the commentor are discussed in the following paragraphs:

Waste management under the Phased Decisionmaking Alternative: The commentor's statement regarding actions that would be taken during Phase 1 of the Phased Decisionmaking Alternative is consistent with what is stated in Chapter 2, Section 2.4.3 of this EIS. However, all of the alternatives except the No Action Alternative involve movement of the solidified high-level radioactive waste to a new storage facility. In addition, the extensive WNYNSC environmental monitoring program, which is designed to detect possible movement of contamination on the site, as well as specialized studies, have concluded that the source of the North Plateau Groundwater Plume is the Main Plant Process Building.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative

Commentor No. 8 (cont'd): Amy Harlib

4) Revisions Needed on Flawed DEIS

- Information Needed on Monitoring and Institutional Controls. The DEIS includes cleanup options where long-lasting radioactive waste is left buried on site, yet there is a serious lack of information on the monitoring and maintenance of engineering and institutional controls to ensure radioactive waste is safely contained. Funds and procedures should also be described that will be in place to respond immediately to any toxic releases. This information is absolutely critical to evaluate whether or not the site can be safely maintained if waste is left buried on site. The full monitoring, maintenance and institutional control program needs to be described in detail under each alternative.
- Public Disclosure is Inadequate. There appears to be a major discrepancy in the two documents; the DEIS states that DOE will be involved in both Phase I & 2 of the Phased Decision Making Alternative. But, the Decommissioning Plan appears to describe a situation where DOE could leave the site and any responsibility at the end of Phase I in approximately 30 years. If this were the case, it could leave New York State with the responsibility for cleaning up an estimated 99% of the site's radioactivity. This would obviously be a major change, yet there are only a few references in the Plan. It is critical that DOE confirm they will continue their responsibility and commitment to fully remediate the site.
- State Law Requires a Complete Plan in DEIS. The Phased Decision Making Alternative not only fails to tell us about key elements of Phase I, such as data collection, but it is unclear about what future actions would be done in Phase 2, which could be a violation of the State Environmental Quality Review Act (SEQRA). The SEQRA law requires that a DEIS have a complete plan and that all potential impacts be examined in detail in the DEIS; it does not allow segmentation of an action and an incomplete plan such as the phased decision making proposal.
- Eliminate Discounting. The agencies inappropriately use discounting in their cost analysis of the cleanup options. The total costs of their analysis should be an undiscounted cost. The economic technique known as 'discounting' undervalues important environmental resources like the Great Lakes and sole source aquifers, as well as future generations. The economists who authored the FCA Study critiqued the use of discounting in nuclear waste cleanups over long time periods for the following reasons. In standard capital investments, a discount rate is applied to account for future interest earnings. For instance, at a 3 percent discount rate, \$103 next year has a present value of \$100 today, because \$100 is

8-4

presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

8-5

Potential environmental and health impacts of leaving waste on site for 30 years: The analysis conducted for this EIS provides a basis for understanding the environmental and health impacts of continuing to manage the inventory in the Waste Tank Farm, NDA, and SDA in their current configuration. The impacts of storage are presented in Chapter 4, Section 4.1.9, where the Phase 1 human health impacts are discussed. Potential mitigation measures that could be implemented during this period are discussed throughout Chapter 6. Information on the human health impacts during this period is also provided in Appendices I, J, and P.

8-6

Status of the underground tanks in the Waste Tank Farm: DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE has developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State, or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flow is into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being further reduced by tank drying.

8-7

Additionally, much of the residual contamination in the tanks is attached (i.e., "fixed") to metal surfaces and is not readily mobile. Chapter 2, Section 2.3.1, of this EIS, as well as text in the *Phase 1 Decommissioning Plan for the West Valley Demonstration Project (Phase 1 Decommissioning Plan)*, have been clarified to acknowledge that the liquids remaining in the tanks will be dried as a result of installation and operation of the tank and vault drying system and that this drying

Commentor No. 8 (cont'd): Amy Harlib

the amount one would have to put in the bank today at 3 percent interest, in order to end up with \$103 next year. But, since West Valley's waste is radioactive for tens of thousands of years, a cost analysis should start out with at least a review over the next 1,000 years as a first step. Over periods of 1000 years, any substantial discount rate implies that the health and wellbeing of future generations has no present value—or no worth to us today. Since the cleanup options are meant to protect the public for many generations, we cannot reasonably assume that there is no value to public health in the year 1000. Also, the existence of regulatory requirements for protection of sites that will remain dangerous for 1,000 years must imply that we care today about health hazards that will be experienced in 2008. Costs and benefits incurred in that distant year must have a significant present value; otherwise, we could ignore them and we could "prove" via discounting that it is not cost-effective to spend anything today on our successors a thousand years down the road. At a discount rate of 1.4 percent, considered low by many economists, \$1 million in 2008 has a present value of \$1 today. Thus it would not be worth spending more than \$1 today to prevent \$1 million of harm in 2008. To validate the commonsense idea that outcomes in 2008 matter today, the discount rate must be no more than zero. If we care about the long-term impacts of today's nuclear waste, then the only supportable discount rate is zero. While the choice of a discount rate for short term decisions is an economic question, the choice of an intergenerational discount rate is a matter of ethics and policy. The value of future lives is a strong argument for not using an economic discount rate in this analysis.

8-7
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will be complete before any Waste Tank Farm decommissioning actions are initiated.

The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program. The decommissioning measures to manage the North Plateau Groundwater Plume and other sources of contamination at WNYNSC would reduce the consequences to humans and the environment.

Data collection under Phase 1 of the Phased Decisionmaking Alternative:

Chapter 2, Section 2.4.3, of this EIS describes decommissioning activities under the Phased Decisionmaking Alternative and provides a discussion of the data collection, studies, and monitoring to be performed during implementation of Phase 1 and the purpose of each of these activities. The overall intent of these Phase 1 activities is to further characterize the site and to research technology developments and engineering to aid consensus decisionmaking for Phase 2. Section 2.4.3.3 explains how the additional data and studies would be used in making a decision about potential future activities. The intent of this EIS is to provide a description of the environmental impacts of each of the alternatives to inform the Agency decisionmakers.

Public participation in Phase 2 decisionmaking: Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until final decisions are made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate Phase 2 decisions for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

Commentor No. 8 (cont'd): Amy Harlib

- 8-4** Please see the response to Comment no. 8-2 regarding long-term monitoring and maintenance and institutional controls under alternatives that would store waste on site. As stated in that response, detailed definition of long-term monitoring and maintenance programs and institutional controls under the alternatives that would leave waste on site would occur after an alternative is selected for implementation. An element of the long-term programs would be the development of plans and procedures for responding to emergencies, including coordination and agreements with local police and fire departments and medical facilities.
- This EIS was prepared to evaluate the environmental impacts of the alternatives for decommissioning and/or long-term stewardship of WNYNSC, a legally required step to support a decision on a course of action. The U.S. Congress and the President are responsible for establishing funding levels for various Federal Government programs, while the New York State Legislature and the Governor are responsible for establishing funding levels for state government programs. Implementation of the decision documented in DOE's Record of Decision and NYSERDA's Findings Statement is contingent on the level of funding allocated. Funding for emergency response to toxic releases is not within the scope of this EIS.
- 8-5** DOE will remain on site until it completes its responsibilities as assigned under the West Valley Demonstration Project Act. DOE would not leave the site after completion of the Phase 1 actions because it would not have completed the actions required under the Act. The description of the Phased Decisionmaking Alternative in Chapter 2 of this EIS has been revised to clarify this, and the wording in the *Phase 1 Decommissioning Plan* has been revised to avoid the implication that DOE would leave the site at the end of Phase 1.
- 8-6** If the Phased Decisionmaking Alternative is selected and documented in DOE's Record of Decision and NYSERDA's Findings Statement, cleanup of the site would occur in two separate phases. As part of the description of the decommissioning activities under the Phased Decisionmaking Alternative, Chapter 2, Section 2.4.3, of this EIS provides a discussion of the data collection, studies, and monitoring that would be performed during implementation of Phase 1, as well as the purpose of each of these activities. The overall intent of these Phase 1 activities is to further characterize the site and to research technology developments and engineering to aid consensus decisionmaking for Phase 2 actions.

Commentor No. 8 (cont'd): Amy Harlib

If the Phased Decisionmaking Alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close in place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. For each resource area, Chapter 4 discusses the impacts that would occur if either the removal or close-in-place is selected for Phase 2. The chapter also discusses which alternative(s) bound the impacts in the event that continued active management is selected for the SDA. The short-term impacts of a Phase 2 decision that involves continued active management of the SDA are bounded by either the removal or close-in-place impacts. The post-decommissioning impacts of a continued active management decision for the SDA, which include staffing, occupational exposure, and waste generation related to SDA monitoring and maintenance, as well as long-term impacts on public health and safety, would be similar to the no action impacts for the SDA.

DOE has not segmented the activities proposed in this EIS; instead, DOE has prepared this single, comprehensive EIS for the decommissioning and long-term stewardship of WNYNSC. This EIS adequately analyzes the totality of environmental impacts, including costs, of a broad spectrum of reasonable alternatives that meet the respective purposes and needs of DOE and NYSERDA (Sitewide Close-In-Place, Phased Decisionmaking, and Sitewide Removal), as well as the No Action Alternative.

While the Phased Decisionmaking Alternative temporarily defers a final decision on the disposition of the Waste Tank Farm, the NDA, and the Construction and Demolition Debris Landfill, DOE believes that the impacts of this deferred decision are adequately analyzed within this current EIS. Of course, as with all tiered decisions, DOE would continue to assess the results of any site-specific studies along with any emerging technologies to ascertain whether or not a Supplemental EIS is warranted prior to any Phase 2 decision. Based upon data available to date, however, DOE believes this EIS adequately evaluates the environmental impacts associated with the range of reasonable alternatives and the Agency has vigorously resisted all efforts to “segment” this single comprehensive decommissioning EIS into separate NEPA documents.

It is NYSERDA’s position that segmentation under SEQR refers to the improper division of one project into multiple smaller projects to circumvent NEPA (or

Commentor No. 8 (cont'd): Amy Harlib

SEQR) requirements. NYSERDA does not believe that improper segmentation would be involved under the Phased Decisionmaking Alternative because the Phase 1 actions proposed would be independent of and would not bias actions conducted in Phase 2. In other words, the actions proposed under Phase 1 would not automatically trigger certain actions under Phase 2; to the contrary, DOE and NYSERDA could opt for any alternative or combination of alternatives during Phase 2. The test for improper segmentation is whether or not projects (in this case Phase 1 and Phase 2) are interdependent. In this case, they are clearly not.

- 8-7 DOE and NYSERDA acknowledge the commentor's objection to discounting and interest in the cost-benefit analysis included in the Revised Draft EIS. Please see the Issue Summary for "Questions about Cost-Benefit Analysis" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

The cost-benefit analysis presented in Chapter 4, Section 4.2, of the Revised Draft EIS was performed to support NRC's request for cost-benefit information consistent with its as low as is reasonably achievable (ALARA) analysis guidelines. This cost-benefit analysis follows the principles in the NRC ALARA guidance presented in NUREG-1757, "NRC Consolidated Decommissioning Guidance." The analysis in Section 4.2 has been revised for this Final EIS and uses several relatively low discount rates (1, 3, and 5 percent) to investigate the sensitivity of the results to lower discount rates.

Commentor No. 9: Seth Rutledge

March 31, 2009

**Seth Rutledge
560 Allen Street
Syracuse, NY 13210**

I don't like the idea of sitting on a nuclear waste site while it spreads into the ground water and pollutes the great lakes. The waste must be cleaned up ASAP, or the job will be harder or impossible for future generations.

|| 9-1

9-1

DOE and NYSERDA note the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 10: Edward Butler

March 31, 2009

Edward Butler

36 E. 69th St.

New York, NY 10021

Sitewide Removal is the only Alternative that provides a complete and comprehensive cleanup of the entire site through excavation of radioactive and toxic waste, provides a permanent and safer solution that removes radioactive waste from a site with serious erosion problems, earthquake hazards, and a sole source aquifer, prevents any catastrophic releases which could cause polluting of community drinking water supplies, Lakes Erie and Ontario, harm public health and cost billions of dollars, significantly lowers health risks to nearby communities, with all waste removed after 64 years, and provides the most cost-effective approach over the long term. Leaving buried waste on site is expensive and a serious environmental and public health risk. Given the past record of decades of delay, the two phased approach with a lengthy 30 year timetable is not responsive or responsible in addressing dangerous contamination. In addition, the DEIS is flawed and inadequate and needs revisions.

10-1

10-2

10-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes," and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

10-2 This EIS was prepared in accordance with the requirements of NEPA and SEQR. In accordance with those requirements, the Revised Draft EIS was issued for public review and comment and DOE has revised it, as appropriate, to enhance the clarity and technical analysis of this Final EIS.

Commentor No. 11: Robert Rosenfeld

March 31, 2009

Robert Rosenfeld
26 McKeon Ave
Valley Stream, NY 11580

I understand there will be a determination on how best to deal with a nuclear waste site in the west valley. I cannot believe there could be more than the one obvious answer. Clean it up. You have the potential of contaminating the Great Lakes and thus at least a thousand miles of shoreline as well as the living things in the water and the water supply of huge numbers of people. This is a no brainer, clean it up completely. Thank you

II-1

11-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 12: Laurence Kirby

March 31, 2009

Laurence Kirby

36 Purdy Hollow Rd

Woodstock, NY 12498

We need the safest way to clean up by digging up the waste as soon as possible so it cannot leak into our water and environment. Therefore I support the Sitewide Removal Alternative and oppose Leaving Buried Waste On Site.

12-1

12-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative and opposition to leaving buried waste on site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 13: Don Devine

March 31, 2009

Don Devine

3 Rocky Road

Chester, NY 10918

Please perform the safest cleanup. Sitewide Removal. Dig dig up the waste immediately so it cannot leak into our water and environment.

13-1

13-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 14: Suzanne Webster

April 1, 2009

Suzanne Webster

154 Harwood Circle

Rochester, NY 14625

Please be aware that this site MUST be taken care of properly NOW. We
cannot leave our mistakes for future generations.

14-1

14-1

DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement.

Commentor No. 15: Judy W. Soffer

April 1, 2009

Judy W. Soffer

NIRS

8 Termakay Drive

New City, NY 10956-6434

Protect the Great Lakes and western New York's drinking water. Support a full cleanup of the West Valley Nuclear Waste Site now.

15-1

15-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 16: Kathleen M. Dunwoodie Aman

April 1, 2009

**Kathleen M. Dunwoodie Aman
431 Ruskin Rd
Amherst, NY 14226**

It is imperative that sufficient funding be included to completely clean up the West Valley nuclear site. Independent studies show that the alternative to a complete clean up is that nuclear waste will seep into the land and Cattaraugus Creek which gushes into Lake Erie. Consider the wonder of the gift of water : everytime you take a drink and realize most of that fresh water comes from the Great Lakes - do we want future generations' water poisoned by our inaction? Please make sure to fully fund the complete clean up of West Valley.

16-1

16-2

**16-1
cont'd**

16-1

16-2

This EIS was prepared to evaluate the environmental impacts of the alternatives for decommissioning and/or long-term stewardship of WNYNSC, a legally required step to support a decision on a course of action. The U.S. Congress and the President are responsible for establishing funding levels for various Federal Government programs, while the New York State Legislature and the Governor are responsible for establishing funding levels for state government programs. Implementation of the decision documented in DOE's Record of Decision and NYSERDA's Findings Statement is contingent on the level of funding allocated.

Please see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

**Commentor No. 17: Elizabeth B. Weberg, Deputy Mayor,
East Aurora, New York**

From: Elizabeth Weberg [mailto:weblark@verizon.net]
 Sent: Thursday, April 02, 2009 9:31 AM
 To: Bohan, Catherine
 Subject: West Valley site

Dear Ms. Bohan,

I am unable to attend the hearing this evening at ECC on the future of the West Valley radioactive waste, but as a resident of Western New York and as a chemist, I have very strong feelings about this issue.

Burying the problem is not the solution! There are irrefutable facts that must be faced:

1) The current site has extremely rapid erosion rates. The streams that run through it eventually feed into Lake Erie, the Niagara River, Lake Ontario, and beyond. || 17-1

2) The West Valley Site has waste that will be dangerous for 100,000 years. There is no method of keeping the waste on site that can control it for that duration. || 17-2

3) Fresh water is the most important natural resource on our earth to protect.

The only responsible solution is to store the waste above ground so it is not forgotten and can be monitored until a safe, national depository is constructed. || 17-3

We have created a mess that has no easy solution, but the mess is ours to deal with, and we must do everything in our power to prevent poisoning the land and water for future generations.

Thank you,

Elizabeth B. Weberg
 Ph.D., Inorganic Chemistry
 Deputy Mayor, East Aurora

17-1 DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

Please see the Issue Summaries for “Concerns about Potential Contamination of Water” and “Questions about Long-term Erosion Modeling” in Section 2 of this CRD for further discussion of these issues and DOE’s and NYSERDA’s responses.

17-2 The long-term environmental consequences of managing waste on site are analyzed in Chapter 4, Section 4.1.10, of this EIS.

17-3 As explained in Chapter 2, Section 2.5.1, of this EIS, DOE and NYSERDA do not consider the use of existing structures or construction of new aboveground facilities at WNYNSC for indefinite storage of decommissioning or long-term management of waste to be a reasonable alternative for further consideration because it would not meet the Purpose and Need for Agency Action described in Chapter 1, Section 1.3. Thus, the decommissioning alternatives addressed in this EIS involve managing existing facilities and contamination at their current locations (Sitewide Close-In-Place) or removing all radioactive and hazardous waste from the site (Sitewide Removal).

Offsite disposal capacity is available for most of the waste that could be generated from any of the EIS alternatives. Consistent with existing practice, any waste generated from any of the EIS alternatives that does not currently have offsite disposal capacity (referred to as orphan waste) would be safely and retrievably stored at WNYNSC until such disposal capacity is available.

Commentor No. 18: Tammy Yekich

4340 Chisholm Trail
Hamburg, NY 14075
March 30, 2009

Dear Ms Bohan,

My family drinks and bathes in the water that comes from Lake Erie. We may now/and/or in the future, be affected by waste from STRONTIUM 90, PLUTONIUM, and other radioactive by-products of reprocessing from West Valley Nuclear Fuel Services, which is presently leaking into nearby streams and creeks that end up in Lake Erie and Lake Ontario.

This dangerous facility was built on unstable terrain that has now had a large landslide.

Decommissioning this long-term stewardship of West Valley demonstration project is NOT an option.

New York State and the Federal government MUST be involved in completely removing nuclear materials from West Valley NOW.

Sincerely,

Mrs Tammy Yekich

18-1

18-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

18-2

18-2 DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

**18-1
cont'd**

Commentor No. 19: Deborah Wirth

May 14, 2009

Deborah Wirth

Wirth Holistic

PO Box 1615

Williamsville, NY 14231

Waiting 30 years is UNACCEPTABLE! What affects us will eventually affect you too! We want Complete Removal Now of the radioactive material at West Valley. We also want An extension of the deadline to file objections from June 8, 2009 to December 2009 so that people have a chance to get informed!

|| 19-1

|| 19-2

19-1

DOE and NYSERDA note the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

19-2

In response to requests from the public, DOE and NYSERDA extended the original 6-month comment period (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE) for an additional 90 days, through September 8, 2009.

Commentor No. 20: Gerard Catalano

April 3, 2009

Gerard Catalano

100 Hamilton Blvd.

Kenmore, NY 14217

Dear Ms. Bohan, To this day it shocks me the policies of NYS regarding the chemical dumps in Niagara County. The faster we can dispose of the chemicals buried in Niagara County the better off our children will be. Have you ever looked at the statistics of the Great Lakes? 1) Drinking water to over 15 million people. 2) Holds 20% of the WORLD's fresh water. 3) Over \$1 billion a year in recreation and fishing industries. We need these chemicals out of Niagara County NOW not 30 years from now. Don't tell me that there isn't significant seepage into the lakes Erie and Ontario. If these stats are not alarming enough to you then you are corrupt as the past administrations. I am also asking for an extension of the deadline for objections from June 8, 2009 to a new date. Gerard Catalano

|| 20-1

|| 20-2

20-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

20-2

In response to requests from the public, DOE and NYSERDA extended the original 6-month comment period (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE) for an additional 90 days, through September 8, 2009.

**Commentor No. 21: Harriet Lane Tower,
Residents for Responsible Government**

April 6, 2009

Harriet lane Tower

Residents for Responsible Government

800 River RD

Youngstown, NY 14174

Government agencies have made serious errors related to the environment and the well being of the people. Now is the time to correct these errors and to remediate fully, now, all at once the errors of West Valley. One of the most spectacular geographic areas of western New York has been marred and put at risk by these errors. Enough procrastinating! Bite the bullet and take care of it before the toxins migrate to the Great Lakes and even bigger problems arise. What kind of people work for these agencies that would be so blind to the actions that need attention. Harriet lane Tower

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DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 22: Wendy Swearingen

April 6, 2009

Wendy Swearingen

3075 North Creek Road

Youngstown, NY 14174

Dear Ms. Bohan, The current plan and environmental impact statement does not fully address two important West Valley issues. It is imperative to protect residents proximate to the site from actual and potential harm and danger, and second the Great Lakes must be safe from all contamination. Lake Ontario alone provides drinking water to more than 50 million humans. Complete removal is the only viable solution that addresses both issues. Please revisit the planning stage and devise a plan that will permanently remove the radioactive wastes from West Valley as soon as possible. I would ask you to plan for a complete removal now and to extend the comment period from June 2009 to December 2009.

Sincerely, Wendy Swearingen

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22-2

This EIS was prepared in accordance with the requirements of NEPA and SEQR to evaluate the environmental impacts of alternatives for the decommissioning and/or long-term stewardship of WNYNSC. DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

In response to requests from the public, DOE and NYSERDA extended the original 6-month comment period (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE) for an additional 90 days, through September 8, 2009.

**Commentor No. 23: Barbara Warren, Executive Director,
Citizens' Environmental Coalition**



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Websites: www.iectoxic.org • www.ecothreatny.org • www.toxicfreefuture.org

**Testimony regarding
the Draft Decommissioning and Stewardship EIS
for the Western New York Nuclear Service Center**

By Barbara Warren
Citizens' Environmental Coalition
Monday March 30th 2009
Albany, NY

Independent Full Cost Accounting Study

An independent, state-funded study, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site*, revealed leaving buried waste at the site is both high risk and expensive while a waste excavation cleanup presents the least risk and the lowest cost. Over 1,000 years, waste excavation costs \$9.7 to \$9.9 billion while leaving dangerous buried radioactive waste onsite costs \$13 billion to \$27 billion if a catastrophic release occurred. We are putting that full report into the record for this hearing. The Full Cost Accounting Study analysis is actually supported by the extensive comments of NYSERDA in the Forward to the Environmental Impact Statement. There NYSERDA questions the long term analysis done by DOE saying they are seriously flawed and scientifically indefensible and therefore cannot be relied on for predicting public radiation doses.

Toxic Assets & The Real Deal

The recent debacle of the financial industry has resulted in lots of talk about toxic assets and what to do about them. Several trillion dollars have been allocated to restoring the soundness of financial institutions because of these "so-called toxic assets." We have REAL toxic assets at the West Valley site and the government must find the money to dig them up and safely contain them for thousands of years. Whatever the cost, it is the government's responsibility to do so. Leaving the buried waste in the ground to leach into the sole source aquifer or to be released catastrophically by the forces of erosion and contaminating the Great Lakes is unacceptable. Fully cleaning up the radioactive waste at West Valley sounds like a bargain at under \$10 billion when compared to over a hundred billion for individual banks. We want to remind you that **Prevention** is usually a fraction of the cost of response, remediation and clean-up. Protecting New Orleans from storms and flooding would have prevented hundreds of billions of dollars in damages from Hurricane Katrina. Your use of Cost-benefit analysis undervalues all prevention activities, which prevent future harm.

Tonight I am going to focus on some of the major problems with the EIS and Decommissioning Plan, particularly the Preferred Alternative or "1% Solution", as we are now calling it. Phase 1 will handle just 1.2% of the buried radioactivity on site. The other 99% of the radioactivity will possibly be dealt with 30 years from now in Phase 2, but we know almost nothing about Phase 2. If they only do 1% of the radioactivity in each Phase, we might need 99 Phases to complete the clean-up.

A Clean Environment* Green Purchasing* Pollution Prevention* Healthy People* Green Jobs* Zero Waste
A Healthy Economy* A Sustainable Future

- 23-1 DOE and NYSERDA acknowledge the commentor's support for the conclusions of *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* and opposition to an EIS alternative that would leave buried waste on site. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Conclusions of the Synapse Report" in Section 2 of this CRD for further discussion and DOE's and NYSERDA's responses.
- 23-2 DOE disagrees with many of the points raised in NYSERDA's View, which is included as the Foreword to this EIS. At the core, differences between DOE and NYSERDA center on different views about the nature of analysis required for an EIS and the attendant level of acceptable risk associated with any uncertainties in that analysis as it relates to decisionmaking. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, this EIS (1) acknowledges the information limitation and its relevance to environmental consequence, (2) summarizes existing credible scientific evidence, and (3) presents an analysis using a theoretical approach that is generally accepted by the scientific community involved in such analysis. This Final EIS contains text boxes in the relevant subject matter areas that acknowledge the differences of opinion between DOE and NYSERDA. In general, DOE's position is that the Agency spent much time and effort engaging highly qualified and respected experts in hydrology and hydrological transport, landscape evolution (erosion), human health and environmental risk analysis, and other technical fields, and stands behind the analyses performed for this EIS.
- 23-3 Regarding funding of cleanup at WNYNSC, this EIS was prepared to evaluate the environmental impacts of the alternatives for decommissioning and/or long-term stewardship of WNYNSC, a legally required step to support a decision on a course of action. The U.S. Congress and the President are responsible for establishing funding levels for various Federal Government programs, while the New York State Legislature and the Governor are responsible for establishing funding levels for state government programs. Implementation of decisions made in DOE's Record of Decision and NYSERDA's Findings Statement is contingent on the level of funding allocated.
- 23-4 The preliminary cost-benefit analysis presented in Chapter 4, Section 4.2, was prepared at NRC's request and in a manner consistent with NRC's as low as is reasonably achievable (ALARA) guidance. Chapter 4, Section 4.2, of this EIS has

**Commentor No. 23 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

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An Environmental Impact Statement should contain 3 major and essential elements:

1. A Complete Plan or Project & Full Public Disclosure
An EIS should start with a complete plan or project and then fully describe and disclose all elements of the project.
2. Identification of all Potential Environmental Impacts and then full Analysis of those impacts.
3. A legitimate public process with information made available and an adequate opportunity for the public to have some influence on the decisions that are made.

Unfortunately we have very incomplete plans for all alternatives except for Sitewide Removal and the Preferred Alternative with its 2 phases is the most incomplete. The major areas of Incompleteness include:

- Monitoring of Containment & Leaks. There is no detailed description of monitoring—no disclosure to the public, no assessment of the environmental impacts associated with the failure to identify a containment failure and as a result no legitimate public process for this critical element.
All of the Alternatives that leave buried Radioactive Materials on site require ongoing monitoring to ensure that containment is maintained and dangerous radioactive materials are not contaminating ground and surface water and spreading off-site. In the case of the Sitewide Removal Alternative we are told that all contamination will be removed, so there is no need for monitoring. In the case of all the other Alternatives monitoring is not described. Monitoring is an essential element of long term containment and control. An inadequate monitoring plan can result in widespread contamination and jeopardize public health—in other words it could have serious environmental impacts. Therefore a detailed monitoring plan should have been disclosed to the public in the EIS so we could comment on its adequacy. And the potential impacts of an inadequate monitoring plan analyzed. As a result the EIS is seriously flawed.
- Data Collection. One of the primary objectives of the so-called Phased Decision-Making Alternative is to collect more data at the site. Data Collection is supposedly a critical part of the future decisions that will be made regarding what projects will be undertaken in Phase 2. Yet the public is not provided any detail regarding the data collection. Thus there is no public disclosure, no ability for the public to evaluate the adequacy of the planned data collection in setting the stage for responsible decision-making, and no ability for the public to provide comments on a critical element of Phase 1.
- The Phased Decision-making Alternative leaves the Public Out. What we now have is unknown process in which agencies will decide on how much monitoring and how much data collection is needed. Over the next 30 years federal and state agencies will make decisions with no public process or involvement. Then the US Department of Energy will leave the West Valley nuclear site prior to the beginning of Phase 2. Thus New York State will be left with the entire responsibility and the bill for cleaning up the rest of the radioactive mess—from federal nuclear wastes, and a national program of nuclear reprocessing.

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been revised to present the results of sensitivity analyses using different discount rates. If cost-benefit considerations are part of the basis for agency decisionmaking, this will be acknowledged and discussed in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Questions about Cost-Benefit Analysis" Issue Summary in Section 2 of this CRD for further discussion of this issue.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see the response to Comment no. 23-8).

DOE and NYSERDA believe that this EIS complies with the requirements of NEPA and SEQR.

1. This EIS has been prepared in accordance with the requirements of NEPA and SEQR. DOE and NYSERDA have prepared this single, comprehensive EIS for the decommissioning and long-term stewardship of WNYNSC. As required by NEPA and SEQR, it analyzes the environmental impacts of a broad spectrum of reasonable alternatives that meet the respective purposes and needs of DOE and NYSERDA (Sitewide Removal, Sitewide Close-In-Place, and Phased Decisionmaking), as well as the No Action Alternative. A detailed work plan is not required to complete an EIS, and normally is not developed until a decision is made.
2. This EIS adequately analyzes the totality of environmental impacts, including costs, for the identified alternatives. These impacts are presented in Chapter 4 of this EIS.
3. The public comment process for this EIS meets the requirements of NEPA and SEQR. The Revised Draft EIS was issued for public review and comment on December 8, 2009. DOE's Notice of Availability announced a 6-month public

**Commentor No. 23 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

Insofar as institutional controls are concerned, DOE would continue control of the project premises during the Phase 1 decommissioning activities and the period between completion of these activities and the start of Phase 2 of the decommissioning. Institutional controls would include security fences and signs along the perimeter of the project premises, a full-time security force, provisions for controlled access through designated gateways, and appropriate security measures for the new Canister Interim Storage Facility on the south plateau, which would be established during Phase 1 of the decommissioning.

- Because Phased Decision-making leaves decisions about what to do with 99% of site radioactivity, the majority of the environmental impacts are unstudied in this alternative. The NRC Disposal site and the State Disposal site are left for Phase 2 as are the High Level Waste Tanks. The inadequacies of the EIS are best illustrated by focusing on these tanks. These tanks are made of carbon steel, subject to corrosion and are currently at the end of their useful lives. Their ability to contain any radioactivity over the next few years is questionable, much less for the next 30 years. The EIS not only fails to describe the monitoring in and around the tanks but fails to examine the potential impact of a failure and leakage from these tanks on the sole source aquifer and nearby creeks. But the Decommissioning Plan stands alone in its lack of honesty when it claims the tanks are empty while describing the contrary situation of the tanks containing 320,000 curies of radioactivity.
- Another objective of Phase I is supposedly to "not prejudice decisions for Phase 2". I have no idea what this means. However, it is not clear why facilities that have not been impacted by radioactivity are a priority for removal under Phase I of the Preferred Alternative such as the new Warehouse in WMA-10. We are concerned that eliminating this facility and others could hinder a full excavation and cleanup of the NDA and the SDA in the future. Also included in this area and slated for demolition are an administration building, an environmental laboratory, and a waste management storage area. Where will you store equipment and materials for the planned activities at the site? Where will workers change their clothing and store protective equipment? Where will emergency medical supplies and equipment be stored? We have received none of the rationale for the choice of certain facilities for demolition and not others. Why is remote handling equipment being removed? Won't it be needed to remove the canisters of vitrified high level waste? At the same time we don't have a work plan that describes fully what facilities will be needed for the work to be accomplished—including full excavation and cleanup of all site facilities containing 99% of the radioactivity. We object to any buildings, facilities or equipment being removed in phase I that pose no radioactive or hazardous material problem, because we can see no benefit to prioritizing such facilities for removal and we fear it will foreclose reasonable and cost-effective options for full clean-up.

The Phased Decision making alternative is an incomplete plan with inadequate basic information available to the public, and therefore inadequate environmental analysis. The current public process fails the test for public involvement and there is no plan laid out for future public involvement. In fact under the State Environmental Quality Review Act, a segmented plan rather than a complete plan is prohibited.

The Sitewide Removal Alternative—full excavation and cleanup—is the only alternative that constitutes a complete plan and that has been adequately described to the public. The only missing element we can identify is that RCRA hazardous waste was not dealt with for this alternative or any of them.

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comment period (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE) and three public hearings. In response to requests from the public, DOE and NYSERDA extended the original public comment period for an additional 90 days, through September 8, 2009. An additional public hearing was held in Albany, New York, and the hearing originally scheduled for Blasdell, New York, was moved to a more central downtown Buffalo, New York, location. DOE and NYSERDA held the public hearings to provide interested members of the public with opportunities to learn more about the content of the Revised Draft EIS from exhibits, factsheets, and other materials; to hear DOE and NYSERDA representatives present the results of the EIS analyses; to ask clarifying questions; and to provide oral or written comments. A website (<http://www.westvalleyeis.com>) was established to further inform the public about the Revised Draft EIS, how to submit comments, the public hearings, and other pertinent information. Comment submission mechanisms and public hearing dates, times, and locations were announced in the *Federal Register* and New York State Environmental Notice Bulletin notices, in local newspapers, and on the website. Members of the public who expressed interest and are on the DOE and NYSERDA mailing list for the Revised Draft EIS were notified by U.S. mail regarding hearing dates, times, and locations.

As acknowledged in this EIS, long-term monitoring and maintenance would be implemented for alternatives that would leave waste on site. This EIS provides a summary description of current and potential future environmental monitoring programs. The descriptions of the alternatives were revised to further describe the use of engineered barriers and long-term monitoring and maintenance. Long-term monitoring and maintenance are described in Chapter 2, Sections 2.4.2.6 and 2.4.3.8. Long-term monitoring and institutional controls are also discussed in Chapter 6. Additional information about current and proposed monitoring and institutional controls is provided in Appendices C, H, and I. Chapter 2, Table 2-4, includes estimates of the environmental consequences if (1) monitoring and maintenance are successful (institutional controls remain in place) and (2) monitoring and maintenance programs fail (institutional controls are lost). Chapter 4, Section 4.2, of this EIS includes monitoring and maintenance costs for the alternatives that would leave waste on site.

Detailed information regarding long-term monitoring and maintenance programs and institutional controls under alternatives that would leave waste on site has

***Commentor No. 23 (cont'd): Barbara Warren,
Citizens' Environmental Coalition***

not been specifically defined at this time. Such definition would occur after an alternative is selected for implementation and would include consultation with appropriate regulatory authorities.

- 23-7 Chapter 2, Section 2.4.3, of this EIS describes decommissioning activities under the Phased Decisionmaking Alternative and provides a discussion of the data collection, studies, and monitoring to be performed during implementation of Phase 1 and the purpose of each of these activities. The overall intent of these Phase 1 activities is to further characterize the site and to research technology developments and engineering to aid consensus decisionmaking for Phase 2. Section 2.4.3.3 explains how the additional data and studies would be used in making the Phase 2 decision regarding potential future activities. The intent of this EIS is to provide a description of the environmental impacts of each of the alternatives to inform the Agency decisionmakers.
- 23-8 Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until final decisions are made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.
- NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate Phase 2 decisions for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.
- Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and

**Commentor No. 23 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

DOE will remain on site until it completes its responsibilities as assigned under the West Valley Demonstration Project Act. DOE would not leave the site after completion of the Phase 1 actions because it would not have completed the actions required under the Act. The description of the Phased Decisionmaking Alternative in Chapter 2 of this EIS has been revised to clarify this, and the wording in the *Phase 1 Decommissioning Plan for the West Valley Demonstration Project (Phase 1 Decommissioning Plan)* has been revised to avoid the implication that DOE would leave the site at the end of Phase 1.

- 23-9 This EIS presents the impacts of Phase 1 and Phase 2 of the Phased Decisionmaking Alternative. The environmental impacts of implementing Phase 1 of the Phased Decisionmaking Alternative are described for each resource area in Chapter 4 of this EIS. If this alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. For each resource area, Chapter 4 discusses the impacts that would occur if either removal or close-in-place is selected for Phase 2. The chapter also discusses which alternative(s) bound the impacts in the event that continued active management is selected for the SDA. The short-term impacts of a Phase 2 decision that involves continued active management of the SDA are bounded by either the removal or close-in-place impacts. The post-decommissioning impacts of a continued active management decision for the SDA, which include staffing, occupational exposure, and waste generation related to SDA monitoring and maintenance, as well as long-term impacts on public health and safety, would be similar to the no action impacts for the SDA.

DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is

**Commentor No. 23 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flow is into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level radioactive waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being further reduced by tank drying. Longer-term monitoring at the site is addressed in the response to Comment no. 23-6.

Additionally, much of the residual contamination in the tanks is attached (i.e., “fixed”) to metal surfaces and is not readily mobile. Chapter 2, Section 2.3.1, of this EIS, as well as text in the *Phase 1 Decommissioning Plan*, have been clarified to acknowledge that there are liquids remaining in the tanks that will be dried as a result of installation and operation of the tank and vault drying system and that this drying will be complete before any Waste Tank Farm decommissioning actions are initiated.

- 23-10** DOE and NYSERDA acknowledge the commentor’s concerns that the removal of facilities under Phase 1 of the Phased Decisionmaking Alternative could affect a future decision about site cleanup.

The decision has already been made to remove many of the facilities and areas identified by the commentor down to their floor slabs or to grade prior to the start of any decommissioning actions (see Chapter 2, Section 2.3.1, of this EIS). These include the Administration Building and Expanded Environmental Laboratory in Waste Management Area 10 and most of the facilities in Waste Management Area 5. The decisions as to which facilities would be removed to achieve the Interim End State (the EIS starting point) were developed by DOE and NYSERDA after careful consideration of all facilities and areas on WNYNSC. None of the facilities to be closed at the starting point of this EIS are expected to be needed, either individually or collectively, for any decommissioning alternative. None of them would be needed to safely monitor and maintain or support future removal of the vitrified high-level radioactive waste on the site or to assist in

***Commentor No. 23 (cont'd): Barbara Warren,
Citizens' Environmental Coalition***

other aspects of site decommissioning. Leaving the unneeded facilities in place would require continuing maintenance and monitoring, resulting in unnecessary expense. The only facility specifically identified by the commentor that will not have been removed prior to the EIS starting point is the New Warehouse in Waste Management Area 10. The New Warehouse and other facilities and storage areas that would be removed from the site during Phase 1 of the Phased Decisionmaking Alternative, if that alternative is selected in DOE's Record of Decision and NYSERDA's Findings Statement, are addressed in Chapter 2, Section 2.4.3.1, of this EIS.

Facilities that would be required for full excavation and cleanup of all site facilities (Sitewide Removal) are described in the discussion in Chapter 2, Section 2.4.1.1, and Appendix C, Section C.3.1.

- 23-11** Regarding the adequacy of the environmental analysis performed for the Phased Decisionmaking Alternative, please see the response to Comment no. 23-9. Regarding continued public involvement in Phase 2 decisionmaking under the Phased Decisionmaking Alternative, please see the response to Comment no. 23-8. Concerning the rest of this comment, DOE has not segmented the activities proposed in this EIS; instead, DOE has prepared this single, comprehensive EIS for decommissioning and long-term stewardship of WNYNSC. This EIS adequately analyzes the totality of environmental impacts, including costs, of a broad spectrum of reasonable alternatives that meet the respective purposes and needs of DOE and NYSERDA (Sitewide Close-In-Place, Phased Decisionmaking, and Sitewide Removal), as well as the No Action Alternative.
- While the Phased Decisionmaking Alternative temporarily defers final decision on the disposition of the Waste Tank Farm, NDA, and Construction and Demolition Debris Landfill, DOE believes that the impacts of this deferred decision are adequately analyzed within the current EIS. Of course, as with all tiered decisions, DOE would continue to assess the results of any site-specific studies along with any emerging technologies to ascertain whether or not a Supplemental EIS is warranted prior to any Phase 2 decision. Based upon data available to date, however, DOE believes this EIS adequately evaluates the environmental impacts associated with the range of reasonable alternatives and the agency has vigorously resisted all efforts to "segment" this single comprehensive decommissioning EIS into separate NEPA documents.

***Commentor No. 23 (cont'd): Barbara Warren,
Citizens' Environmental Coalition***

It is NYSERDA's position that segmentation refers to the improper division of one project into multiple smaller projects in an effort to circumvent NEPA (or SEQR) requirements. NYSERDA does not believe that improper segmentation has occurred in this case because the Phase 1 actions proposed under the Preferred Alternative would be independent of and would not bias actions conducted in Phase 2. In other words, the actions proposed under Phase 1 will not automatically trigger certain actions to take place under Phase 2; to the contrary, NYSERDA can opt for any alternative or combination of alternatives during Phase 2. The test for improper segmentation is whether or not projects (in this case Phase 1 and Phase 2) are interdependent. In this case, they are clearly not.

- 23-12** DOE acknowledges the commentor's support for the Sitewide Removal Alternative. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD. Both the Revised Draft EIS and the Final EIS address management and disposal of RCRA hazardous waste. Chapter 1, Section 1.2, discusses the RCRA background of the site. Chapter 4, Section 4.1.11 and Table 4-46, address the disposition of hazardous waste under each of the alternatives. The long-term performance assessment in Appendix H analyzes the human health consequences of known hazardous constituents. Agency actions would comply with the applicable cleanup and decommissioning criteria for WNYNSC embodied in Federal and New York State environmental, safety, and health regulatory requirements promulgated under various statutory authorities (see Chapter 5 of this Final EIS). As summarized in Chapter 1, Section 1.3, of this Final EIS, these regulatory requirements include, in part, RCRA permitting and corrective actions under New York State and/or EPA requirements, decommissioning according to NRC requirements in its License Termination Rule, and EPA assessments of compliance with National Emission Standards for Hazardous Air Pollutants.

**Commentor No. 24: Roger Downs,
Sierra Club Atlantic Chapter**



Catherine Bohan,
EIS Document Manager,
West Valley Demonstration Project,
Department of Energy,
PO Box 2368, Germantown, MD 20874

March 30, 2009

Dear Ms. Bohan,

The Sierra Club Atlantic Chapter has reviewed the Department of Energy (DOE) and NYS Energy Research & Development Authority's (NYSERDA) Draft Environmental Impact Statement (DEIS) focused on cleanup options for the West Valley Nuclear Waste Site. In consideration of all available and analyzed options we find that a complete site wide removal of this historic radioactive waste deposit is far superior to the "preferred alternative" which is to wait up to 30 years on a final cleanup decision, while the plume of waste continues its subsurface migration.

Clearly the site wide removal option provides us the benefit of a complete and comprehensive cleanup from a site with serious erosion problems, earthquake hazards; all over a sole source aquifer. Ultimately, we would like to remove any possibility of a catastrophic release into community drinking water supplies, including the Great Lakes, potentially costing billions in human and ecological losses.

The Sierra Club Atlantic Chapter has also reviewed the independent, State-funded study, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site* and we are compelled by the findings:

Leaving buried waste at the site has more adverse environmental outcomes and at a greater cost where as a complete site wide cleanup presents the least risk to a broader population and is the least expensive long-term option. The study finds that over the next 1000 years, waste excavation will cost \$9.9 billion while onsite burial will cost \$13 billion with the potential for an additional \$27 billion dollar remediation cost if a catastrophic release occurs.

353 Hamilton Street • Albany, NY 12210 • tel. (518) 426-9144 • fax (518) 426-3052
web: <http://newyork.sierraclub.org> 100% recycled paper

- 24-1 DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.
- Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.
- Implementation of the Phased Decisionmaking Alternative would make an important advance in the decommissioning of the WNYNSC within the initial 8 years. The cleanup that would take place during Phase 1 of the Preferred Alternative, as explained in Chapter 2, Section 2.4.3, of this EIS, would reduce or eliminate potential health or environmental impacts by removing major facilities (such as the Main Plant Process Building and lagoons). In addition, the source area for the North Plateau Groundwater Plume would be removed, thereby reducing the source of radionuclides that are potential contributors to human health or environmental impacts. The nonsource area would be contained by the permeable treatment wall.
- 24-2 DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in Appendix F of this EIS. This EIS analyzes the long-term (multi-century) consequences of unmitigated erosion for postulated local and Lake Erie and Niagara River water users. This EIS also analyzes the long-term consequences of groundwater releases to postulated local and Lake Erie and Niagara River water users. Please see the Issue Summaries for "Concerns about Potential Contamination of Water" and "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

**Commentor No. 24 (cont'd): Roger Downs,
Sierra Club Atlantic Chapter**

While it is difficult to think in geologic time, we are convinced that the West Valley Site is fatally vulnerable to erosion, and that a long-term storage strategy of radioactive waste is certain to result in the Great Lakes contamination over the centuries. The responsibility of maintaining this site in perpetuity over hundreds if not thousands of years cannot be remotely guaranteed. New York State and The Dept of Energy have control over the present, and in spite of the staggering cost, full comprehensive clean up now will be the bargain of the millennium.

The Sierra Club Atlantic Chapter is appreciative of NYSERDA's separate and critical analysis of the DEIS's unscientific findings, and hopes that moving forward meaningful changes will be made to the document including clarification on public disclosure, monitoring protocols, and future obligations under SEQRA.

While we understand the complexity of this clean-up and the perceived need for a phased approach to allow for the best information to guide the process, we find the current "preferred alternative" deficient in its lack of commitment to public participation, expeditious clean ups and clarity as to who will eventually fund the vast majority of those clean-ups. Again, we urge the Department of Energy to take responsibility, while we still can, and fund the total clean up of the West Valley Nuclear Waste Site.

Sincerely yours,

Roger Downs
Sierra Club Atlantic Chapter
353 Hamilton Street
Albany, NY 12210
(518) 426-9144

**24-2
cont'd**

**24-3
cont'd**

24-4

24-3

DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for a discussion of the report's issues and DOE's and NYSERDA's response.

In preparing this Final EIS, changes were made to the Revised Draft EIS in response to Agency and public comments. Specific instances of additional information included in this Final EIS include long-term monitoring protocols (Sections 2.4.2.6, 2.4.3.8, and 2.4.4.4) and future NEPA and SEQR obligations under the Preferred Alternative (Section 2.4.3). Public disclosure is discussed in the following response.

24-4

Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until final decisions are made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate Phase 2 decisions for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

This EIS was prepared to evaluate the environmental impacts of the alternatives for decommissioning and/or long-term stewardship of WNYNSC, a legally required step to support a decision on a course of action. The U.S. Congress and the President are responsible for establishing funding levels for various Federal Government programs, while the New York State Legislature and the Governor

**Commentor No. 24 (cont'd): Roger Downs,
Sierra Club Atlantic Chapter**

are responsible for establishing funding levels for state government programs. Implementation of the decision documented in DOE's Record of Decision and NYSERDA's Findings Statement is contingent on the level of funding allocated.

**Commentor No. 25: Laurence T. Beahan, Conservation Chair,
Sierra Club, Niagara Group**

Laurence T. Beahan MD
5 Darwin Drive
Snyder NY 14226
716 839 3112
larry_beahan@roadrunner.com

Catherine M. Bohan
EIS Document Manager
West Valley Demonstration Project
US Department of Energy
PO Box 2368
Germantown, MD 20874

RE West Valley Draft Decommissioning and/or Long term Stewardship EIS Comments.

The border between Erie and Cattaraugus County is pretty country, forested hills cut by deep ravines. The snow pack is beginning to melt there. Dark tree trunks stand outlined against patches of snow on the forest floor. Fog shrouds the hollows. Occasional cabins peer though the woods.

Then at West Valley, out of the mist, looms a moon-scape with an alien space station at its center, the Western New York Nuclear Service Center. In the next few months, State and Federal governments will decide how much radioactive material to leave on this 3300-acre ulcer.

My wife, Lyn, and I drove down Route 219 to West Valley on a rainy day in March. We crossed the roaring Cattaraugus Creek where 219 construction attempts have loosened a fault line started it sliding into Zoar Valley. There, on Scobey Hill Road, a house is off its foundation, trees stand at odd angles, turf, undercut by mudslides, hangs over in a fringe. Geologically speaking, not long ago our beloved Boston Hills were a flat lake bed. Erosion is rapidly cutting it into this rugged terrain.

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**Commentor No. 25 (cont'd): Laurence T. Beahan, Conservation Chair,
Sierra Club, Niagara Group**

In the 1960s nuclear fuel reprocessing sounded like a marvelous idea.

Cattaraugus County had empty space and needed jobs. Nuclear energy was the power source of the future and reprocessing spent uranium would take care of its radioactive waste. From 1966 to 1972 Nuclear Fuel Services, NFS, a private corporation, reprocessed over 600 metric tones of high-level uranium nuclear waste there.

NFS got out of the business when radioactive leftovers of reprocessing leaked into nearby streams, when employee radiation exposure became a problem, and when federal regulation tightened up. They walked away leaving tons of high and low level nuclear waste which will be a threat to health for thousands of years.

The Federal Government and New York State are left with the clean up and are now about to decide how thorough a job to do.

The nuclear site is on two plateaus divided by the eroding waters of Erdman Creek and surrounded by Franks and Quarry Creeks. They join Buttermilk Creek and it pours into the Cattaraugus a few miles west. Radioactive waste has leaked into West Valley's ditches. It sends a plume of radioactive ground water toward Buttermilk Creek. Buttermilk's 160 foot bluff, a few hundred yards away, has had a landslide. Plutonium has been found in the Cattaraugus behind Scobey Hill dam. There is the potential of polluting the waters of Lake Erie, Lake Ontario and the Saint Laurence River with West Valley's poisons.

We wonder if, when we took the kids wading in Zoar Valley, they were in a dilute solution of Strontium 90.

25-I

25-1

DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Finding Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concern about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses. DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

DOE and NYSERDA are aware of the contamination behind the Springville (Scobey Hill) Dam that was the result of releases from the site when reprocessing operations were in progress. The sediments behind the Springville Dam have levels of cesium-137, uranium, potassium-40, and gross beta; plutonium measurements are below background levels. They are sampled every 5 years and the results are reported in annual site environmental reports (available at <http://www.wv.doe.gov>).

**Commentor No. 25 (cont'd): Laurence T. Beahan, Conservation Chair,
Sierra Club, Niagara Group**

Clearly it was a terrible mistake to put such a dangerous facility into such unstable geological terrain. The only conceivable answer now is complete removal of nuclear materials from West Valley.

Laurence T. Beahan MD
Laurence T. Beahan MD
Conservation Chair, Sierra Club, Niagara Group

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cont'd

**Commentor No. 26: Kathy McGoldrick,
Coalition on West Valley Nuclear Wastes**

P.O. Box 458
Ellicottville, NY 14731

Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
Department of Energy
PO Box 2368
Germantown, MD 20874

Public Comments by Kathy McGoldrick, West Valley Coalition on Nuclear Wastes, on the Revised Draft Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center (DOE/EIS-0226-D)

DOE Representatives, Et.al.:

Historically, the Coalition on West Valley Nuclear Wastes has taken the position that there should be a full clean-up of the West Valley nuclear site, ultimately leaving the site available for unrestricted use. This, then, includes the complete exhumation of the state and federal burial grounds and the high level waste tanks.

Our position always has been as advocates for monitored and retrievable storage on site until the federal government has environmentally sound isolation and monitoring technologies and safe places for West Valley's reprocessing waste and other radioactive wastes, from mine tailings to fuel rods.

It is for these reasons that we have concerns regarding the Department of Energy's "preferred alternative", which calls for up to thirty years before a final cleanup decision is made. We would like to believe that this hesitation is truly to buy the wisdom of time. However, some of us find that hard to believe. Some of us have been here since 1980 when Westinghouse and the DOE came to West Valley to deal with the mess left after only six years of reprocessing; and although we have undoubtedly seen some progress, we have seen little in the way of final resolution for this once beautiful site.

We, the people, need to be involved in the final decision-making for West Valley because the ramifications of the wrong choices will affect our great lakes, our environment, and the lives of our progeny. The DEIS provides no methods whereby the public can be involved in the processes which will provide a Phase 2 alternative, despite the fact that 98-99% of the waste at the site will still need to be dealt with at that time. This is not acceptable.

The public needs to be secure in knowing that there is every intent to clean up the entire West Valley site, and that at the end of Phase I there will not be a 30 year "coma" after which the DOE "comes to" and determines to grout in-situ the high level waste tanks and the burial grounds. There must be a continuous decision-making process

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cont'd</p> | <p>DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.</p> <p>Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Modified Phased Decisionmaking Alternative" in Section 2 of this EIS for further discussion of these issues and DOE's and NYSERDA's responses.</p> <p>Offsite disposal capacity is available for most of the waste that could be generated from any of the EIS alternatives. The shift to a national policy of storage rather than disposal of this waste is outside the scope of this EIS. Consistent with existing practice, any waste generated from any of the EIS alternatives that does not currently have offsite disposal capacity (referred to as orphan waste) would be safely and retrievably stored on site until such disposal capacity is available.</p> <p>Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until final decisions are made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.</p> |
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**Commentor No. 26 (cont'd): Kathy McGoldrick,
Coalition on West Valley Nuclear Wastes**

involving the public, the end result of which is removal of all waste from West Valley. It is critical that the DOE confirm that it will continue its responsibility and commitment to fully remediate the site. There must be no lapse in the process which helps us determine how to best meet the decommissioning requirements prescribed by the NRC under the West Valley Demonstration Project Act and set forth in the NRC's License Termination Rule.

After Phase 1 the West Valley site will still suffer the SDA and NDA burial grounds, the North Plateau Groundwater Plume, the Waste Tank Farm and more likely than not, Streambed Sediment Contamination and a Cesium Prong of Surface Soil. We are concerned that the ultimate decisions made regarding these wastes will be subject to a DEIS erosion analysis which is questionable. Even NYSERDA raises serious issues with the DOE's erosion study processes. It is quite likely by other analyses that the West Valley site will be subject to erosion that could allow these wastes to enter the waterways which feed into lakes Erie and Ontario far sooner than the DEIS suggests.

The DEIS soil erosion analysis is not scientifically defensible over the long term and should not be used for long-term decision making. The groundwater contaminant transport analysis and modeling used in the DEIS cannot be relied on to predict public radiation doses and long term cleanup decisions. Erosion and waste transport barrier performance has not been substantiated and may be overly optimistic. Especially for these reasons, we cannot accept a study process which leaves open the potential for the DOE to walk away from the site after 30 years, or to choose the Sitewide Close in Place Alternative or any variable thereof.

Anything less than ultimate cleanup of the site is unreasonable and unethical.

Yes, we have seen some of the highest level waste made into glass logs, but they still rest on this once beautiful site because there is nowhere for them to go. And although I recognize that it is superfluous to this DEIS, it is not superfluous for us to ask, "Why then, would we ever consider increasing nuclear capacity WHEN THERE IS NOWHERE FOR THE NUCLEAR WASTE TO GO?" And what would the cost of a kilowatt of nuclear energy REALLY be if we included the cost of appropriately dealing with the associated nuclear waste? If the push toward "new nuclear" is, as I suspect, about ultimate corporate control of our energy resources, then I am reminded of where unbridled control of our nation's resources by the few has gotten us today.

West Valley waste is a reminder of how the citizen pays the price for unreasonable and unethical business actions once sanctioned by government, *perhaps* with machiavellian best interests for the public. But West Valley and the West Valley Demonstration Project Act are also testaments to the strength of the citizenry in moving government to do the right thing. Let us continue in that process of doing the right thing and let us involve our people in the process of learning how to do the right thing, now, in this new era.

Thank you.

Kathy McGoldrick

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NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate Phase 2 decisions for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

DOE will remain on site until it completes its responsibilities as assigned under the West Valley Demonstration Project Act.

As stated in the Purpose and Need for Agency Action in Chapter 1 of the Final EIS, DOE is required by the West Valley Demonstration Project Act to decontaminate and decommission the waste storage tanks and facilities used in the solidification of high-level radioactive waste, as well as any material and hardware used in connection with the WVDP, in accordance with such requirements as the NRC may prescribe. This EIS analyzes three alternatives for accomplishing decommissioning and/or long-term stewardship of the WNYNSC.

As noted in the response to Comment no. 26-1 regarding the 30-year timeframe for Phase 2 decisionmaking, DOE and NYSERDA have reconsidered this timeframe. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

As stated in the response to Comment no. 26-3, DOE will remain on site until it completes the actions required under the West Valley Demonstration Project Act.

It should be noted that, if the Phased Decisionmaking Alternative is selected, the decision for implementation of Phase 2 could be sitewide removal of remaining facilities and contamination (Sitewide Removal Alternative), in-place closure of remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These

***Commentor No. 26 (cont'd): Kathy McGoldrick,
Coalition on West Valley Nuclear Wastes***

projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. The erosion analysis that is presented in Appendix F of this EIS is considered to be scientifically defensible and, consistent with NEPA requirements, uses a theoretical approach that is accepted in the scientific community for evaluating long-term erosion.

DOE disagrees with many of the points raised in NYSERDA's View, which is included as the Foreword to this EIS. At the core, differences between DOE and NYSERDA center on different views about the nature of analysis required for an EIS and the attendant level of acceptable risk associated with any uncertainties in that analysis as it relates to decisionmaking. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, this EIS (1) acknowledges the information limitation and its relevance to environmental consequence, (2) summarizes existing credible scientific evidence, and (3) presents an analysis using a theoretical approach that is generally accepted by the scientific community involved in such analyses. This Final EIS contains text boxes in the relevant subject matter areas that acknowledge the differences of opinion between DOE and NYSERDA. In general, DOE's position is that the Agency spent much time and effort engaging highly qualified and respected experts in hydrology and hydrological transport, landscape evolution (erosion), human health and environmental risk analysis, and other technical fields, and stands behind the analyses performed for this EIS.

Please see the Issue Summaries for "Concerns about Potential Contamination of Water" and "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

- 26-6 Although the Administration stated its intent in the 2010 budget request to terminate the Yucca Mountain program while developing nuclear waste disposal alternatives, DOE remains committed to meeting its obligations to manage and ultimately dispose of high-level radioactive waste and spent nuclear fuel (see Chapter 1, Section 1.6.4, of this EIS). The Administration intends to convene a blue ribbon commission to evaluate alternative approaches for meeting these obligations and will provide recommendations that will form the basis for working with Congress to revise the statutory framework for managing and disposing of high-level radioactive waste and spent nuclear fuel.
- 26-7 DOE and NYSERDA note the comment.

Commentor No. 27: Chicory Kettle



The Revised Draft Environmental Impact Statement for
Decommissioning and/or Long-Term Stewardship at the West Valley
Demonstration Project and Western New York Nuclear Service Center
(Decommissioning and/or Long-Term Stewardship EIS)

NYSERDA

Comment Form

Date: March, 31 2009

Name Chicory Kettle

Organization

Address 80 Jimerson Hill Lane

City, State, Zip Code Irving, NY 14081

NOTE: Please do not include personal information (such as address or phone number) if you object to it being included in the Final EIS; comments received will be included in their entirety.

Your Comments on the Draft Decommissioning and/or Long-Term Stewardship EIS

~~you should~~ take care of all the stuff
 in the lakes ~~about~~ because the fish will
~~die~~ and we will too we need fish to
 live. ~~think about~~ all the stuff
 that are made of fish and other in the ~~the~~
 lake.

(Over)

Thank You For Your Comments

PLEASE RETURN THIS FORM TO THE REGISTRATION DESK OR SUBMIT BY JUNE 8, 2009 TO:
 U.S. Mail: Catherine Bohan, EIS Document Manager, U.S. Department of Energy, P.O. Box 2368, Germantown, MD 20874
 Toll-Free Fax: 1-866-306-9094
 E-mail: westvalleyeis.com

27-I

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DOE and NYSERDA note the commentor's concern about contamination of the Great Lakes and the effect on fish. The purpose of this EIS is to evaluate the environmental impacts of the various alternatives, including the impacts on biological resources, which are presented in Chapter 4 of this EIS. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

**Commentor No. 28: Lenith K. Waterman, Clerk,
Seneca Nation of Indians**

Seneca Nation of Indians

President - Barry E. Snyder, Sr.
Clerk - Lenith Waterman

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AT THE REGULAR SESSION OF COUNCIL OF
THE SENECA NATION OF INDIANS HELD ON
MARCH 14, 2009 AT THE G.R. PLUMMER
BUILDING ON THE ALLEGANY TERRITORY
SALAMANCA, NEW YORK, 14779.

CN: R-03-14-09-25

EXECUTIVES PRESENT:
PRESIDENT - BARRY E. SNYDER, SR.
CLERK - LENITH K. WATERMAN
TREASURER - JACQUELINE L. BOWEN

TO SUPPORT WEST VALLEY CLEANUP / APPROVAL

MOTION: by J. Conrad Seneca, seconded by Donald John that Tribal Council approves the following resolution:

WHEREAS, the Seneca Nation of Indians is a Sovereign Nation recognized by the United States as such pursuant to the Treaty of November 11, 1794 and occupying five territories in Western York State; and

WHEREAS, the West Valley nuclear waste site, located 17 miles upstream from the Nation's Cattaraugus Territory along Cattaraugus Creek, is burdened with the vast amounts of toxic and radioactive wastes, many of which will remain radioactive for tens of thousands of years, some for millions of years, including plutonium, uranium, strontium-90 and iodine-129, which can cause leukemia and cancer at low doses; and

WHEREAS, the West Valley site is the United States' only venture into commercial reprocessing of irradiated nuclear fuel , which was operated by Nuclear Fuel Services and resulted in a complete failure in 1976 with the Company leaving and passing on clean up responsibility to the U.S. government; and

WHEREAS, the West Valley site sits on top of a sole source aquifer and has been plagued with problems, such as radioactive contaminated groundwater, and radioactivity from the site has been found as far away as the shore at the juncture of the Niagara River and Lake Ontario demonstrating a potential for the leaking site to contaminate the waters flowing through the Nation's Territory and affecting the lives of the Seneca people; and

- 28-1** WNYNSC has inventories of radionuclides and hazardous chemical constituents in the facilities (buildings, lagoons, and waste disposal areas) as well as environmental contamination from past facility operations (e.g., in the North Plateau Groundwater Plume). A description of the facilities and inventories of the radionuclides and hazardous chemical constituents is included in Appendix C of this EIS. This EIS was prepared to evaluate the potential environmental impacts, including impacts from radiological and hazardous chemical constituents, of alternatives for decommissioning and/or long-term stewardship of the site.

The commentator is correct that scientific studies have not clearly demonstrated the existence of a threshold below which exposure to ionizing radiation conveys no risk of health effects. By assuming that the risk of health effects at low doses is proportional to the exposure (i.e., doubling the exposure also doubles the risk), regulatory agencies such as EPA and NRC have adopted a prudent approach to establishing standards to protect human health and the environment from the effects of ionizing radiation. EPA typically regulates radiation exposure based on a lifetime cancer risk of 1×10^{-6} to 1×10^{-4} (1 in a million to 1 in 10,000), consistent with its approach for chemical carcinogens. NRC's license termination dose criterion of 25 millirem per year total effective dose equivalent is consistent with the recommendations of advisory bodies such as the International Commission on Radiological Protection to limit exposures to members of the public from individual sources of radiation. Estimated exposures from the alternatives considered in this EIS are presented throughout this document in a manner that allows a comparison with these levels of protection.

- 28-1** **28-2** Chapter 1 of this EIS summarizes the history of WNYNSC. Section 1.1 provides an accurate history of the development of the site and how DOE and NYSERDA became responsible for their respective roles.
- 28-2** **28-3** Chapter 3, Section 3.6.2.1, of this EIS addresses groundwater at WNYNSC that was contaminated due to past activities (for example, the North Plateau Groundwater Plume). This EIS was prepared to evaluate the environmental impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC. Under all of the action alternatives, DOE would either remove contamination sources, mitigate their impacts to groundwater, or both. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the North Plateau Groundwater Plume. Potential groundwater impacts associated with the EIS alternatives are discussed in Chapter 4, Sections 4.1.4 and 4.1.10, and Appendix H of this Final EIS.

**Commentor No. 28 (cont'd): Lenith K. Waterman, Clerk,
Seneca Nation of Indians**

TO SUPPORT WEST VALLEY CLEANUP / APPROVAL
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WHEREAS, the Department of Energy and NYS Energy Research & Development Authority are proposing to leave buried waste onsite, (including high level radioactive waste tanks when such tanks are at the end of their useful lives and could leak contamination at any time), and delay final cleanup decisions for up to 30 years; and

WHEREAS, various economists and scientists recently released a first-ever study on the long-term cleanup costs, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site*, funded by a New York State grant sponsored by Senator Catherine Young (R-Olean), and conducted by Synapse Energy Economics, experts from Tufts University, SUNY Fredonia and Radioactive Waste Management Associates; and

WHEREAS, the study investigated the costs of digging up radioactive waste versus leaving waste buried onsite for the next 1,000 years and found that a full waste excavation cleanup costs less, at \$9.9 billion, and presents the least risk to the population that leaving buried waste onsite, at \$13 billion, and which also carries high risks to human populations, including a potential cost of \$27 billion or more if a catastrophic release of radioactive waste contaminated drinking water supplies;

WHEREAS, scientists have found that erosion is a powerful and fast moving force in the region, which means that leaving buried radioactive waste onsite poses a risk to the Nation and its people if controls fail and dangerous radioactive waste pollutes Cattaraugus Creek.

NOW, THEREFORE, BE IT RESOLVED, that the Council of the Seneca Nation of Indians hereby supports the full cleanup of the entire West Valley nuclear waste site through waste excavation and the adoption of cleanup standards that are at least as protective as current New York State radiation standards and unrestricted use toxic standards, and are fully protective of vulnerable populations, including children, fish, wildlife and water; and

FURTHER RESOLVED, that the President is authorized and directed to distribute official copies of this resolution to appropriate United States and New York State Energy officials, including the U.S. Department of Energy and the New York State Energy and Research Development Authority.

ALL IN FAVOR

MOTION CARRIED

CERTIFICATION

I hereby certify the foregoing extract is a true and correct copy from the minutes of the Regular Session of Council of the Seneca Nation of Indians held on March 14, 2009, on the Allegany Territory, original of which is on file in the Clerk's Office of the Seneca Nation of Indians.

The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program.

28-4 Some of the alternatives evaluated in this EIS, including the Preferred Alternative (Phased Decisionmaking), could result in some facilities and waste remaining on the site, including the high-level radioactive waste tanks. Under the Phased Decisionmaking Alternative, action would be undertaken during Phase 1 for all facilities except the Waste Tank Farm, NDA, SDA, and Construction and Demolition Debris Landfill. Options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close in place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. DOE is required by the West Valley Demonstration Project Act to decontaminate and decommission the waste storage tanks and facilities used to solidify high-level radioactive waste, as well as any material and hardware used in connection with the WVDP, in accordance with such requirements as NRC may prescribe.

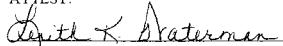
DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE has developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flows into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being further

**Commentor No. 28 (cont'd): Lenith K. Waterman, Clerk,
Seneca Nation of Indians**

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IN TESTIMONY WHEREOF, I have hereunto subscribed my name and caused the seal to be affixed at the G.R. Plummer Building, on the Allegany Territory, on the 18th day of March 2009.

ATTEST:


LENITH K. WATERMAN, CLERK
SENECA NATION OF INDIANS

{S E A L}

reduced by tank drying. Additionally, much of the residual contamination in the tanks is attached (i.e., "fixed") to metal surfaces and is not readily mobile.

- 28-5 Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed the Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.
- 28-6 DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for a discussion of the report's issues and DOE's and NYSERDA's response.
- 28-7 DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in this EIS. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. In addition to the previously cited Issue Summaries, please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.
- 28-8 DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's

**Commentor No. 28 (cont'd): Lenith K. Waterman, Clerk,
Seneca Nation of Indians**

Findings Statement. Please see the Issue Summary for “Support for Sitewide Removal of All Radioactive and Hazardous Wastes” in Section 2 of this CRD for further discussion of this issue and DOE’s and NYSERDA’s response.

Agency actions would comply with the applicable cleanup and decommissioning criteria for WNYNSC that are embodied in Federal and New York State environmental, safety, and health regulatory requirements promulgated under various statutory authorities (see Chapter 5 of this Final EIS). As summarized in Chapter 1, Section 1.3, of this Final EIS, these regulatory requirements include RCRA permitting and corrective actions under New York State and/or EPA requirements, decommissioning according to NRC requirements in its License Termination Rule, and EPA assessments of compliance with National Emission Standards for Hazardous Air Pollutants.

**Commentor No. 29: Barry Miller,
Concerned Citizens of Cattaraugus County**

I am Barry Miller. I live at 3624 Jollytown Rd., Hinsdale, NY 14743.

I represent Concerned Citizens of Cattaraugus County.

Points on how to handle the waste at West Valley:

1. Site Wide Removal—a recent state funded cost accounting reveals that leaving the waste buried is both high risk and highest cost. Excavation is less cost and least risk to a large population.
2. Leaving buried waste is not acceptable—erosion and we are talking about 1,000 years of control and monitoring --- unacceptable.
3. No Phased Decision Making – there is no evidence that the strontium plume is from leaking tanks. Besides this is a very small portion of the radioactive waste. There is no explanation concerning public participation in Phase 2. A two-phased approach over 30 years is not responsible.
4. Revisions are needed on flawed DEIS. It includes cleanup options where long-lasting radioactive waste is left buried on site, yet there is a serious lack of information on the monitoring and maintenance of engineering and institutional controls to ensure radioactive material safely contained. Funds and procedures should also be described that will be in place to respond immediately to any toxic releases. The decommissioning plan appears to describe a situation where the Doe could leave the site and any responsibility at the end of phase 1 in around 30 years which would leave NYS the responsibility of cleaning up 99% of the radioactivity. It is imperative that the DOE confirm that they will continue their responsibility and commitment to fully remediate the site.
5. Use zero in the discount rate. There must not be an economic discount rate in an analysis of the cost of cleanup in 1,000 years, the time the waste will be radioactive. Any substantial discount rate implies that the health and well-being of future generations have no present value—or no worth to us today.

- 29-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA also assume that the commentor is referring to the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Conclusions of the Synapse Report" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.
- 29-2 Chapter 4 of this EIS presents the environmental impacts, including human health risks, for each of the decommissioning alternatives and the No Action Alternative. This EIS also includes a cost analysis of each alternative, based on NRC guidance. In addition to the Issue Summaries cited above, please see the Issue Summary for "Questions about Cost-Benefit Analysis" and Chapter 4, Section 4.2, of this EIS for discussions of this approach to developing cost-benefit information.
- 29-3 DOE and NYSERDA acknowledge the commentor's opposition to an EIS alternative that would leave buried waste on site. In addition to the Issue Summaries cited in the response to Comment no. 29-1 above, please see the Issue Summaries for "Concerns about Potential Contamination of Water" and "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.
- 29-4 DOE and NYSERDA concur that there is no evidence that the strontium plume is from the underground tanks in the Waste Tank Farm. The extensive WNYNSC environmental monitoring program, which is designed to detect possible movement of contamination on the site, as well as past studies discussed in Chapter 3, Section 3.6.2.1, have concluded that the source of the North Plateau Groundwater Plume is the Main Plant Process Building.
- 29-5 It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased

**Commentor No. 29 (cont'd): Barry Miller,
Concerned Citizens of Cattaraugus County**

Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until final decisions are made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate Phase 2 decisions for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

29-4

As acknowledged in this EIS, long-term monitoring and maintenance would be required for alternatives that would leave waste on site. This EIS provides a summary description of current and potential future environmental monitoring

**Commentor No. 29 (cont'd): Barry Miller,
Concerned Citizens of Cattaraugus County**

programs. The descriptions of the alternatives were revised to further describe the use of engineered barriers and long-term monitoring and maintenance. Long-term monitoring and maintenance are described in Chapter 2, Sections 2.4.2.6 and 2.4.3.8. Long-term monitoring and institutional controls are also discussed in Chapter 6. Additional information about current and proposed monitoring and institutional controls is provided in Appendices C, H, and I. Chapter 2, Table 2-4, includes estimates of the environmental consequences if (1) monitoring and maintenance are successful (institutional controls remain in place) and (2) monitoring and maintenance programs fail (institutional controls are lost). Chapter 4, Section 4.2, of this EIS includes monitoring and maintenance costs for the alternatives that would leave waste on site.

Detailed information regarding long-term monitoring and maintenance programs and institutional controls under alternatives that would leave waste on site has not been specifically defined at this time. Such definition would occur after an alternative is selected for implementation and would include consultation with appropriate regulatory authorities. An element of the long-term programs would be the development of plans and procedures for responding to emergencies. These plans and procedures would include coordination and agreements with local police and fire departments and medical facilities.

This EIS was prepared to evaluate the environmental impacts of the alternatives for decommissioning and/or long-term stewardship of WNYNSC, a legally required step to support a decision on a course of action. The U.S. Congress and the President are responsible for establishing funding levels for various Federal Government programs, while the New York State Legislature and the Governor are responsible for establishing funding levels for state government programs. Implementation of the decision made in DOE's Record of Decision and NYSERDA's Findings Statement is contingent on the level of funding allocated.

As noted in the response to Comment no. 29-3 regarding the 30-year timeframe for Phase 2 decisionmaking, in response to public comments on this issue, DOE and NYSERDA have reconsidered this timeframe. The Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

**Commentor No. 29 (cont'd): Barry Miller,
Concerned Citizens of Cattaraugus County**

DOE will remain on site until it completes its responsibilities as assigned under the West Valley Demonstration Project Act. DOE would not leave the site after completion of the Phase 1 actions because it would not have completed the actions required under the Act. The description of the Phased Decisionmaking Alternative in Chapter 2 of this EIS has been revised to clarify this, and the wording in the *Phase 1 Decommissioning Plan for the West Valley Demonstration Project (Phase 1 Decommissioning Plan)* has been revised to avoid the implication that DOE would leave the site at the end of Phase 1.

- 29-5** DOE and NYSERDA acknowledge the commentor's opinion about cost discounting in the cost-benefit analysis included in the Revised Draft EIS. Please see the Issue Summary for "Questions about Cost-Benefit Analysis" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

The cost-benefit analysis presented in Chapter 4, Section 4.2, of the Revised Draft EIS was performed to support NRC's request for cost-benefit information consistent with its as low as is reasonably achievable (ALARA) analysis guidelines. This cost-benefit analysis follows the principles in the NRC ALARA guidance presented in NUREG-1757, "NRC Consolidated Decommissioning Guidance." The analysis in Section 4.2 has been revised for the Final EIS and uses several relatively low discount rates (1, 3, and 5 percent) to investigate the sensitivity of the results to lower discount rates. The use of a single discount rate of zero for the ALARA analysis is not considered to be consistent with NRC guidance.

**Commentor No. 30: James Rauch, Secretary,
FACTS, Inc. (For a Clean Tonawanda Site)**

Subject: DOE/EIS-0226-D (Revised) November 2008
 Oral Comments of James Rauch, Secretary, FACTS (For A Clean Tonawanda Site), Inc.
 April 2, 2009

In the mid-90s, several years after the Coalition on West Valley Nuclear Waste's (CWVNW) 1987 court settlement with DOE, the public was promised that the legally required National Environmental Policy Act (NEPA) and State Environmental Quality Review Act (SEQRA) impact statements for closure of the West Valley nuclear site would be sitewide in scope, covering all the facilities and land contaminated by both NFS's reprocessing operations and the federal West Valley Demonstration Project (WVDP), as well as the two burial grounds (the State-licensed Disposal Area [SDA] and the NRC-licensed Disposal Area [NDA]). At that time the CWVNW was also promised by the DEIS contractor, SAIC, that the impact study would address impacts out 10,000 years from the present, as best they could. The resulting 1996 DEIS was released and commented upon by the public; it was sitewide in scope, and it showed some radiation dose impacts peaking well beyond 1000 years in the future.

The current DEIS fails to make the legally required NEPA sitewide decision; in fact it only resolves less than 2% of the wastes on the site, and puts off the decision on the remaining 98% of wastes for another 30 years. Fifty years to reach a decision on waste management at this leaky, physically most unsuitable site is not acceptable.

We often hear from both the State and the DOE that the sitewide decision needs to be delayed because "there is currently no place for some of the wastes", eg the vitrified High-Level Waste (HLW), and the greater than Class C waste (GTCC). This myth is a common ploy that DOE has used here and at other sites around the country. For example, while Yucca Mtn. may never open for WV's HLW glass logs, in earlier discussions with the Coalition, DOE said that interim storage of these logs at their Idaho facility would be a possibility. It's clear to me that when DOE wants to, it can make this "no place to go" problem vanish. In the case of its Fernald uranium refinery, when DOE's contractor was anxious to collect a large work acceleration bonus, DOE soon found a place for Fernald's high-level K-65 residues; when Utah wouldn't take them, DOE moved these wastes to a private facility (Waste Control Specialists) in Texas that did not even have a disposal license for these dangerous radium-bearing materials, only a storage license.

New York State's record on radioactive waste management at its larger sites is quite poor and doesn't inspire confidence for the future. The two agencies in charge, DEC and DOH, are nine years overdue on promulgating radioactive site cleanup regulations corresponding to NRC's 1997 federal License Termination Rule (LTR). In fact, the NRC has placed the State's Agreement State radiation programs on heightened oversight for failing to meet this deadline. Why do I bring this up? Because had the State promulgated these regulations in a timely fashion, it might have prevented the deficient cleanup decisions made by the Army Corps at the Tonawanda Manhattan Project properties. In fact, the State did not enforce its own existing AEA-authorized radiation regulations applicable to those Tonawanda properties and sat by, and continues to sit by, while Army Corps implements its deficient CERCLA-based cleanups at the Tonawanda properties. The weak cleanup levels selected for the Linde property attracted national attention.

At Lewiston, the State sat by in the 1980s while DOE made a mockery of the NEPA impact process. NEPA requires a decision (Record of Decision [ROD]) before federal resources are committed to a federal project. At the DOE-owned Niagara Falls Storage Site, the State allowed DOE to perform a number of "interim actions", the most egregious being the slurring of the high-level K-65 residues from the silo to the water-logged building basements and placement of an interim cap over these wastes. The decision to be made in the final impact statement is simply whether to put a final, thicker, clay cap on the tumulus. At the time there was criticism within NYS DOH about this DOE "subterfuge" as DOH's John

30-1

- 30-1** The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. This Final EIS presents the environmental impacts of four alternatives that address decommissioning and long-term stewardship of the WNYNSC. The long-term performance assessment considers impacts beyond 10,000 years for the alternatives that would leave waste on site.

DOE believes that this EIS meets the requirements of NEPA. While the Phased Decisionmaking Alternative would temporarily defer a final decision on the disposition of the Waste Tank Farm, the NDA, and the Construction and Demolition Debris Landfill, DOE believes that the impacts of this deferred decision are adequately analyzed within this current EIS. The environmental impacts of implementing Phase 1 of the Phased Decisionmaking Alternative are described for each resource area in Chapter 4 of this EIS. If this alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. For each resource area, Chapter 4 discusses the impacts that would occur if either removal or close-in-place is selected for Phase 2. The chapter also discusses which alternative(s) bound the impacts in the event that continued active management is selected for the SDA. The short-term impacts of a Phase 2 decision that involves continued active management of the SDA are bounded by either the removal or close-in-place impacts. The post-decommissioning impacts of a continued active management decision for the SDA, which include staffing, occupational exposure, and waste generation related to SDA monitoring and maintenance, as well as long-term impacts on public health and safety, would be similar to the no action impacts for the SDA.

The status of the Yucca Mountain project is acknowledged in this EIS, and the plan to store the vitrified high-level radioactive waste at the WNYNSC is consistent with DOE's August 1999 ROD for the *Final Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste* (DOE/EIS-0200-F). The implications of the potential for orphan waste are discussed in this EIS.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now

**Commentor No. 30 (cont'd): James Rauch, Secretary,
FACTS, Inc. (For a Clean Tonawanda Site)**

Matuszek called it, but the Department heads and Governor Cuomo did nothing about it. Years later, the National Academy of Science's National Research Council issued its 1995 report stigmatizing these radium-bearing K-65 residues as no different in hazard than HLW, and calling for their exhumation and further stabilization by vitrification or other means.

At West Valley, both the DOE and the State have let the North Plateau Sr-90 plume spread to contaminate one million cubic yards of soils rather than effectively dealing with it decades ago when the cost would have been a million dollars or less; the estimated cost to properly clean it up now is between \$1.5 and \$2 billion, depending on how much longer they wait. This is a glaring example of waste management failure.

It's high time to get on with the necessary job of full cleanup of the West Valley site.

30-2

contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Finding Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

- 30-2 The history of the North Plateau Groundwater Plume is discussed in Chapter 3, Section 3.6.2.1, of this EIS. The plume was first discovered in the early 1990s. This EIS was prepared to evaluate the environmental impacts of alternatives for the decommissioning and/or long-term stewardship of WNYNSC, including the North Plateau Groundwater Plume and its source. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the plume. Under any of the action alternatives, DOE would take actions to remove or mitigate the impacts of the plume. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

Commentor No. 31: Vincent Agnello

Vincent Agnello
3314 East Ave.
Youngstown, NY 14174

April 2, 2009

Catherine Bohan
EIS Document manager
West Valley Demonstration Project
U.S. Department of Energy
P.O. Box 2868
Germantown, Md. 20874

Dear Catherine Bohan:

I am a past president of Residents for Responsible Government, Inc. a community based group fighting to clean the environment in Lewiston and Youngstown from further disposal of toxic wastes and from the radioactive assault on our community from the government's LOOW site. In a sense, our struggle and that of the residents impacted by West Valley are similar. The government's response, both Federal and State, are even more strikingly identical. No action to protect the health and welfare of the impacted citizens. Neither level of government has taken any action in our communities to protect our nation's greatest resource, the fresh waters of the Great Lakes.

I am a professor at Niagara University and I recently showed my classes a video on the struggles of the residents of Love Canal. The video was entitled "In Our Own Backyard: The First Love Canal" by Bull Dog Films (1982). I would recommend that you view the film before making any decisions on West Valley. My students were shocked by the government's inaction. History does repeat itself. When asked what the role of government is, their response was uniform: Government's job is to protect the health and welfare of its citizens.

Your plan of action and the environmental impact statement is faulty in that it fails to address honestly, accurately, and fully the two major issues regarding West Valley. First, your plan must protect the residents of the area from actual and potential harm. Secondly, and as important, your plan must remove any threat of contamination to the fresh drinking water of the Great Lakes. Complete removal is the only viable solution that addresses both issues. We could spend months going over each line of your plan and impact statement, but that will not resolve the issue at hand. I implore you to go back to the planning stage and come up with a plan that will permanently remove the radioactive wastes from West Valley and to do so immediately.

What will our legacy be? What shall we say to our children, grandchildren, and generations to come as to why they have no drinking water? What shall we say to our children as to why our government continues to fail us?

Sincerely,

Vincent Agnello
Vincent Agnello

31-1

31-1

DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative. Please see Chapter 1, Section 1.2, for a discussion of the history of the development of this EIS. This EIS was prepared to evaluate the environmental impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 32: Margret Linich

April 7, 2009

**Margret Linich
14549 Lake Street
Sterling, NY 13156**

It is imperative more now than ever, in a time when we fully understand the long term repercussions of polluting the environment, that action is swiftly executed to protect some of the most important fresh water sources in the world. Please do not delay and allow this to devolve into a catastrophe for our local environment, Make a decision your grandchildren can live with.

32-I

32-1

DOE and NYSERDA note the commentor's desire for a decision that is protective of humans and the environment. The EIS evaluates the environmental impacts of decommissioning and/or long-term stewardship of WNYNSC. These impacts are presented in Chapter 4 of this EIS. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 33: Bridget M. Fitzgerald

April 12, 2009

Bridget M. Fitzgerald
109 N. Buffalo St. #33
Springville, NY 14141

what happens when the scoby hill landslide/collapse progresses?the erosion behind the nuke plant has escalated and is obvious. can we afford to let that stuff in catt. creek and proceed to lake erie,niag.river,lake ontario, etc. doesnt alot of the us drinking h2o come from the great lakes? doesnt the food we grow become at risk if the stuff flows downstream through our farmland. why did the d.o.t. ignore the studies from the 70's about "springville" and erosion? who's zoomin' who here?

33-1

33-1

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H. Erosion studies are discussed in Appendix F. Please also see the Issue Summaries for "Concerns about Potential Contamination of Water" and "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Neither DOE nor NYSERDA can speak for the New York State Department of Transportation (NYSDOT). Questions about NYSDOT's handling of studies from the 1970s about Springville and erosion should be directed to that Agency.

**Commentor No. 34: Rev. Bronwen W. Boswell,
Presbytery of Western New York**

PRESBYTERY OF WESTERN NEW YORK

2060 UNION ROAD • WEST SENECA, NEW YORK 14224 • (716) 668-1995
FAX (716) 668-5336
WWW.PBYWNY.ORG



April 9, 2009

Catherine Bohan, EIS Document Manager
West Valley Demonstration Project
U.S. Department of Energy
PO Box 2368
Germantown, MD 20874

Dear Ms. Bohan:

At the regularly scheduled meeting on March 28, 2009 the Presbytery of Western New York unanimously passed the attached resolution on the clean up of the West Valley Nuclear Site. The Presbytery is the governing body of 64 churches with 12,640 members in Western New York.

The Resolution:

Supports the full clean up of the entire West Valley nuclear waste site (also known as the Western NY Nuclear Service Center & Demonstration Project) through waste exhumation; and

Supports cleanup standards for the West Valley Demonstration Project site that are at least as protective as current guidance in New York State for unrestricted use levels, and are fully protective of vulnerable human populations including children, and fully protective of all of the natural features of the site, such as fish and wildlife, while ensuring safe drinking water for all downstream human populations.

The Presbytery asks that you take appropriate action to ensure the full clean up of the West Valley site. Thank you for your assistance.

Sincerely yours,
Bronwen W. Boswell
The Rev. Bronwen W. Boswell
Stated Clerk

BWB:jlt

Enclosure

34-1

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DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Agency actions would comply with the applicable cleanup and decommissioning criteria for WNYNSC embodied in Federal and New York State environmental, safety, and health regulatory requirements promulgated under various statutory authorities (see Chapter 5 of this Final EIS). As summarized in Chapter 1, Section 1.3, of this Final EIS, these regulatory requirements include, in part, RCRA permitting and corrective actions under New York State and/or EPA requirements, decommissioning according to NRC requirements in its License Termination Rule, and EPA assessments of compliance with National Emission Standards for Hazardous Air Pollutants.

**Commentor No. 34 (cont'd): Rev. Bronwen W. Boswell,
Presbytery of Western New York**

**A Response to the Draft Environmental Impact Statement
for Cleanup of Nuclear Wastes at West Valley Demonstration Project**

By: Presbytery of Western New York

Regarding: Comment period to respond to proposed Draft Environmental Impact Statement offered by the U.S. Department of Energy and the NYS Energy Research & Development Authority

Whereas, Christians believe that we are obligated to care for God's gift of creation for the good of all and for the benefit of future generations (Genesis 2:16); and

Whereas, the West Valley Demonstration Project is a nuclear waste site, located in Cattaraugus County, that contains large amounts of toxic and radioactive wastes, many of which will remain radioactive for tens of thousands of years or longer; and

Whereas, the site includes dangerous waste such as plutonium-238, -239, -240, and -241, uranium-238, strontium-90, iodine-129 and tritium which has been shown to cause leukemia and cancer and other negative health effects at low doses; and

Whereas, an underground plume of radioactivity has been identified at the site, which is slowly migrating in groundwater toward Buttermilk Creek, which then empties into Cattaraugus Creek and thence into Lake Erie; and

Whereas, radioactivity from the West Valley site has been found as far away as the shore at the juncture of the Niagara River and Lake Ontario and therefore impacts all of the Western New York region; and

Whereas, the Department of Energy and NYS Energy Research & Development Authority have issued a Draft Environmental Impact Statement which offers four alternatives for the resolution of cleanup at the site, and such agencies are accepting public comments through June 8, 2009; and

Whereas, the Department of Energy and NYS Energy Research & Development Authority have identified a Preferred Alternative which favors decontaminating and demolishing all buildings and leaving buried waste onsite, while delaying final cleanup decisions for up to 30 years; and

Whereas, economists and scientists recently released a first-ever study on the long-term cleanup costs, The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site, funded by a New York State grant sponsored by Senator Catharine Young (R-Olean), and the

34-2 WNYNSC has inventories of radionuclides and hazardous chemical constituents in the facilities (buildings, lagoons, and waste disposal areas) as well as environmental contamination from past facility operations (e.g., in the North Plateau Groundwater Plume). A description of the facilities and inventories of the radionuclides and hazardous chemical constituents is included in Appendix C of this EIS. This EIS was prepared to evaluate the potential environmental impacts, including impacts from radiological and hazardous chemical constituents, of alternatives for decommissioning and/or long-term stewardship of the site.

The commentator is correct that scientific studies have not clearly demonstrated the existence of a threshold below which exposure to ionizing radiation conveys no risk of health effects. By assuming that the risk of health effects at low doses is proportional to the exposure (i.e., doubling the exposure also doubles the risk), regulatory agencies such as EPA and NRC have adopted a prudent approach to establishing standards to protect human health and the environment from the effects of ionizing radiation. EPA typically regulates radiation exposure based on a lifetime cancer risk of 1×10^{-6} to 1×10^{-4} (1 in a million to 1 in 10,000), consistent with its approach for chemical carcinogens. NRC's license termination dose criterion of 25 millirem per year total effective dose equivalent is consistent with the recommendations of advisory bodies such as the International Commission on Radiological Protection to limit exposures to members of the public from individual sources of radiation. Estimated exposures from the alternatives considered in this EIS are presented throughout this document in a manner that allows a comparison with these levels of protection.

34-3 Chapter 3, Section 3.6.2.1, of this EIS addresses groundwater at WNYNSC that was contaminated due to past activities (for example, the North Plateau Groundwater Plume). This EIS was prepared to evaluate the environmental impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC. Under all of the action alternatives, DOE would either remove contamination sources, mitigate their impacts to groundwater, or both. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the North Plateau Groundwater Plume. Potential groundwater impacts associated with the EIS alternatives are discussed in Chapter 4, Sections 4.1.4 and 4.1.10, and Appendix H of this Final EIS.

The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The

**Commentor No. 34 (cont'd): Rev. Bronwen W. Boswell,
Presbytery of Western New York**

study was conducted by Synapse Energy Economics, experts from Tufts University, SUNY Fredonia and Radioactive Waste Management Associates, and

Whereas, the study investigated the costs of digging up radioactive waste versus leaving waste buried onsite for the next 1,000 years and found that leaving buried waste onsite is both high risk and expensive while a waste excavation cleanup presents the least risk to a large population and the lowest cost, and

Whereas, the study confirmed that erosion is a powerful force at the West Valley site and estimated that within the next few hundred years erosion will create damaging gullies, with buried waste areas breached in less than 1000 years and as quickly as 150 years; and

Whereas, the study estimated that if just 1% of radioactivity leaked from the site, a large population of over 800,000 Lake Erie water users would be exposed to substantial radiation; and

Whereas, the study concluded that if wastes are left buried at West Valley and a release occurs, it will have expensive and disastrous consequences irreparably contaminating the Great Lakes region; and

Whereas, the study concluded that the costs of maintaining buried waste in an attempt to thwart future disaster will be far more expensive and far more risky than exhuming the waste and the precautionary and safest approach is to excavate and move the wastes; and

Whereas, the Preferred Alternative offered in the Draft Environmental Impact Statement involves a large degree of uncertainty as to the eventual long-term risks of leaving any portion of nuclear wastes buried at the site, and defers final decisions about the most dangerous nuclear wastes to the next generation of citizens and government agencies; and

Whereas, Christian commitment to caring for creation presents a moral imperative to act responsibly based on the best information available currently, as part of our compact with future generations;

Therefore, Be It Resolved that the Presbytery of WNY

Supports the full clean up of the entire West Valley nuclear waste site (also known as the Western NY Nuclear Service Center & Demonstration Project) through waste exhumation; and

Supports cleanup standards for the West Valley Demonstration Project site that are at least as protective as current guidance in New York State for unrestricted

34-6
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34-4

environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program.

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Some of the alternatives evaluated in this EIS, including the Preferred Alternative (Phased Decisionmaking), could result in some facilities and waste remaining on the site, including the high-level radioactive waste tanks. Under the Phased Decisionmaking Alternative, action would be undertaken during Phase 1 for all facilities except the Waste Tank Farm, NDA, SDA, and Construction and Demolition Debris Landfill. Options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close in place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. DOE is required by the West Valley Demonstration Project Act to decontaminate and decommission the waste storage tanks and facilities used to solidify high-level radioactive waste, as well as any material and hardware used in connection with the WVDP, in accordance with such requirements as NRC may prescribe.

DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE has developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flows into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being further reduced by tank drying. Additionally, much of the residual contamination in the tanks is attached (i.e., "fixed") to metal surfaces and is not readily mobile.

**Commentor No. 34 (cont'd): Rev. Bronwen W. Boswell,
Presbytery of Western New York**

use levels, and are fully protective of vulnerable human populations including children, and fully protective of all of the natural features of the site, such as fish and wildlife, while ensuring safe drinking water for all downstream human populations; and

Communicates this resolution to the U.S. Department of Energy as an official comment on the Draft Environmental Impact Statement for commissioning and/or Long-Term Stewardship at the West Valley Demonstration Project; and

Communicates this resolution to the Western New York Congressional delegation and to President Barack Obama; and

Urges member congregations and individuals to submit similar comments to the U.S. Department of Energy prior to the comment period deadline, June 8, 2009, either in person at the public hearings on 3-31, 4-1, 4-2 or in writing to the following address:

Attn: Catherine Bohan
EIS Document Manager
West Valley Demonstration Project, U.S. Department of Energy
P.O. Box 2368
Germantown, MD 20874
Toll Free Fax: 866-306-9094.

34-I
cont'd

- 34-5 Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed the Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.
- 34-6 DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for a discussion of the report's issues and DOE's and NYSERDA's response.
- 34-7 DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in this EIS. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. In addition to the previously cited Issue Summaries, please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.
- 34-8 DOE and NYSERDA note that the impacts of a release of 1 percent of the site radioactivity referred to by the commentor are taken from the *Synapse Report*. Please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for a discussion of the report's issues and DOE's and NYSERDA's response. See also the response to Comment no. 34-7 regarding the long-term impacts analysis addressed in this EIS.

**Commentor No. 34 (cont'd): Rev. Bronwen W. Boswell,
Presbytery of Western New York**

- 34-9 The conclusions referenced in the comment are taken from the *Synapse Report*. As noted above, please see the Issue Summary for “Conclusions of the *Synapse Report*” in Section 2 of this CRD for a discussion of the report’s issues and DOE’s and NYSERDA’s response.
- 34-10 The Preferred Alternative is the Phased Decisionmaking Alternative. If this alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close in place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. For each resource area, Chapter 4 discusses the impacts that would occur if either removal or close in place is selected for Phase 2. The chapter also discusses which alternative(s) bound the impacts in the event that continued active management is selected for the SDA. The short-term impacts of a Phase 2 decision that involves continued active management of the SDA are bounded by either the removal or close-in-place impacts. The post-decommissioning impacts of a continued active management decision for the SDA, which include staffing, occupational exposure, and waste generation related to SDA monitoring and maintenance, as well as long-term impacts on public health and safety, would be similar to the no action impacts for the SDA. Please see the response to Comment no. 34-5 regarding the timing of the Phase 2 decision.

Commentor No. 35: Joan Herold

Joan Herold
437 Prospect Ave
East Aurora NY 14052
USA

Phone 716 655 0033
email: wacasey43@verizon.net

April 7, 2009

Catherine Bohan
EIS document Manager
West Valley Demonstration Project
U.S. Department of Energy
P.O Box 2368,
Germantown, MD 20874

Dear Ms. Bohan,

**Re: West Valley Demonstration Project - and
Niagara's Year of our Shared Waters**

On April 2nd, I attended a public hearing on alternatives for cleaning up the West Valley Demonstration Project. The four alternatives presented were –

No Action Alternative – presented as a basis for comparing action alternatives

Sitewide Removal Alternative - All facilities removed, soil and water decontaminated and all waste shipped off site

Sitewide Close-In-Place Alternative - All major facilities closed in place, buffer areas established, facilities with residual radioactivity isolated by specially designed closure structures and engineered barriers.

Phased Decisionmaking Alternative – Remove Main Plant Process Building, Vitrification Facility and source area of North Plateau Groundwater Plume containing Cesium 137 and Strontium 90. No long term management decisions at this time for other facilities – or for the Groundwater Plume itself — and an assessment period of up to 30 years.

Amazingly, the DOE and NYSERDA favor the last alternative. This Preferred Alternative would remove about 2% of the radioactive waste in Phase 1 – with decisions regarding the rest of the facilities to be made in an assessment period of up to 30 years. It was noted that this puts the burden and costs on the shoulders of our children and grandchildren.

I think it was clear at the hearing that virtually 100% of those present favored Alternative #2 – Sitewide removal of radioactive waste. This would be an appropriate use of stimulus money as it would provide jobs, clean up contamination and leave land clean enough for other uses.

35-1

35-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Once DOE's Record of Decision is issued, it may be possible to use stimulus funds for some of the selected actions. DOE will explore options for use of the funds at that time.

Commentor No. 35 (cont'd): Joan Herold

West Valley is subject to powerful forces of erosion, and is far from a stable site. Even a small leakage from the site would affect local streams that flow into the Great Lakes. And already some radioactivity has been detected in surrounding areas.

2009 is Niagara's Year of our Shared Waters – celebrating the 100th anniversary of the Boundary Waters Treaty between USA and Canada. How can the United States, in good conscience, delay for 30 years, or more, a full cleanup of West Valley Demonstration Project, which is already leaching pollutants into the Great Lakes – our "Shared Waters."

Yours truly,

cc. President Barack Obama
 Senator Charles Schumer
 Senator Kristen Gillibrand
 Assemblyman Brian Higgins

|| 35-2

- 35-2 DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. Please also see the Issue Summaries for "Concerns about Potential Contamination of Water" and "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

When Nuclear Fuel Services operated WNYNSC from 1966 through 1981, small quantities of radioactive and other materials were discharged to the air and surface water bodies as part of authorized operations. Chapter 3, Section 3.11.5, summarizes the consequences of historical accidents or spills at WNYNSC that resulted in release of radioactive material or hazardous constituents to the environment. Annual releases to surface water bodies and air from current WVDP activities are well within permitted limits established by applicable regulatory agencies, as discussed in Sections 3.6.1 and 3.7.2 of this Final EIS and reported in annual site environmental reports (available at <http://www.wv.doe.gov>).

Commentor No. 36: David Ashley

May 18, 2009

David Ashley
101 Windsor Place
Syracuse, NY 13210

I believe immediate action is needed to prevent radioactive waste from leaching off the site into streams or the ground watertable.

36-1

36-1

DOE and NYSERDA note the commentor's desire for prompt action to address site cleanup. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

**Commentor No. 37: Kimberly D. Reichert, RMC,
Village Administrator, Clerk-Treasurer, Village of East Aurora**



I, Kimberly D. Reichert, Village Administrator/Clerk-Treasurer of the Village of East Aurora, Erie County, New York, do hereby certify that the attached resolution is a true copy of the original resolution adopted by the Village Board of the Village of East Aurora, at a meeting of the said Board held on the 18th day of May 2009.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of the Village of East Aurora, New York, this May 19, 2009.



Kimberly D. Reichert, RMC
Village Administrator
Clerk-Treasurer

Trustee Mercurio offered the following Resolution and moved its adoption:

**RESOLUTION ON WEST VALLEY
NUCLEAR WASTE SITE CLEANUP**

Whereas, thirty miles south of Buffalo, NY, the West Valley nuclear waste site, located in Cattaraugus County, is burdened with vast amounts of toxic and radioactive wastes, many of which will remain radioactive for tens of thousands of years, some for millions of years, including plutonium, uranium, strontium-90 and iodine-129, and can cause leukemia and cancer at low doses;

Whereas, the site is the nation's only venture into commercial reprocessing of irradiated nuclear fuel, was operated by Nuclear Fuel Services and ended in a total failure in 1976 with the company leaving and passing on cleanup responsibility to the government and taxpayers;

Whereas, the site sits on top of a sole source aquifer and has been plagued with problems, such as radioactive contaminated groundwater, and radioactivity from the site

- 37-1 WNYNSC has inventories of radionuclides and hazardous chemical constituents in the facilities (buildings, lagoons, and waste disposal areas) as well as environmental contamination from past facility operations (e.g., in the North Plateau Groundwater Plume). A description of the facilities and inventories of the radionuclides and hazardous chemical constituents is included in Appendix C of this EIS. This EIS was prepared to evaluate the potential environmental impacts, including impacts from radiological and hazardous chemical constituents, of alternatives for decommissioning and/or long-term stewardship of the site.
- The commentor is correct that scientific studies have not clearly demonstrated the existence of a threshold below which exposure to ionizing radiation conveys no risk of health effects. By assuming that the risk of health effects at low doses is proportional to the exposure (i.e., doubling the exposure also doubles the risk), regulatory agencies such as EPA and NRC have adopted a prudent approach to establishing standards to protect human health and the environment from the effects of ionizing radiation. EPA typically regulates radiation exposure based on a lifetime cancer risk of 1×10^{-6} to 1×10^{-4} (1 in a million to 1 in 10,000), consistent with its approach for chemical carcinogens. NRC's license termination dose criterion of 25 millirem per year total effective dose equivalent is consistent with the recommendations of advisory bodies such as the International Commission on Radiological Protection to limit exposures to members of the public from individual sources of radiation. Estimated exposures from the alternatives considered in this EIS are presented throughout this document in a manner that allows a comparison with these levels of protection.
- 37-2 Chapter 1 of this EIS summarizes the history of WNYNSC. Section 1.1 provides an accurate history of the development of the site and how DOE and NYSERDA became responsible for their respective roles.
- 37-3 Chapter 3, Section 3.6.2.1, of this EIS addresses groundwater at WNYNSC that was contaminated due to past activities (for example, the North Plateau Groundwater Plume). This EIS was prepared to evaluate the environmental impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC. Under all of the action alternatives, DOE would either remove contamination sources, mitigate their impacts to groundwater, or both. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the North Plateau Groundwater Plume. Potential groundwater impacts associated with the EIS alternatives are discussed in Chapter 4, Sections 4.1.4 and 4.1.10, and Appendix H of this Final EIS.

**Commentor No. 37 (cont'd): Kimberly D. Reichert, RMC,
Village Administrator, Clerk-Treasurer, Village of East Aurora**

has been found as far away as the shore at the juncture of the Niagara River and Lake Ontario demonstrating a potential for the leaking site to contaminate drinking water supplies for millions of people;

Whereas, the Department of Energy and NYS Energy Research & Development Authority are proposing to leave buried waste onsite, (including high level radioactive waste tanks when such tanks are at the end of their useful lives and could leak contamination at any time), and delay final cleanup decisions for up to 30 years;

Whereas, economists and scientists recently released a first-ever study on the long-term cleanup costs, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site*, funded by a New York State grant sponsored by Senator Catharine Young (R-Olean), and the study was conducted by Synapse Energy Economics, experts from Tufts University, SUNY Fredonia and Radioactive Waste Management Associates;

Whereas, the study investigated the costs of digging up radioactive waste versus leaving waste buried onsite for the next 1,000 years and found that a full waste excavation cleanup costs less, at \$9.9 billion, and presents the least risk to the population than leaving buried waste onsite, which is expensive, at \$13 billion, carries high risks, and could also cost an additional \$27 billion or more if a catastrophic release of radioactive waste contaminated drinking water supplies;

Whereas, scientists found that erosion is a powerful and fast moving force in the region, and leaving buried waste onsite poses a risk to people if controls fail and dangerous radioactive waste pollutes local, regional and international waterways into Lake Erie, the Niagara River and beyond;

Whereas, scientists found the site poses a significant danger to people who live along nearby creeks, Buffalo residents and people living along the shores of Lakes Erie and Ontario, and if just 1% of radioactivity leaked from the site, Lake Erie water users would be exposed to substantial radiation, causing hundreds of cancer deaths, and Buffalo and Erie County water replacement would cost hundreds of millions of dollars;

Whereas, scientists and economists concluded that if wastes are left buried at West Valley and a release occurs, it can have expensive and disastrous consequences irreparably contaminating the precious Great Lakes region, and the costs of maintaining buried waste in an attempt to thwart future disaster will be far more expensive and far more risky than excavating the radioactive waste which is the safest, precautionary approach.;

Therefore, Be It Resolved, that the Village of East Aurora, located in the County of Erie, State of New York, goes on record with the passage of this Resolution that it

SUPPORTS the full cleanup of the entire West Valley nuclear waste site (also known as the Western NY Nuclear Service Center & Demonstration Project) through waste excavation; and

The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program.

- | | | |
|-----------------------|-------|--|
| 37-3
<i>cont'd</i> | 37-4 | Some of the alternatives evaluated in this EIS, including the Preferred Alternative (Phased Decisionmaking), could result in some facilities and waste remaining on the site, including the high-level radioactive waste tanks. Under the Phased Decisionmaking Alternative, action would be undertaken during Phase 1 for all facilities except the Waste Tank Farm, NDA, SDA, and Construction and Demolition Debris Landfill. Options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close in place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. DOE is required by the West Valley Demonstration Project Act to decontaminate and decommission the waste storage tanks and facilities used to solidify high-level radioactive waste, as well as any material and hardware used in connection with the WVDP, in accordance with such requirements as NRC may prescribe |
| 37-5 | 37-6 | DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE has developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flows into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being |
| 37-7 | 37-8 | |
| 37-9 | 37-10 | |

**Commentor No. 37 (cont'd): Kimberly D. Reichert, RMC,
Village Administrator, Clerk-Treasurer, Village of East Aurora**

SUPPORTS cleanup standards that are at least as protective as current state radiation standards and unrestricted use toxic standards, and are fully protective of vulnerable populations, including children, fish, wildlife and water.

This resolution will be distributed to state and federal elected officials and the US Department of Energy and NYS Energy Research and Development Authority.

Seconded by Trustee Scheer, and **ADOPTED** with voting as follows:

Trustee Mercurio	Aye
Trustee McDonnell	Aye
Trustee Scheer	Aye
Trustee Biggs	Aye
Trustee Kasprzak	Aye
Mayor Crook	Aye

|| 37-10
cont'd

further reduced by tank drying. Additionally, much of the residual contamination in the tanks is attached (i.e., “fixed”) to metal surfaces and is not readily mobile.

- 37-5** Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed the Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.
- 37-6** DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for “Conclusions of the *Synapse Report*” in Section 2 of this CRD for a discussion of the report’s issues and DOE’s and NYSERDA’s response.
- 37-7** DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in this EIS. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. In addition to the previously cited Issue Summaries, please see the Issue Summary for “Questions about Long-term Erosion Modeling” in Section 2 of this CRD for further discussion of this issue and DOE’s and NYSERDA’s response.
- 37-8** DOE and NYSERDA note that the impacts of a release of 1 percent of the site radioactivity referred to by the commentor are taken from the *Synapse Report*. Please see the Issue Summary for “Conclusions of the *Synapse Report*” in Section 2

**Commentor No. 37 (cont'd): Kimberly D. Reichert, RMC,
Village Administrator, Clerk-Treasurer, Village of East Aurora**

of this CRD for a discussion of the report's issues and DOE's and NYSERDA's response. See also the response to Comment no. 37-7 regarding the long-term impacts analysis addressed in this EIS.

- 37-9** The conclusions referenced in the comment are taken from the *Synapse Report*. As noted above, please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for a discussion of the report's issues and DOE's and NYSERDA's response.
- 37-10** DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response. Agency actions would comply with the applicable cleanup and decommissioning criteria for WNYNSC embodied in Federal and New York State environmental, safety, and health regulatory requirements promulgated under various statutory authorities (see Chapter 5 of this Final EIS). As summarized in Chapter 1, Section 1.3, of this Final EIS, these regulatory requirements include, in part, RCRA permitting and corrective actions under New York State and/or EPA requirements, decommissioning according to NRC requirements in its License Termination Rule, and EPA assessments of compliance with National Emission Standards for Hazardous Air Pollutants.

Commentor No. 38: Mary E. Bolt, Town Clerk,
Town of Concord



Town of Concord

MARY E. BOLT
TOWN CLERK
TAX COLLECTOR
(716) 592-4948

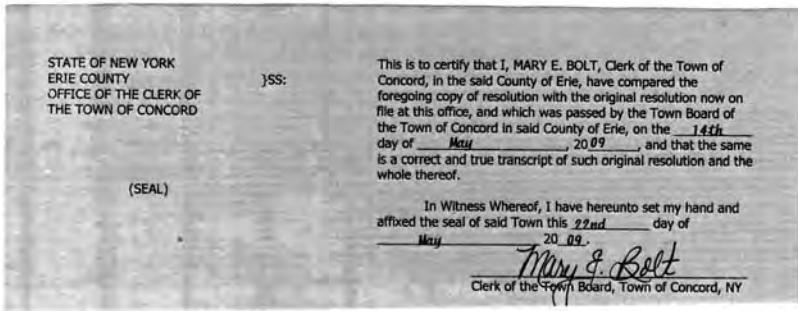
May 22, 2009

To: Mr. Bryan Bower, Director
From: Mary E. Bolt, Town Clerk

Enclosed please find certified copy of a Resolution passed by the Concord Town Board at their meeting held on Thursday, May 14th. It concerns cleaning up of the West Valley site.

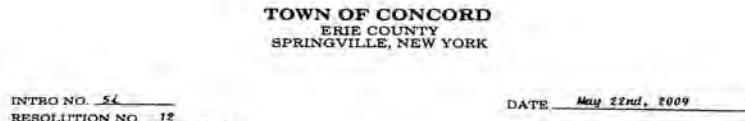
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**Commentor No. 38 (cont'd): Mary E. Bolt, Town Clerk,
Town of Concord**



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**Commentor No. 38 (cont'd): Mary E. Bolt, Town Clerk,
Town of Concord**



To Whom It May Concern:

I hereby certify that a meeting of the Town Board of the Town of Concord held at the Town Hall in the Town of Concord on the 22nd Day of May 2009, a resolution was adopted of which the following is a true copy.

Councilman Snyder moved the adoption of Resolution 12, seconded by Councilman Salzler, and passed unanimously:

Revised Draft Environmental Impact Statement for Decommissioning and/or Long Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center

WHEREAS: The Town Board of the Town of Concord appreciates the work that went into, and the cooperation among the core team members, especially DOE and NYSERDA, and all the groups involved in bringing the site to its current condition and to this Revised Draft EIS, and

WHEREAS: The Town Board of the Town of Concord would also like to recognize the important role the West Valley Citizen's Task Force (CTF) has played in this process and would like to emphasize the importance of the CTF's continuing role in this process as we move forward, and

WHEREAS: The Town Board of the Town of Concord makes its comments and decisions on this Revised Draft EIS with public health and safety on the forefront of our minds, and wishes to best represent the views and sentiment of the residents of the Town of Concord, and

WHEREAS: The Town Board of the Town of Concord, for the purposes of making comments on this Revised Draft EIS, operates under the overall premise that the site will be completely cleaned to a point of sitewide removal where all waste, both radioactive and all other types, will be shipped off site for disposal as soon as reasonably possible, and eventually unrestricted use of the land will be achieved where applicable and safe, and

WHEREAS: we understand that there are obstacles that currently prevent full cleanup and site wide removal from taking place in the near future, the main one being, the lack of a Federal waste repository to send orphan and/or high - level radioactive waste to, and

WHEREAS, we recognize that there are certain risks associated with any of the alternatives listed in this Draft EIS and that certain risks may be greater for sitewide removal, these could include impacts to human health and safety in the form of a release during cleanup activities, a catastrophic release, and a dose risk during transportation of waste, all of which could affect the general public or workers involved in clean up activities through several media including air, soil, and water, and

WHEREAS: The Town Board of the Town of Concord asserts that these risks and many other risks not mentioned, will eventually be outweighed by public sentiment and demand for sitewide removal of all wastes and, in time, by the risks associated with leaving this waste on site for long periods of time, and

WHEREAS: we recognize and agree that more time is needed to study erosion modeling, transportation methods, developing technologies to aid in containment and removal, engineered man made barrier technology, and other risks, and that these studies will support the eventual sitewide removal and full cleanup, and

- 38-1 DOE and NYSERDA appreciate the commentor's recognition of the efforts of the Citizen Task Force, the involved agencies, and others in preparing this EIS and understand the basis for the comments provided.
- 38-2 DOE and NYSERDA acknowledge the commentor's preference for an alternative in which there is sitewide removal of all waste and unrestricted use of the site where applicable and safe. The decision on the selected course of action and supporting rationale will be provided in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.
- 38-3 As described in Chapter 2, Section 2.4 of this EIS, there is currently no offsite disposal location for vitrified high-level radioactive waste canisters and certain wastes that may be generated by sitewide removal of all wastes. However, as stated in the same section, it is conceivable that the canisters and waste could be shipped off site during the time over which this alternative is implemented.
- 38-4 Please refer to the response to Comment no. 38-2. The commentor is correct that there are risks associated with implementation of any of the alternatives evaluated in this EIS. Chapter 4 of this EIS presents the impacts of the alternatives, including the potential human health impacts to workers and the public in the short-term and the long-term, to provide information to be considered by DOE and NYSERDA decisionmakers in selecting an alternative for decommissioning and/or long-term stewardship of WNYNSC.
- 38-5 Chapter 2, Section 2.4.3, of this EIS describes decommissioning activities under the Phased Decisionmaking Alternative and provides a discussion of the data collection, studies, and monitoring to be performed during implementation of Phase 1 and the purpose of each of these activities. The overall intent of these Phase 1 activities is to further characterize the site and to research technology developments and engineering to aid consensus decisionmaking for Phase 2. Section 2.4.3.3 explains how the additional data and studies would be used in making decisions for potential future activities. These studies will not necessarily lead to a full cleanup of the site as expressed by the commentor.
- DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to

**Commentor No. 38 (cont'd): Mary E. Bolt, Town Clerk,
Town of Concord**

WHEREAS; the fact that NYSERDA does not agree with the analysis of soil erosion over the long term in the Revised Draft EIS indicates that more studies are needed in this area, but also, that more studies of this nature will not necessarily provide scientifically defensible analysis and therefore, due to the unique geographical conditions that exist on this site, erosion conditions over a longer period of time may never be accurately predictable, indicating sitewide removal as the best long term option, and,

WHEREAS; we question some of the transportation figures presented in the Revised Draft EIS, including the number of fatalities associated with rail accidents in transporting waste, a more thorough study is required in this area which may reveal these figures as overestimated and therefore, reveal a more positive conclusion toward moving forward with sitewide removal in regards to transporting waste of site which is critical to this alternative, and,

WHEREAS; any additional studies related to erosion should take into consideration real world observations that can be made on site; just as the NYSDOT was surprised at the slumping conditions that developed while extending the I-95 expressway through the Town of Concord in the Scobey Hill Road area, many local residents in our community predicted similar scenarios based on the information presented; it made over time what could be said about the conditions at the West Valley Site; therefore, the same lesson should be learned: erosion model output and related studies should be compared to actual field conditions and related data collected over time, this will inevitably lead to a conclusion to remove waste from the site, versus storing waste on site for the long term, and,

WHEREAS; we understand that the stability and long term performance of engineered barriers is critical to a close in place alternative or a close in place decision for Phase 2 of the Phased Decision Making Alternative and therefore, it shouldn't be assumed that these barriers will remain in place, unaffected by water, time, and erosion, as we have observed the effects of these conditions on the engineered barriers currently on site and that sitewide removal is the only guarantee of no release from this site over the long term due to the deterioration or failure of engineered barriers, and,

WHEREAS; we also recognize that some important decisions will have to be made throughout the Phased Decision Making process and that these decisions will be made with full public participation and consideration, with input form all the parties involved, with the best information at hand, will require revision of the EIS, and will eventually lead to sitewide removal and full cleanup, and,

WHEREAS; we also want to re-emphasize the importance of public involvement in whatever alternative is selected, a clear and defined public process is necessary for public review and input for decisions that will need to be made throughout this process, especially that of the vaguely defined Phase 2 of the Phased Decision Making Alternative where regular consultation with the public will be a necessity and should be a guarantee until the day the site is completely clean and release plans are in place, and,

THEREFORE; The Town Board of the Town of Concord agrees that the preferred alternative of Phased Decision Making is a prudent way to move forward in that Phase 1 activities allow for a number of valuable cleanup activities to take place including removal of the Main Plant Process building, the source of the North Plateau Groundwater Plume, and the Lagoons in Waste Management Area 2; and that this Phase also provides time to complete necessary studies, investigate and develop improved technologies, and further characterize site waste, and,

THEREFORE; The Town Board of the Town of Concord has determined that a time frame not to exceed 30 years for Phase 1 activities is far too long and should be limited to 10 years to prevent a loss of momentum toward full cleanup; this would include political, public, funding, and workforce momentum which could be lost over a 30 year period of time, now be it

RESOLVED; that the Town Board of the Town of Concord supports a combined alternative of phased decision making with an understanding of eventual sitewide removal resulting in the release of as much of the site as possible for selected use at the time of release, we understand this as completing Phase 1 of the Phased Decision Making Alternative, and Phase 2 would result in a decision to move ahead with sitewide removal.

38-5
cont'd

38-6

38-5
cont'd

38-7 38-6

38-8

38-7

be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

DOE disagrees with many of the points raised in NYSERDA's View, which is included as the Foreword to this EIS. At the core, differences between DOE and NYSERDA center on different views about the nature of analysis required for an EIS and the attendant level of acceptable risk associated with any uncertainties in that analysis as it relates to decisionmaking. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, this EIS (1) acknowledges the information limitation and its relevance to environmental consequence, (2) summarizes existing credible scientific evidence, and (3) presents an analysis using a theoretical approach that is generally accepted by the scientific community involved in such analyses. This Final EIS contains text boxes in the relevant subject matter areas that acknowledge the differences of opinion between DOE and NYSERDA. In general, DOE's position is that the agency spent much time and effort engaging highly qualified and respected experts in hydrology and hydrological transport, landscape evolution (erosion), human health and environmental risk analysis, and other technical fields, and stands behind the analyses performed for this EIS.

The transportation analysis has been revised and updated in this Final EIS to change the basis of the nonradiological impact analysis from a route-specific approach to a state-by-state approach. This change eliminated the influence of state-specific accident data associated with states in the Northeastern United States that have higher accident rates. This change in approach lowered the impacts from rail transport, although nonradiological impacts from rail transport are still shown as being higher than truck transport. This, in part, is due to the use of rail statistics that are in terms of railcar-kilometers. There is no literature available that provides accident and fatality rates on a train-kilometer basis. Appendix J of this Final EIS has been revised to address the changes made in the transportation analysis and further discuss uncertainty.

If the Phased Decisionmaking Alternative is selected, as discussed in response to Comment no. 38-5, a variety of studies is expected to be performed during Phase 1. Information gathering conducted during Phase 1 is expected to provide data to aid consensus decisionmaking for Phase 2 activities. If this alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining

***Commentor No. 38 (cont'd): Mary E. Bolt, Town Clerk,
Town of Concord***

facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements.

Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until final decisions are made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate Phase 2 decisions for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

- 38-8** DOE and NYSERDA acknowledge the commentor's support for the Phased Decisionmaking Alternative and opinion that the Phase 2 decision should be made within 10 years. The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

DOE and NYSERDA also acknowledge the commentor's preference for sitewide removal as the Phase 2 decision if the Phased Decisionmaking Alternative

**Commentor No. 38 (cont'd): Mary E. Bolt, Town Clerk,
Town of Concord**

is selected. It should be noted that Phase 2 activities could include sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements.

Commentor No. 39: Bruce C. Chapman

May 8, 2009

**Bruce C. Chapman
Hammond Hill Road
East Otto, NY 14729**

This site needs to be cleaned up BEFORE serious ground and surface water contamination occur. Whoever decided that West Valley was a suitable storage site for radioactive waste, had no clue as to the geography of the area. It is extremely MOBILE, with shallow soils and shale substrate. Failure to remove this waste in a timely manner, will result in litigation against the Federal Govt. and State for malfeasance beyond all comprehension.

39-I

39-1

DOE and NYSERDA acknowledge the commentor's preference for site cleanup and opinion about the unsuitability of WNYNSC for long-term storage or disposal of wastes. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

Commentor No. 40: Linda A. DeStefano

May 8, 2009

**Linda A. DeStefano
5031 Onondaga Rd.
Syracuse, NY 13215-1403**

I favor the full cleanup alternative. Although there is no totally acceptable site to store radioactive wastes that are active for thousands of years, West Valley is clearly a poor choice so another site should be found. Meantime, there should be a moratorium on all new nuclear reactors. Further, old reactors should no longer have their licenses extended beyond their intended lifetime.

40-I

40-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 41: Bob Alessi

May 8, 2009

Bob Alessi

3637 Northcreek Run

Wheatfield, NY 14120

Comment: Remove the waste from West Valley. Do not stop this project. || **41-1**

- 41-1** DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

**Commentor No. 42: Lori A. Pangborn, Deputy Clerk,
Cattaraugus County Legislature**



Cattaraugus County
John R. Searles, Clerk of the Legislature

303 Court St.
Little Valley, NY 14755
Phone (716) 938-2577
Fax (716) 938-2760

May 20, 2009

Catherine Bohan, EIS Document Manager
West Valley Demonstration Project
U.S. Department of Energy
Ashford Office Complex
9030 Rte. 219
West Valley, NY 14171

Dear Ms. Bohan:

Enclosed you will find a certified resolution of Act Number 258-2009, adopted by the Cattaraugus County Legislature on May 13, 2009.

If you have any questions, please do not hesitate to contact my office at (716) 938-2232.

Sincerely,

A handwritten signature in blue ink, appearing to read "Lori A. Pangborn".

Lori A. Pangborn, Deputy Clerk
Cattaraugus County Legislature

Enclosure

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**Commentor No. 42 (cont'd): Lori A. Pangborn, Deputy Clerk,
Cattaraugus County Legislature**

ACT NO. 258-2009

by Mrs. Abers, Mr. Burrell, Mr. Ellis,
Mr. O'Brien, Mr. Snyder, Mr. McClure and Mr. Sprague
and Mr. Aiello, Mr. Marsh, Mr. McLarney, Mr. Murphy,
Mr. Neal, Mr. Teachman, Mr. Vecchiarelli, Ms. Vickman,
Mr. Boser, Mr. Giardini, Mr. Hobdon, Mr. Padlo,
Mr. Ward and Mrs. Wittie

SUPPORTING SITEWIDE REMOVAL ALTERNATIVE IN
REVISED DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR
DECOMMISSIONING AT WEST VALLEY DEMONSTRATION PROJECT AND
WESTERN NEW YORK NUCLEAR SERVICE CENTER

Pursuant to Section 153 of the County Law.

- I. WHEREAS, the Western New York Nuclear Service Center is located at 10282 Rock Springs Road, West Valley, New York, and
- II. WHEREAS, the public has been given an opportunity to comment on the Revised Draft Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center (DOE/EIS-0226-D (revised)), and
- III. WHEREAS, the Revised Draft Environmental Impact Statement analyzes four alternatives:
 - Sitewide Removal,
 - Sitewide Closed-In-Place,
 - Phased Decisionmaking,
 - No Action
 and
- IV. WHEREAS, under the Sitewide Removal Alternative, all site facilities would be removed, all environmental media would be decontaminated, and all radioactive, hazardous and mixed waste would be characterized, packaged as necessary, and eventually shipped off-site for disposal, and
- V. WHEREAS, completion of these activities would allow unrestricted use of the site, and
- VI. WHEREAS, the Cattaraugus County Legislature has some concerns with the Sitewide Removal Alternative, and
- VII. WHEREAS, the revised DEIS indicates that the Sitewide Removal Alternative would take 64 years to implement the decommissioning, and
- VIII. WHEREAS, the County Legislature has been informed that the length of time was based on the assumption of funding the Sitewide Removal at a funding level identical to the current funding for the project, and
- IX. WHEREAS, both the state and federal governments should be put on notice that funding a project at a level which would take 64 years to complete is absurd, and
- X. WHEREAS, funding should be increased dramatically so that the process could be completed within 10 years, and

42-1

42-2

- 42-1 Comment noted. This Final EIS retains the four alternatives, including the Sitewide Removal Alternative.
- 42-2 Comment noted. The duration of the Sitewide Removal Alternative is projected to be approximately 60 years and is based on funding projections. However, this EIS was prepared to evaluate the environmental impacts of the alternatives for decommissioning and/or long-term stewardship of WNYNSC, a legally required step to support a decision on a course of action. The U.S. Congress and the President are responsible for establishing funding levels for various Federal Government programs, while the New York State Legislature and the Governor are responsible for establishing funding levels for state government programs. Implementation of decisions made in DOE's Record of Decision and NYSERDA's Findings Statement, including how quickly they can be implemented, is contingent on the level of funding allocated.
- 42-3 The Sitewide Removal or the Phased Decisionmaking Alternative with sitewide removal selected in Phase 2 would result in the highest worker population doses. Regardless of the alternative selected, individual worker doses would be maintained as low as reasonably achievable through the use of engineering and administrative controls. Engineering controls span a broad range of technologies including use of shielding and working at a distance (including using robotics). As discussed in Chapter 4, Section 4.1.9.1, of this EIS, DOE limits dose to a worker to 5 rem per year, but an administrative control level of 500 millirem per year has been established for activities on the Project Premises. All workers working in radiation areas would be monitored to ensure their doses are within annual limits.
- 42-4 DOE and NYSERDA acknowledge that the commentator considers the No Action Alternative to be the least desirable due to the amount of precipitation in the area, concerns about erosion, and proximity to the Great Lakes. DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Appendix D, Section D.3.1.1, of this EIS indicates that the impact of natural cycling (periods of wetter or drier conditions) is addressed through sensitivity analyses. Erosion studies are discussed in Appendix F.

**Commentor No. 42 (cont'd): Lori A. Pangborn, Deputy Clerk,
Cattaraugus County Legislature**

XI. WHEREAS, another concern of the County Legislature with the Sitewide Removal Alternative is the increased exposure to radiation by workers on the site, and

XII. WHEREAS, the County Legislature requests that the state and federal governments explore the increased use of remote control robotic devices to minimize, as much as possible, exposure of workers to increased radiation levels, and

XIII. WHEREAS, the County Legislature has considered the No Action Alternative, which it rejects, since the amount of precipitation in the area, the erosion probabilities, and the proximity to the Great Lakes makes the No Action Alternative the least desirable, and

XIV. WHEREAS, the County Legislature has reviewed the Sitewide Close-In-Place Alternative and rejects that alternative for the reasons that it rejects the No Action Alternative, and

XV. WHEREAS, although the Sitewide Removal and Phased Decisionmaking phase I activities are similar in their treatment of the canisters and the process building, the County Legislature is concerned about the High-Level Waste Tanks, the NRC-Licensed Disposal Area and the State-Licensed Disposal Area, the North Plateau Groundwater Plume and the Cesium Prong, and

XVI. WHEREAS, the County Legislature is aware that those areas would generate waste for which there may be no current off-site disposal location, and

XVII. WHEREAS, the federal government should be encouraged to designate a site more suitable for this waste, with preference for a site which would have considerably less precipitation, erosion potential, or proximity to major freshwater bodies than the West Valley site, and

XVIII. WHEREAS, With regard to the North Plateau Groundwater Plume, the Phased Decisionmaking Alternative only removes the source area of the groundwater plume, while the Sitewide Removal Alternative cleans up both the source area and non-source area of the North Plateau Groundwater Plume, and

XIX. WHEREAS, due to the continued migration of the Groundwater Plume, there is the probability that the plume will migrate off-site, thereby contaminating currently uncontaminated soil and water supplies, and

XX. WHEREAS, the United States Department of Energy and the New York State Energy Research and Development Authority support the Phased Decisionmaking Process because of a disagreement relating to the long-term performance assessments, and

XXI. WHEREAS, while projecting site conditions at West Valley from between 10,000 and 100,000 years from the present date may be an interesting academic exercise, the inability to accurately project weather conditions next week makes such performance assessments a fantasy, now, therefore, be it

- 42-3 42-5 DOE and NYSERDA acknowledge that the commentor rejects the Sitewide Close-In-Place Alternatives for the same reasons that it opposes the No Action Alternative. Please see the response to Comment no. 42-4.
- 42-4 42-6 If this Phased Decisionmaking Alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. For each resource area, Chapter 4 discusses the impacts that would occur if either removal or close-in-place is selected for Phase 2. The chapter also discusses which alternative(s) bound the impacts in the event that continued active management is selected for the SDA.
- 42-5 42-7 As described in Chapter 2, Section 2.4 of this EIS, there is currently no offsite disposal location for vitrified high-level radioactive waste canisters and certain wastes that may be generated by sitewide removal of all wastes. However, as stated in the same section, it is conceivable that the canisters and waste could be shipped off site during the time over which this alternative is implemented. The commentor's opinion regarding the characteristics of a more suitable site is noted.
- 42-6 42-8 As noted in the comment, the source of the North Plateau Groundwater Plume would be removed in Phase 1 if the Phased Decisionmaking Alternative is selected. Please see the response to Comment no. 42-6 regarding the options for Phase 2. It is correct that if the North Plateau Groundwater Plume is not removed that it would continue to migrate. Potential groundwater impacts associated with the EIS alternatives, including impacts of the North Plateau Groundwater Plume, are discussed in Chapter 4, Sections 4.1.4 and 4.1.10, and Appendix H of this Final EIS.
- 42-7 42-9 DOE and NYSERDA see the Phased Decisionmaking Alternative as a way to make substantial progress on the decommissioning and/or long-term stewardship of WNYNSC while conducting activities to further characterize the site and to research technology developments and engineering to aid consensus decisionmaking for Phase 2. Section 2.4.3.3 explains how the additional data and studies would be used in making decisions for potential future activities.
- 42-8 42-10 DOE believes that this EIS presents an analysis of long-term impacts using a theoretical approach that is generally accepted by the scientific community

**Commentor No. 42 (cont'd): Lori A. Pangborn, Deputy Clerk,
Cattaraugus County Legislature**

I, RESOLVED, that the Cattaraugus County Legislature hereby supports the Sitewide Removal Alternative described in the Revised Draft Environmental Impact Statement for the above-stated reasons, and be it further
 II, RESOLVED, that the Clerk of the Legislature is hereby directed to forward a certified copy of this resolution to the United States Department of Energy and the New York State Energy Research and Development Authority.

STATE OF NEW YORK)
 COUNTY OF CATTARAUGUS)

I, the undersigned, Deputy Clerk of the Legislature of the County of Cattaraugus, New York, do hereby certify that I have compared the foregoing copy of Resolution Act No. 258-2009 of the Legislature of Said County of Cattaraugus with the original thereof on file in my office and duly adopted by said Legislature at a meeting of said Legislature on the 13th day of May, 2009, and that the same is a true and correct copy of such resolution and of the whole thereof.

In testimony whereof, I have hereunto set my hand and affixed the seal of said County this 14th day of May, 2009.



Lori A. Pangborn, Deputy Clerk
Cattaraugus County Legislature

42-11

42-11

involved in such analyses. In general, DOE's position is that the agency spent much time and effort engaging highly qualified and respected experts in hydrology and hydrological transport, landscape evolution (erosion), human health and environmental risk analysis, and other technical fields, and stands behind the analyses performed for this EIS.

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

**Commentor No. 43: Cathie Synor, Assistant Clerk,
Niagara County Legislature**



NIAGARA COUNTY LEGISLATURE
NIAGARA COUNTY COURTHOUSE
175 HAWLEY STREET
LOCKPORT, NY 14094-2470

WILLIAM L. ROSS
Chairman

MARYJO TAMBURLIN
Clerk
(716) 439-7000
(716) 439-7774 Fax

March 26, 2009

On behalf of the Niagara County Legislature I am forwarding to you a copy of Resolution # IL-030-09 which was discussed during the Niagara County Legislature Meeting on Tuesday, March 17, 2009.

Sincerely,

Cathie Synor

Cathie Synor
Assistant Clerk of the Legislature

Enclosure

Response side of this page intentionally left blank.

Commentor No. 43 (cont'd): Cathie Synor, Assistant Clerk,
Niagara County Legislature

NIAGARA COUNTY LEGISLATURE

FROM: Legislator John D. Ceretto & Legislator Clyde L. Burnmaster DATE: 3/17/2009 RESOLUTION # TL-030-09

APPROVED BY CO. ATTORNEY	REVIEWED BY CO. MANAGER	COMMITTEE ACTION	LEGISLATIVE ACTION
			Approved: Ayes _____ Ahs. _____ Nos. <u>0</u> Rejected: Ayes _____ Ahs. _____ Nos _____ Referred: _____

RESOLUTION ON WEST VALLEY NUCLEAR WASTE SITE CLEANUP

WHEREAS, the West Valley nuclear waste site, (also known as the Western New York Nuclear Service Center & Demonstration Project) is located 30 miles south of Buffalo and contains large amounts of toxic and radioactive wastes, some of which will remain dangerous for thousands of centuries, and

WHEREAS, the site represents the nation's sole venture into commercial reprocessing of irradiated nuclear fuel, and

WHEREAS, this venture ended in 1976 when the private partner failed, leaving cleanup responsibility to government taxpayers, and

WHEREAS, contamination from this site has been found as far away as the Niagara River at Lake Ontario, and

WHEREAS, the Niagara River represents the drinking water supply source for Niagara County, and the Great Lakes represent a drinking water source for millions of people, and

WHEREAS, the Department of Energy has identified alternatives for the remediation of the West Valley site ranging from complete removal of all radioactive materials to taking no action, and proposes a partial remediation while leaving buried waste onsite, including high level radioactive waste tanks, and

WHEREAS, the Department of Energy preference would postpone a final cleanup decision for up to 30 years, and

WHEREAS, independent joint economic and scientific analysis, funding by a New York State grant, was conducted by expert consultants and academics, and

WHEREAS, these experts concluded that over time full cleanup is approximately 30% less expensive than partial cleanup and maintenance, not including any future leaks that would increase cleanup costs exponentially, now, therefore, be it

RESOLVED, that the Niagara County Legislature supports the option of full cleanup of the West Valley nuclear waste site using standards that are at least as protective as current State radiation standards and toxic standards for unrestricted use, and be it further

RESOLVED, that copies of this resolution be sent to Governor David Paterson; Senator George D. Maziarz; Senator Antoine D. Thompson; Senator William Stachowski; Senator Dale Volker; Senator Michael Ranzenhofer; Senator Catharine M. Young; Member of the Assembly Jane L. Corwin; Member of the Assembly Jim Hayes; Member of the Assembly Francine DelMonte; Member of the Assembly Robin Schimininger; Member of the Assembly Stephen Hawley; Member of the Assembly Crystal D. Peoples; Member of the Assembly Sam Hoyt; Member of the Assembly Mark J. F. Schroeder; Member of the Assembly

- 43-1 WNYNSC has inventories of radionuclides and hazardous chemical constituents in the facilities (buildings, lagoons, and waste disposal areas) as well as environmental contamination from past facility operations (e.g., in the North Plateau Groundwater Plume). A description of the facilities and inventories of the radionuclides and hazardous chemical constituents is included in Appendix C of this EIS. This EIS was prepared to evaluate the potential environmental impacts, including impacts from radiological and hazardous chemical constituents, of alternatives for decommissioning and/or long-term stewardship of the site.
- 43-2 Chapter 1 of this EIS summarizes the history of WNYNSC. Section 1.1 provides an accurate history of the development of the site and how DOE and NYSERDA became responsible for their respective roles.
- 43-2 43-3 Chapter 3, Section 3.6.2.1, of this EIS addresses groundwater at WNYNSC that was contaminated due to past activities (for example, the North Plateau Groundwater Plume). This EIS was prepared to evaluate the environmental impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC. Under all of the action alternatives, DOE would either remove contamination sources, mitigate their impacts to groundwater, or both. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the North Plateau Groundwater Plume. Potential groundwater impacts associated with the EIS alternatives are discussed in Chapter 4, Sections 4.1.4 and 4.1.10, and Appendix H of this Final EIS. Also, please refer to the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for a discussion of this issue and DOE's and NYSERDA's response.
- 43-3 The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program.
- 43-4 43-7 Some of the alternatives evaluated in this EIS, including the Preferred Alternative (Phased Decisionmaking), could result in some facilities and waste remaining on the site, including the high-level radioactive waste tanks. Under the Phased Decisionmaking Alternative, action would be undertaken during Phase 1 for all facilities except the Waste Tank Farm, NDA, SDA, and Construction and Demolition Debris Landfill. Options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal

**Commentor No. 43 (cont'd): Cathie Synor, Assistant Clerk,
Niagara County Legislature**

IL-030-09
Page 2

Jack Quinn; Member of the Assembly Dennis H. Gabryszak; Member of the Assembly Joe Giglio; Senator Charles Schumer; Senator Kirsten Gillibrand; Congresswoman Louise M. Slaughter; Congressman Brian Higgins; Congressman Christopher Lee, the U.S. Department of Energy, and the New York State Energy Research and Development Authority.

LEGISLATOR JOHN D. CERETTO

LEGISLATOR CLYDE L. BURMASTER

APPROVED FOR SUBMISSION:

CHAIRMAN

MAJORITY LEADER

MINORITY LEADER

Alternative), close in place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. DOE is required by the West Valley Demonstration Project Act to decontaminate and decommission the waste storage tanks and facilities used to solidify high-level radioactive waste, as well as any material and hardware used in connection with the WVDP, in accordance with such requirements as NRC may prescribe.

- 43-5 Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed the Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.
- 43-6 DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for a discussion of the report's issues and DOE's and NYSERDA's response.
- 43-7 DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

***Commentor No. 43 (cont'd): Cathie Synor, Assistant Clerk,
Niagara County Legislature***

Agency actions would comply with the applicable cleanup and decommissioning criteria for WNYNSC that are embodied in Federal and New York State environmental, safety, and health regulatory requirements promulgated under various statutory authorities (see Chapter 5 of this Final EIS). As summarized in Chapter 1, Section 1.3, of this Final EIS, these regulatory requirements include RCRA permitting and corrective actions under New York State and/or EPA requirements, decommissioning according to NRC requirements in its License Termination Rule, and EPA assessments of compliance with National Emission Standards for Hazardous Air Pollutants.

**Commentor No. 44: Paul R. Guenther,
League of Women Voters**

May 28, 2009

**Paul R. Guenther
League of Women Voters
2772 South Creek Road
Hamburg, NY 14075**

I have been following the progress on this site for many years, including the classification process of solids. I have taken my Hutch Tech High School students to observe the site and take water samples in the 1970s. We have had inaction here for far too long! A huge area depends on pure water from Lake Erie and points downstream.

44-1

44-1

The purpose of this EIS is to evaluate the environmental impacts of the various alternatives for the decommissioning and/or long-term stewardship of WNYNSC, including impacts on water resources. These impacts are presented in Chapter 4 of this EIS. Please see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 45: Kathleen McCormick

May 28, 2009

**Kathleen McCormick
53 Milton Street
Williamsville, NY 14221**

Please remove all nuclear waste from the West Valley site. The threat to our water supply is too great to leave it in place.

45-1

45-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

**Commentor No. 46: Brenda Rigby Riehle, Clerk of the Board,
Allegany County Board of Legislators**

ALLEGANY COUNTY BOARD OF LEGISLATORS

County Office Building * 7 Court Street
Belmont, New York 14813-1083
Telephone 585-268-9222 * Fax 585-268-9446

Curtis W. Crandall
Chairman

Brenda Rigby Riehle
Clerk of the Board

May 27, 2009

Ms. Catherine Bohan, EIS Document Manager
West Valley Demonstration Project
U.S. Dept. of Energy
Ashford Office Complex, 9030 Route 219
West Valley NY 14171

Dear Ms. Bohan:

Enclosed please find a certified copy of Resolution No. 97-09 (*Endorsing the Position of Cattaraugus County in Support of the Sitewide Removal Alternative in Revised Draft Environmental Impact Statement for Decommissioning at West Valley Demonstration Project and Western New York Nuclear Service Center*) approved by the Allegany County Board of Legislators on May 26, 2009.

Thank you in advance for your attention to this matter.

Sincerely,



Brenda Rigby Riehle, Clerk of the Board
Allegany County Board of Legislators

BRR/af
Enclosure

This letter was sent to:

Cattaraugus County Legislative Board Chair Crystal Abers
U.S. Dept. of Energy EIS Document Manager Catherine Bohan
U.S. Dept. of Energy NEPA Director Carol M. Borgstrom
NYS Energy Research & Development Authority Program Director Paul J. Bembia
NYS Energy Research & Development Authority Deputy Counsel David A. Munro
U.S. Senator Charles E. Schumer
U.S. Senator Kirsten Gillibrand
U.S. Congressman Eric Massa
NYS Senator Catharine M. Young
NYS Assemblyman Daniel J. Burling
NYS Assemblyman Joseph M. Giglio
Seneca Nation of Indians President Barry Snyder
NYS Association of Counties Executive Director Stephen J. Acquario
InterCounty Association of WNY Secretary Lisa Nicolay

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**Commentor No. 46 (cont'd): Brenda Rigby Riehle, Clerk of the Board,
Allegany County Board of Legislators**

Intro. No. 104 - 09 **RESOLUTION NO.** 97-09 Page 1 of 2 pages
 County Attorney Tm

TITLE: ENDORSING THE POSITION OF CATTARAUGUS COUNTY IN SUPPORT OF THE SITEWIDE REMOVAL ALTERNATIVE IN REVISED DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR DECOMMISSIONING AT WEST VALLEY DEMONSTRATION PROJECT AND WESTERN NEW YORK NUCLEAR SERVICE CENTER

Offered by: Human Services Committee

WHEREAS, Cattaraugus County lies directly to the west of Allegany County, and

WHEREAS, environmental, economic and public health concerns that impact Cattaraugus County have the potential of also impacting the residents of Allegany County, and

WHEREAS, the potential for ground water contamination that migrates offsite poses a risk to all Western New Yorkers, and

WHEREAS, decommissioning and site cleanup at the West Valley Demonstration Project and Western New York Nuclear Service Center are deemed to have an impact on residents of Allegany County , and

WHEREAS, Allegany County is aware of the Revised Draft Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center (DOE/EIS-0226-D (revised)), and

WHEREAS, Allegany County is aware of the concerns expressed by Act No. 258-2009 of the Cattaraugus County Legislature, and

WHEREAS, Allegany County shares many of the same concerns as expressed by Cattaraugus County, and

WHEREAS, Allegany County agrees with Cattaraugus County that the Sitewide Removal Alternative is the best alternative for addressing the environmental, health and economic concerns of this region, and

WHEREAS, Allegany County agrees with Cattaraugus County that the proposed decommissioning plan of 64 years is absurd and that a ten year plan needs to be properly funded by the state and federal government so as to provide a reasonable timeframe for addressing the ongoing concerns posed by this site, now therefore be it

- | | |
|------------------------|--|
| 46-1 | 46-1 Comment noted. The commentor is referring to a resolution passed by the Cattaraugus County Board of Legislators that is included in this CRD as Commentor no. 42. Please see the responses to Comment nos. 42-1 through 42-10 addressing the concerns expressed in that resolution. |
| 46-2 | 46-2 Analysis in the EIS addresses the potential for groundwater contamination. Please see the Issue Summary "Concerns about Potential for Contamination of Water" for a discussion of this issue and DOE's and NYSERDA's response. |
| 46-1
cont'd | 46-3 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response. |
| 46-3 | 46-4 The duration of the Sitewide Removal Alternative is projected to be approximately 60 years and is based on funding projections. However, this EIS was prepared to evaluate the environmental impacts of the alternatives for decommissioning and/or long-term stewardship of WNYNSC, a legally required step to support a decision on a course of action. The U.S. Congress and the President are responsible for establishing funding levels for various Federal Government programs, while the New York State Legislature and the Governor are responsible for establishing funding levels for state government programs. Implementation of decisions made in DOE's Record of Decision and NYSERDA's Findings Statement, including how quickly they can be implemented, is contingent on the level of funding allocated. |

Commentor No. 46 (cont'd): Brenda Rigby Riehle, Clerk of the Board,
Allegany County Board of Legislators

Intro. No. 104 - 09

Page 2 of 2 pages

RESOLVED:

1. That the Allegany County Legislature hereby supports the Sitewide Removal Alternative described in the Revised Draft Environmental Impact Statement.
2. That certified copies of this resolution be mailed to the United States Department of Energy; New York State Energy Research and Development Authority; United States Senators Charles E. Schumer and Kirsten Gillibrand; United States Congressman Eric Massa; New York State Senator Catharine M. Young; New York State Assemblymen Daniel J. Burling and Joseph M. Giglio; Crystal J. Abers, Chair of the Cattaraugus County Legislature; Barry Snyder, President of The Seneca Nation of Indians; NYSAC and the InterCounty Association of Western New York.

|| **46-3**
cont'd

Response side of this page intentionally left blank.

I, Brenda Rigby Riehle, Clerk of the Board of Legislators of the County of Allegany, State of New York, do hereby certify that the foregoing constitutes a correct copy of the original on file in my office and the whole thereof of a resolution passed by said

Board on the 26th day of May, 20 09.

Brenda Rigby Riehle Dated at Belmont, New York this 27th day of May, 20 09
Clerk, Board of Legislators, Allegany County

Moved by Dibble, Seconded by Fullen VOTE: Ayes 11 Noes 0 Absent 4 Voice _____
Absent: Hall, OGrady, Reynolds, Truax

**Commentor No. 46 (cont'd): Brenda Rigby Riehle, Clerk of the Board,
Allegany County Board of Legislators**

ACT NO. 258-2009 by Mrs. Abera, Mr. Burrell, Mr. Ellis,
Mr. O'Brien, Mr. Snyder, Mr. McElone and Mr. Sprague
who ask immediate consideration

SUPPORTING SITEWIDE REMOVAL ALTERNATIVE IN
REVISED DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR
DECOMMISSIONING AT WEST VALLEY DEMONSTRATION PROJECT AND
WESTERN NEW YORK NUCLEAR SERVICE CENTER

Pursuant to Section 153 of the County Law.

- I. WHEREAS, the Western New York Nuclear Service Center is located at 10282 Rock Springs Road, West Valley, New York, and
- II. WHEREAS, the public has been given an opportunity to comment on the Revised Draft Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center (DOE/EIS-0226-D (revised)), and
- III. WHEREAS, the Revised Draft Environmental Impact Statement analyzes four alternatives:
 - Sitewide Removal,
 - Sitewide Closed-In-Place,
 - Phased Decisionmaking,
 - No Action
- and
- IV. WHEREAS, under the Sitewide Removal Alternative, all site facilities would be removed, all environmental media would be decontaminated, and all radioactive, hazardous and mixed waste would be characterized, packaged as necessary, and eventually shipped off-site for disposal, and
- V. WHEREAS, completion of these activities would allow unrestricted use of the site, and
- VI. WHEREAS, the Cattaraugus County Legislature has some concerns with the Sitewide Removal Alternative, and
- VII. WHEREAS, the revised DEIS indicates that the Sitewide Removal Alternative would take 64 years to implement the decommissioning, and
- VIII. WHEREAS, the County Legislature has been informed that the length of time was based on the assumption of funding the Sitewide Removal at a funding level identical to the current funding for the project, and
- IX. WHEREAS, both the state and federal governments should be put on notice that funding a project at a level which would take 64 years to complete is absurd, and
- X. WHEREAS, funding should be increased dramatically so that the process could be completed within 10 years, and

46-5

46-5

This attachment to Commentor no. 46 is identical to Commentor no. 42. Please see Commentor no. 42 for responses.

**Commentor No. 46 (cont'd): Brenda Rigby Riehle, Clerk of the Board,
Allegany County Board of Legislators**

XI. WHEREAS, another concern of the County Legislature with the Sitewide Removal Alternative is the increased exposure to radiation by workers on the site, and

XII. WHEREAS, the County Legislature requests that the state and federal governments explore the increased use of remote control robotic devices to minimize, as much as possible, exposure of workers to increased radiation levels, and

XIII. WHEREAS, the County Legislature has considered the No Action Alternative, which it rejects, since the amount of precipitation in the area, the erosion probabilities, and the proximity to the Great Lakes makes the No Action Alternative the least desirable, and

XIV. WHEREAS, the County Legislature has reviewed the Sitewide Closed-In-Place Alternative and rejects that alternative for the reasons that it rejects the No Action Alternative, and

XV. WHEREAS, although the Sitewide Removal and Phased Decisionmaking Phase I activities are similar in their treatment of the canisters and the process building, the County Legislature is concerned about the High-Level Waste Tanks, the NRC-Licensed Disposal Area and the State-Licensed Disposal Area, the North Plateau Groundwater Plume and the Cesium Prong, and

XVI. WHEREAS, the County Legislature is aware that those areas would generate waste for which there may be no current off-site disposal location, and

XVII. WHEREAS, the federal government should be encouraged to designate a site more suitable for this waste, with preference for a site which would have considerably less precipitation, erosion potential, or proximity to major freshwater bodies than the West Valley site, and

XVIII. WHEREAS, with regard to the North Plateau Groundwater Plume, the Phased Decisionmaking Alternative only removes the source area of the groundwater plume, while the Sitewide Removal Alternative cleans up both the source area and non-source area of the North Plateau Groundwater Plume, and

XIX. WHEREAS, due to the continued migration of the Groundwater Plume, there is the probability that the plume will migrate off-site, thereby contaminating currently uncontaminated soil and water supplies, and

XX. WHEREAS, the United States Department of Energy and the New York State Energy Research and Development Authority support the Phased Decisionmaking Process because of a disagreement relating to the long-term performance assessments, and

46-5
cont'd

Response side of this page intentionally left blank.

**Commentor No. 46 (cont'd): Brenda Rigby Riehle, Clerk of the Board,
Allegany County Board of Legislators**

XXI. WHEREAS, while projecting site conditions at West Valley from between 10,000 and 100,000 years from the present date may be an interesting academic exercise, the inability to accurately project weather conditions next week makes such performance assessments a fantasy, now, therefore, be it
I. RESOLVED, that the Cattaraugus County Legislature hereby supports the Sitewide Removal Alternative described in the Revised Draft Environmental Impact Statement for the above-stated reasons, and be it further
II. RESOLVED, that the Clerk of the Legislature is hereby directed to forward a certified copy of this resolution to the United States Department of Energy and the New York State Energy Research and Development Authority.

46-5
cont'd

Response side of this page intentionally left blank.

Commentor No. 47: Marietta Bratton

June 2, 2009

Marietta Bratton
334 Crescent Ave.
Buffalo, NY 14214

I support the Sitewide Removal Alternative (full waste excavation cleanup) for the West Valley Demonstration Project as described in the Draft Environmental Impact Statement issued by the DOE and the NYS Energy & Research Authority in December 2008. This will provide a permanent and safe solution and remove the radioactive waste from an unstable site with serious erosion problems and provide the most cost-effective approach. Marietta Bratton

47-1

47-1

DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes," "Concerns about Potential Contamination of Water," and "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Chapter 4, Section 4.2, of this EIS presents an evaluation of cost-benefit considerations related to the alternatives. Section 4.2.1 compares costs; Section 4.2.2 summarizes the population doses for different work elements from each alternative; and Section 4.2.3 discusses the cost-effectiveness of each decommissioning alternative.

Commentor No. 48: Julie Nentarz

June 2, 2009

Julie Nentarz

22 Laforce Place

Buffalo, NY 14207

As a resident in the City of Buffalo I see no other option than complete removal of all toxic waste and materials from the West Valley Demonstration waste site. It is appalling that this matter is even up for debate. The toxic waste that is stored at the site has proven long term deadly effects on human lives and is dangerously close to one of the largest natural sources of water that this world has. Please consider this an act for humanity. Complete removal of all toxic materials and soil is not only essential it is quite simply the right thing to do.

48-1

48-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. This EIS was prepared to evaluate the environmental impacts of the alternatives for decommissioning and/or long-term stewardship of the WNYNSC, a legally required step to support a decision on a course of action. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 49: Sean Brodfuehrer

June 2, 2009

Sean Brodfuehrer

University at Buffalo

187 Norwalk Ave

Buffalo, NY 14216

As a resident of WNY and the Great Lakes region I feel that it is irresponsible for the West Valley storage facility to remain. It is too close to a huge supply of water for many millions of individuals and will undoubtedly be a huge resource in the future. Leaving this kind of nuclear material so close to one of the world's largest bodies of fresh water inevitably will cause problems. Creeks flood, soil moves, everything in this site has the potential to leach and contaminate the lakes. The consequences of which no one knows. Cancer, death and the pollution of both people and agricultural lands

49-1

49-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

**Commentor No. 50: Rev. Stanford Bratton, Executive Director,
Network of Religious Communities**

June 2, 2009

Rev. Stanford Bratton, Executive Director

Network of Religious Communities

1272 Delaware Ave.

Buffalo, NY 14209

Whereas, West Valley, located 30 miles south of Buffalo where 35 million Curies of radioactive material is stored on site and whereas, two burial grounds..plaine dug trenches, unengineered and unlined, eroding creeks feeding directing in to Cattaragus creek and thence to Lake Erie. Whereas, over 2 billions dollars have been spent since 1982 and considering Lake Erie County's water supply is threatened and whereas, the Department of Energy has considered a Phased Decision Process dealing with only 1-2% of the radioactively on site with second phase in possibly 30 years. The members of the Board of the Network of Religious Communities whose mission is to facilitate interreligious and interracial cooperation among judiacatories, congregation and religious organizations in WNY and the Niagara Peninsula of Ontario, Canada resolve and insist that the federal and state officials listen to the voice of the people and commit to a complete cleanup of West Valley nuclear waste site that would allow unrestricted land use for the people of WNY.

50-1

50-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in this EIS. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. In addition to the previously cited Issue Summaries, please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and

***Commentor No. 50 (cont'd): Rev. Stanford Bratton, Executive Director,
Network of Religious Communities***

NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 51: Barbara and Joseph Castiglia

June 2, 2009

**Barbara and Joseph Castiglia
1749 Reading Road
West Falls, NY 14170**

We totally agree with Congressman Higgins that the West Valley site must be totally cleared of stored nuclear waste. The Great Lakes, and especially Lake Erie, are our greatest natural resource and the Western New York areas' foremost asset. To risk contamination of the main source of drinking water for millions of people would be the greatest folly.

51-I

- 51-1** DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 52: Meryl Toan

June 3, 2009

Meryl Toan

62 Hickory Hill Road

Tappan, NY 10983

Please clean up the West Valley Nuclear site using the excavation option -- the most effective means to ensure the Great Lakes Watershed will not be contaminated far into the future.

52-1

52-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 53: Andy Mager

June 3, 2009

Andy Mager

559 Buckingham Ave.

Syracuse, NY 13210

Leaving radioactive waste buried on site is unacceptable! Please implement a comprehensive cleanup and excavation of the entire site now. Please support the Sitewide Removal Option, which will ensure comprehensive cleanup and excavation of the entire site- the safest, most cost-effective solution!

||| 53-1

53-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Chapter 4, Section 4.2, of this EIS presents an evaluation of cost-benefit considerations related to the alternatives. Section 4.2.1 compares costs; Section 4.2.2 summarizes the population doses for different work elements from each alternative; and Section 4.2.3 discusses the cost-effectiveness of each decommissioning alternative.

Commentor No. 54: Richard M. Space

June 3, 2009

Richard M. Space
11 Tempo Road
New City, NY 10956

I Urge the U.S. DOE and NYSERDA to support the Sitewide Removal Option, which will ensure comprehensive cleanup and excavation of the entire site- the safest, most cost-effective solution! This is something we don't want to leave to our children. Our generation made this mess and we need to clean it up! Regards, Richard Space

||| 54-1

54-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Chapter 4, Section 4.2, of this EIS presents an evaluation of cost-benefit considerations related to the alternatives. Section 4.2.1 compares costs; Section 4.2.2 summarizes the population doses for different work elements from each alternative; and Section 4.2.3 discusses the cost-effectiveness of each decommissioning alternative.

Commentor No. 55: Dede Lifgren

June 3, 2009

Dede Lifgren

19 Palmyra Rd.

Brewster, NY 10509

My brother used to say, "You would never change your car's oil in your living room. God forbid you get some on the carpet." It's even worse in West Valley. Please be responsible and get rid of the radioactivity in their living space. Support the West Valley cleanup!!! Dede Lifgren

||| 55-1

55-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 56: Barbara Grosh

June 3, 2009

Barbara Grosh

12 Whittlers Ridge

Pittsford, NY 14534

I urge you to support the Sitewide Removal Option, which will ensure comprehensive cleanup and excavation of the entire site- the safest, most cost-effective solution! It's terrible that a few brief years of operation of this site is going to contaminate our water table indefinitely. It should be contained now, not later.

56-1

56-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Chapter 4, Section 4.2, of this EIS presents an evaluation of cost-benefit considerations related to the alternatives. Section 4.2.1 compares costs; Section 4.2.2 summarizes the population doses for different work elements from each alternative; and Section 4.2.3 discusses the cost-effectiveness of each decommissioning alternative.

***Commentor No. 57: Michele Weingart,
Special Education Parent Teacher Association (SEPTA)***

June 3, 2009

Michele Weingart

SEPTA - Special Education Parent Teacher Association

135 Onderdonk Ave

Manhasset, NY 11030

Dear Ms. Bohan: I am writing to you from Manhasset, NY a suburb on Long Island and I am highly aggrieved over our representatives lack of concern regarding the clean up at West Valley's Nuclear site. Being as you are a woman, I am sure that you aware that Long Island hold the sad record to being #1 in the rate of breast cancer in the entire nation! There are clusters of women in almost each neighborhood in each town across Long Island where plumes of contaminated water from various chemical spills have polluted the drinking water which is well water from our aquifer system. To this day, no politician has admitted such is true however, it is common knowledge and if one can afford it we all drink bottled water in our homes. It is a sad state of affairs that our land is disregarded as disposable when it is not. Furthermore, the rate of autism and other neurological disorders is as high as California and we do not have anywhere near their population numbers. It does not take a rocket scientist to determine we are poisoning ourselves as well as children not yet born to us by contaminated air, water and land conduits. When does it stop? Until 1 in 9 children have cancer? When everything becomes so polluted that nothing will grow? We have allowed the all male regime of politicians to remain ignorant for the sake of profit but at a price much too steep. I purposely vote for women in positions of power in the deepest hopes that they will bring to the table healthier common sense change to our planet, especially for the children. If not you to insist upon healthier change for the children, then who? As Martin Luther King expressed so succinctly "The time is always right to do what is right." Sincerely, Michele Weingart Manhasset, NY

57-1

57-1

DOE and NYSERDA have prepared this EIS to evaluate the environmental impacts of a range of reasonable alternatives for decommissioning and/or long-term stewardship of WNYNSC. Chapter 4, Section 4.1.9, 4.1.10, and 4.1.12, present the impacts on the health and safety of both populations in nearby communities and workers under all of the alternatives. DOE and NYSERDA understand that potential radiological releases resulting in water contamination are a major concern in the region of WNYNSC. Please see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for additional discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 58: Janet Bensman

June 1, 2009

Janet Bensman

135 Geneva Road

East Aurora, NY 14052

Dig Up ALL The Radioactive Waste At West Valley! Recent reports indicate that the long-term effects of global warming will make the Great Lakes area of primary importance as one of the few areas of fresh water. We must preserve this essential natural resource for future generations. Total clean up - NOW - of the West Valley radioactive waste is imperative. Please do the responsible thing -- no matter the cost.

58-1

58-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

3-114

**Commentor No. 59: Melanie Scherer,
Care for Creation**

June 1, 2009

Melanie Scherer

Care for Creation

46 brookpark drive

Amherst, NY 14228

It is essential for the health and sustainability of the people living in all areas upstream from the West Valley's nuclear waste leakage that the Waste be cleaned up AS SOON AS POSSIBLE. Every month that we wait, the cost of cleanup both economically and environmentally - and in human suffering - will increase. Thank you for doing the responsible and moral thing!

59-1

59-1

DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement.

Commentor No. 60: Ruth A. Stegner

June 1, 2009

Ruth A. Stegner

5775 Tonawanda Creek Road

Lockport, NY 14094

My husband, Bruce Stegner and myself, want a full clean-up of the West Valley site.

60-1

60-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 61: Janet M. Goodsell

June 1, 2009

Janet M. Goodsell

368 Tracey Lane

Grand Island, NY 14072

I have seen a picture of nuclear waste, in boxes, sitting in water, in an open trench at West Valley. It doesn't take a nuclear physicist to see that this is a looming and irreversible danger to the water and people of the Great Lakes basin. It's time the population admitted that there is no safe method for dealing with nuclear waste. Until there is, we should stop deluding ourselves that nuclear is a viable "alternative" energy source.

Janet Goodsell

61-1

61-1

DOE and NYSERDA note the commentor's opposition to nuclear power. Nuclear power is not within the scope of this EIS, which was prepared to evaluate the environmental impacts of the alternatives for decommissioning and/or long-term stewardship of WNYNSC. Impacts to water resources and the population near the site are presented in Chapter 4. In addition, please see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 62: Columbia E. Miller

June 1, 2009

**Columbia E. Miller
2341 Unionroad Apt. 121
West Seneca, NY 14224**

I worked for Joe Benz, The concator from Dec. 1965 to Dec 1969.
Burying the Powder residue ,from the spent fuel rods from the plant. We
dug 50ft. Deep holes and buried them remotely.Behind a 4in. lead sheild.
I was an Equipment Opeator. It don't sound real too dig it up and and
ship it away. I am 85 going on 86. I wish to hear from someone, If that is
possible. Columbia Miller

62-1

62-1

DOE and NYSERDA acknowledge the commentor's input. The difficulty of
removing some of the waste, particularly that with a high dose rate, is recognized
and considered in the analysis.

Commentor No. 63: Donald R. Scherer

June 1, 2009

**Donald R. Scherer
46 Brookpark Dr.
Amherst, NY 14228**

Please clean this up!

|| 63-1

63-1

DOE and NYSERDA acknowledge the commentor's desire for site cleanup. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 64: Bradley J. Mattar

June 1, 2009

Bradley J. Mattar

I would like full clean up.

64-1

64-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 65: Kenneth C. Margrey

June 1, 2009

**Kenneth C. Margrey
4857 Gooseneck Rd.
Delevan, NY 14042**

The clean up can't be finished soon enough. I support a full clean up.

|| 65-1

65-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 66: Kathleen and Peter Sayadoff

June 1, 2009

**Kathleen and Peter Sayadoff
1313 Boies Road
East Aurora, NY 14052**

As stated in a Sunday May 31, 2009 Buffalo News article: "Now is our chance to protect our drinking water from intensely radioactive nuclear power and weapons waste buried upstream decades ago but still able to cause large numbers of cancers now and in decades to come," said Diane D'Arrigo, radioactive waste project director at Nuclear Information and Resource Service. "The DOE and State won't commit to dig it all up before it leaks further unless every one of us tells them they must," she said. Please add my name to the list of those concerned citizens who agree that West Valley Demonstration Project needs to be FULLY and COMPLETELY cleaned up to prevent future major health impacts. West Valley is on 18 Mile Creek which flows directly into Lake Erie. Unstable soil conditions in West Valley are documented. A complete cleanup of the contaminants is crucial and critical to the health and safety of thousands who depend on the Great Lakes for drinking water. PLEASE CLEAN UP WEST VALLEY COMPLETELY!

66-1

- 66-1** DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

**Commentor No. 67: David Kowalski,
Re-Energize Buffalo**

June 1, 2009

David Kowalski

Re-ENERGIZE BUFFALO, www.renewnrg.blogspot.com

166 Burbank Dr.

Amherst, NY 14226

Protect our Drinking Water and Public Health, for now and for future generations. Radioactive contamination will affect drinking water drawn from Lake Erie, and downstream waterways including the Niagara River, Lake Ontario and the St. Lawrence River. Do the RIGHT thing...a FULL Cleanup of the West Valley Nuclear Waste Site.

67-1

67-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 68: Kevin Furlong

June 1, 2009

Kevin Furlong

103 EBENEZER DR.

West Seneca, NY 14224

HI THERE. PLEASE PULL YOUR HEADS OUT OF YOUR [expletive deleted]. TO EVEN CONSIDER ANYTHING BUT A FULL AND COMPLETE CLEANUP OF WEST VALLEY IS JUST PLAIN STUPID. ARE YOU PEOLPE STUPID?

68-1

68-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 69: Nancy M. Cassick

June 1, 2009

**Nancy M. Cassick
7 Oakwood Ave.
Lancaster, NY 14086-2524**

I am 62 years old and been hearing about West Valley for I can't tell you how long. When West Valley was built I thought it unwise at the time and when it was shut down was happy but I have not been happy with the delay to FULLY excavate and clean up this site. This area poses an extreme threat to the environment NOW and IN THE LONG TERM. I'm just glad I don't live really close to this area. There is NO TIME FOR FURTHER STUDY! Studies have been done! The PEOPLE want this site fully excavated. The Federal and State governments work for the People. Now do it!

69-1

69-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

**Commentor No. 70: Frank Woolever,
Pax-Christi Syracuse**

June 3, 2009

**Frank Woolever
Pax Christi-Syracuse
308 Crawford Avenue
Syracuse, NY 13224**

A comprehensive cleaning of the entire toxic waste area is needed for the health and welfare of the neighbors and the entire State. Thank you for making this effort!

||| 70-1

70-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

**Commentor No. 71: Melissa Scholl,
Franciscan Sisters of Allegany, NY**

June 3, 2009

Melissa Scholl

Franciscan Sisters of Allegany, NY

943 N. Union St.

Olean, NY 14760

The entire West Valley Demonstration Project must be cleaned up as soon as possible. The damage to the environment, drinking water, people in the area have been at risk for too long. Delaying this will only put us all at greater risk. The DOE and NYSERDA recommend cleaning up only about 1% of the radioactivity now, and waiting 30 years before deciding what to do with the rest of the dangerous radioactive waste is totally unacceptable.

71-1

71-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 72: David Stout

June 3, 2009

David Stout

NRDC

354 Lakeside Rd

Angola, NY 14006-9551

In-ground nuclear waste MUST BE removed or containerized above ground within a building on a part of the site not subject to being eroded into Lake Erie via the local drainage (Erdman Creek) through the site. Currently significant amounts of radiation enter the Lake (NYSDEC Radiation Unit), are drawn into public water systems, cannot be eliminated by treatment, and are accumulating in the local population to no one's benefit and likely detriment. Containment of radioactive wastes landfillled in the past requires their removal from the ground. The higher level glassified wastes will need to be stored on-site until an acceptable very long-term site with security is established.

72-I

72-1

DOE and NYSERDA note the commentor's preference for sitewide removal (which is evaluated in the EIS) or above ground storage. However, as explained in Chapter 2, Section 2.5.1, of this EIS, DOE and NYSERDA do not consider the use of existing structures or construction of new aboveground facilities at WNYNSC for indefinite storage of decommissioning or long-term management of waste to be a reasonable alternative for further consideration because it would not meet the Purpose and Need for Agency Action stated in Chapter 1, Section 1.3. The environmental consequences of current operations are minimal, as demonstrated by the results from the ongoing site environmental monitoring program. Additional measures to manage the North Plateau Groundwater Plume as part of Phase 1 of the Phased Decisionmaking Alternative would further reduce the consequences to humans and the environment.

This EIS addresses impacts of storage of the vitrified high-level radioactive wastes on site for approximately 30 years. The text in Chapter 2, Section 2.6.1, has been revised to provide the annual impacts of long-term storage of high-level radioactive waste at WNYNSC.

**Commentor No. 73: Carol A. Meissner, Town Clerk,
Town of Evans**

Supervisor Pordum moved and Councilman Erickson seconded,

WHEREAS: the West Valley nuclear waste site (also known as the Western New York Nuclear Service Center & Demonstration Project) is located 30 miles south of Buffalo and contains large amounts of toxic and radioactive wastes, some of which will remain dangerous for thousands of centuries and;

WHEREAS: the site represents the nation's sole venture into commercial reprocessing of irradiated nuclear fuel, and whereas this venture ended in 1976 when the private partner failed, leaving cleanup responsibility to government taxpayers, and

WHEREAS: contamination from this site has been found as far away as the Niagara River at Lake Ontario, and

WHEREAS: Lake Erie represents the drinking water supply source for Erie County, and the Great Lakes represent a drinking water source for millions of people, and

WHEREAS: the Department of Energy has identified alternatives for the remediation of the West Valley site ranging from complete removal of all radioactive materials to taking no action, and proposals a partial remediation while leaving buried waste onsite, including high level radioactive waste tanks, and

WHEREAS: the Department of Energy preference would postpone a final cleanup decision for up to 30 years, and

WHEREAS: independent joint economic and scientific analysis, funded by a New York State grant, was conducted by expert consultants and academics¹. And whereas these experts concluded that over time full clean up is approximately 30% less expensive than partial clean up and maintenance, not including any future leaks that would increase clean up costs exponentially,

THEREFORE BE IT

RESOLVED: that the Town of Evans Town Board supports the option of full cleanup of the West Valley nuclear waste site using standards that are at least as protective as current state radiation standards and toxic standards for unrestricted use.

BE IT FURTHER

RESOLVED: that copies of this resolution be sent to all state and federal elected officials representing Niagara, Erie and Cattaraugus counties, as well as the U.S. Department of Energy, and the New York State Energy Research and Development Authority.

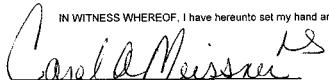
Carried.

STATE OF NEW YORK
COUNTY OF ERIE
TOWN OF EVANS

I, Carol A. Meissner, Town Clerk of the Town of Evans, County of Erie, New York, DO HEREBY CERTIFY, that I have compared the foregoing with the original resolution adopted by the Town Board of the Town of Evans at a meeting of said Board held on the 20th day of May, 2009, and the foregoing is a true and correct transcript of said original resolution and of the whole thereof, and that said original resolution is on file in my office.

I DO FURTHER CERTIFY that each of the members of said Town Board had due notice of said meeting, and that Francis J. Pordum, Supervisor, Karen Erickson, Paul T. Cooper, Michael Spence, Keith Dash, Councilmen, were present at such meeting.

IN WITNESS WHEREOF, I have hereunto set my hand and the seal of the Town of Evans, the 29th day of May, 2009.


Carol A. Meissner
Town Clerk

¹ The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site, conducted by Synapse Energy Economics, experts from Tufts University, SUNY Fredonia and Radioactive Waste Management Associates

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WNYNSC has inventories of radionuclides and hazardous chemical constituents in the facilities (buildings, lagoons, and waste disposal areas) as well as environmental contamination from past facility operations (e.g., in the North Plateau Groundwater Plume). A description of the facilities and inventories of the radionuclides and hazardous chemical constituents is included in Appendix C of this EIS. This EIS was prepared to evaluate the potential environmental impacts, including impacts from radiological and hazardous chemical constituents, of alternatives for decommissioning and/or long-term stewardship of the site.

Chapter 1 of this EIS summarizes the history of WNYNSC. Section 1.1 provides an accurate history of the development of the site and how DOE and NYSERDA became responsible for their respective roles.

Chapter 3, Section 3.6.2.1, of this EIS addresses groundwater at WNYNSC that was contaminated due to past activities (for example, the North Plateau Groundwater Plume). This EIS was prepared to evaluate the environmental impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC. Under all of the action alternatives, DOE would either remove contamination sources, mitigate their impacts to groundwater, or both. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the North Plateau Groundwater Plume. Potential groundwater impacts associated with the EIS alternatives are discussed in Chapter 4, Sections 4.1.4 and 4.1.10, and Appendix H of this Final EIS.

The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program.

Please refer to the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for a discussion of this issue and DOE's and NYSERDA's response.

Some of the alternatives evaluated in this EIS, including the Preferred Alternative (Phased Decisionmaking), could result in some facilities and waste remaining on the site, including the high-level radioactive waste tanks. Under the Phased Decisionmaking Alternative, action would be undertaken during Phase 1 for

**Commentor No. 73 (cont'd): Carol A. Meissner, Town Clerk,
Town of Evans**

all facilities except the Waste Tank Farm, NDA, SDA, and Construction and Demolition Debris Landfill. Options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close in place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. DOE is required by the West Valley Demonstration Project Act to decontaminate and decommission the waste storage tanks and facilities used to solidify high-level radioactive waste, as well as any material and hardware used in connection with the WVDP, in accordance with such requirements as NRC may prescribe.

- 73-5 Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed the Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.
- 73-6 DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for “Conclusions of the *Synapse Report*” in Section 2 of this CRD for a discussion of the report’s issues and DOE’s and NYSERDA’s response.
- 73-7 DOE and NYSERDA acknowledge the commentor’s support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE’s Record of Decision and NYSERDA’s Findings Statement.

**Commentor No. 73 (cont'd): Carol A. Meissner, Town Clerk,
Town of Evans**

Agency actions would comply with the applicable cleanup and decommissioning criteria for WNYNSC embodied in Federal and New York State environmental, safety, and health regulatory requirements promulgated under various statutory authorities (see Chapter 5 of this Final EIS). As summarized in Chapter 1, Section 1.3, of this Final EIS, these regulatory requirements include, in part, RCRA permitting and corrective actions under New York State and/or EPA requirements, decommissioning according to NRC requirements in its License Termination Rule, and EPA assessments of compliance with National Emission Standards for Hazardous Air Pollutants.

**Commentor No. 74: Laura Sheinkopf,
Institute for Children and Poverty**

June 3, 2009

**Laura Sheinkopf
Institute for Children & Poverty
59 4th Avenue
Brooklyn, NY 11217**

I am writing in support of a comprehensive cleanup and excavation of the || **74-1**

74-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

**Commentor No. 75: Kathleen Heffern,
Diocese of Buffalo**

June 3, 2009

Kathleen Heffern

Diocese of Buffalo, New York

795 Main St.

Buffalo, NY 14203

Please do everything in your power to provide for a total cleanup of the West Valley Nuclear Waste Site. Our future generations must be protected from the consequences of this situation. The level of cancer in our area is very high at present and we need to do everything in our power to significantly reduce the risk. Partial elimination is not nearly enough.

75-1

75-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

The health and safety of both populations in nearby communities and workers on site would be protected under all of the alternatives analyzed in this EIS. However, each of the alternatives would result in risks and benefits that DOE and NYSERDA will consider in making their decision. Projected short-term and long-term impacts for each alternative are presented in detail for each environmental resource area (e.g., human health and safety, ecological resources, water resources) in Chapter 4, Section 4.1, and are summarized in a comparative presentation in Chapter 2, Section 2.6, of this EIS.

**Commentor No. 76: Denis Byrne,
Friends of the Edgewood Preserve**

June 4, 2009

Denis Byrne

Friends of the Edgewood Preserve

30 Cliff Road

Belle Terre, NY 11777

I strongly believe that the option for complete removal and cleanup of the entire site is the only viable option. Waiting for 30 years while only removing a cursory 1% of the waste is unacceptable and will only cost more in the future as contamination spreads even further. Thank you for the opportunity to comment.

76-1

76-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 77: Walter Simpson

June 4, 2009

**Walter Simpson
4 Meadowstream CT
Amherst, NY 14226**

After all these years of delay and partial fixes, it is essential that all agencies support and conduct a complete, comprehensive clean up and excavation of the West Valley nuclear site.

77-I

77-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 78: Richard Bennett

June 4, 2009

Richard Bennett

4 Ivy Street

Cambridge, MA 02138

I support the Higgins/Massa West Valley cleanup. Please implement this program.

78-I

78-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 79: Sarah Gallagher

June 4, 2009

Sarah Gallagher

1136 First Avenue

New York, NY 10065

It is imperative that West Valley be cleaned entirely.

|| 79-I

79-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 80: Vic Paglia

June 4, 2009

**Vic Paglia
35 West Hook Rd
HOPEWELL JCT, NY 12533**

I urge you to sign the Higgins/Wassa West Valley Clean-up letter.

|| 80-1

80-1 DOE and NYSERDA note the comment.

Commentor No. 81: Lori Eaton

June 4, 2009

Lori Eaton

**133 Superior Street
Jamestown, NY 14701**

As a residence and tax payer of the State of New York, I demand a full clean up of the West Valley site.

81-I

81-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 82: John Carey

June 4, 2009

John Carey

928 Donahoe Lane

Needmore, PA 17238

this site should be all the way cleaned up I think you should know at this point I'm generally just amazed at the stuff politicians try to get away with. It's like your a bunch of retarded two year olds with your agenda set by a satanist bent on world domination. What the **** are you going to try next?! Clean it up.

82-1

82-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 83: Alice Bartholomew

June 4, 2009

**Alice Bartholomew
415 Wall Street
Elmira, NY 14905**

Please support a comprehensive cleanup and excavation of the entire site.
Thank you.

|| 83-I

83-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

**Commentor No. 84: Amy Morris,
Catholic Charities of Buffalo, NY**

June 5, 2009

Amy Morris

Catholic Charities of Buffalo, NY

1581 Bailey Ave.

Buffalo, NY 14212

Please support a comprehensive cleanup and excavation of the entire site now!

84-1

84-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 85: Gilbert L. Rulon Jr.

June 5, 2009

Gilbert L. Rulon Jr.

**L.I.B.B.A., Sierra Club, W.W.F., Audubon, C.C.E. Life time member
of the place called EARTH.**

355 Islip Blvd

Islip Terrace, NY 11752

The fact that a company can just walk away from the mess they created that will last as long as this waste will last is beyond comprehension. They public officials that let this happen the first time should bear the same responsibility as the owners . I thought that the public officials where elected by the people to work for the people. This was not the case here. Yes I still believe that goverment is to work for the people. Now is youre chance to stand up and not ignore this problem any longer. Clean up 1% of the waste then wait another 30 years. What is everyone thinking it will get better by itself, the contamination will just go away . Or is it that we will just ignore the wishes of the people, the safety of our children and our childrens great great children, let the next guy worry about it. Enough is enough, stop the insanity and legal B.S. and start fixing the problem. Do not miss this chance to make the world we live in a better place. In case you are wondering Yes I fish ,I hunt ,I vote, I am a member of several organizations that support the enviroment, and the world which we live in. Thank you for doing the right thing and cleaning up this mess.

85-1

85-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 86: Joseph Dimartino

June 5, 2009

Joseph Dimartino

Peace

207 vern lane

Cheektowaga, NY 14227

clean up that mess- i won't have my son getting cancer's because of your || 86-1 lazyness

86-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

DOE and NYSERDA have prepared this EIS to evaluate the environmental impacts of a range of reasonable alternatives for decommissioning and/or long-term stewardship of WNYNSC. Chapter 4, Section 4.1.9, 4.1.10, and 4.1.12, present the impacts on the health and safety of both populations in nearby communities and workers under all of the alternatives. DOE and NYSERDA understand that potential radiological releases resulting in water contamination are a major concern in the region of WNYNSC. Please see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for additional discussion of this issue and DOE's and NYSERDA's response.

**Commentor No. 87: Celia Padginton,
Orchard Park Presbyterian Church**

June 5, 2009

**Celia Padginton
Orchard Park Presbyterian Church
Buffalo Street
Orchard Park, NY 14127**

I would like to see the government clean up the site to prevent further contamination of the ground water, soil and into Lake Erie. If this is not done who knows what will become of this area and we could have something much worse than Love Canal on our hands.

||| 87-I

87-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 88: Sister Michael M. Jordan, FSSJ

June 2, 2009

Dear Department of the Environment and MYS Energy Research Development Authority,

The West Valley nuclear site needs to be fully cleaned up NOW.

I attended your presentation in Buffalo regarding your proposals a few months ago. I was not impressed with any of your plans. I also felt that you were not open to outside suggestions especially the manner in which the US Air Force currently deals with nuclear waste. The idea of doing this project in phases that could take 30 years (which in New York State could mean 40 or 50 plus years) makes no sense. It has already taken years to begin to address this site, and the 14 year delay on the DEIS. The Phased Decision-Making approach is an unacceptable delay. It is passing on to the children and grandchildren of the area the reality of disease(cancer), contaminated water sources and future environmental problems.

Your plan to contain contaminates has a major flaw. The Buffalo News presented an article on Sunday, May 24, 2009 entitled, Parts of area slip sliding away. I quote, "Questions raised in 1991 about the storage of low-level nuclear wastes in the Cattaraugus County Town of West Valley, subject to serious erosion along its waterways." That was 18 years ago and there are still problems. It does not protect the environment due to erosion problems, and it poses a serious risk to residents if controls fail and waste pollutes nearby drinking water. Of course, there will never be an earthquake even though there have been slight sometimes unreported tremors. Your Department can guarantee this. Correct? I could guarantee that if the final decision were put to the public vote a full cleanup would be the result.

Clean up will be expensive. However, can anyone project how much it will cost if there is a major disaster involving not only human life but also uncontrolled nuclear waste in land, air and drinking water. I would think that as a Department concerned with the ENVIRONMENT you would agree with a 100 percent cleanup. A total cleanup that begins NOW.

Sincerely,

 Sister Michael M. Jordan, FSSJ
 5286 South Park Ave
 Hamburg, NY 14074

PS. I noticed at the Buffalo presentation that members of the DEIS on stage were drinking bottled water?

88-1 DOE and NYSERDA acknowledge the commentor's support for cleanup of WNYNSC now. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

88-1

88-2

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

This EIS was prepared to evaluate the environmental impacts of the alternatives for decommissioning and/or long-term stewardship of WNYNSC, a legally required step to support a decision on a course of action. The U.S. Congress and the President are responsible for establishing funding levels for various Federal Government programs, while the New York State Legislature and the Governor are responsible for establishing funding levels for state government programs. Implementation of the decision documented in DOE's Record of Decision and NYSERDA's Findings Statement is contingent on the level of funding allocated.

This EIS analyzes the radiological and nonradiological consequences of minor and major events to postulated onsite and postulated near and distant offsite receptors. DOE and NYSERDA note the commentor's desire for prompt action to address site cleanup.

**Commentor No. 89: Patricia R. Dashnaw, Registrar, Town Clerk,
Town of Ashford Resolution 4-2009**



The Revised Draft Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center (Decommissioning and/or Long-Term Stewardship EIS)

NYSERDA

Comment Form

Date: June 2, 2009

Name Ashford Town Board
Organization Town of Ashford
Address 9377 Route 240 P. O. Box #306
City, State, Zip Code West Valley, New York 14171
E-mail ashfordw@yahoo.com

NOTE: Please do not include personal information (such as address or phone number) if you object to it being included in the Final EIS; comments received will be included in their entirety.

Your Comments on the Draft Decommissioning and/or Long-Term Stewardship EIS

PLEASE SEE THE ENCLOSED COPY OF THE ASHFORD TOWN BOARD MINUTES FOR MAY, 26, 2009

(Over)

Thank You For Your Comments

PLEASE RETURN THIS FORM TO THE REGISTRATION DESK OR SUBMIT BY JUNE 8, 2009 TO:

U.S. Mail: Catherine Bohan, EIS Document Manager, U.S. Department of Energy, P.O. Box 2368, Germantown, MD 20874

Toll-Free Fax: 1-866-306-9094

E-mail: westvalleyeyeis.com

Response side of this page intentionally left blank.

**Commentor No. 89 (cont'd): Patricia R. Dashnaw, Registrar,
Town Clerk, Town of Ashford Resolution 4-2009**

1073

Work Session

May 26, 2009

Present: Christopher C. Gerwitz, Supervisor
 Charles E. Davis, Councilman
 John A. Pfeffer, Councilman
 Beverly Hess, Councilwoman
 William J. Heim, Councilman
 Patricia R. Dashnaw, Town Clerk
 Tim Engels, Highway Superintendent

The meeting was called to order at 7:30 p.m. with the pledge to the American Flag.

Members of the West Valley Water District Steering Committee were present. The committee has held several meetings and has reviewed with detail the Engineering Report of the Proposed Water District No. 1 for the Town Of Ashford prepared by E&M Engineers and Surveyors. The committee makes a recommendation to the Ashford Town Board that at the present time to take the third alternative, which is the "No Action Alternative." Ultimately, a public meeting will take place informing the residents and the proposed district will have the opportunity to vote on the propositions.

The Ashford Town Board thanks the Water District Steering Committee for all of the time spent with meetings and research completed.

Councilman Pfeffer made a motion to accept the recommendation of the Water District Steering Committee of the "No Action Alternative". Councilman Davis seconded the motion.

Meg Lauerman of Continental I made a brief presentation on the work being completed for the US Route 219 project and the effects on areas near the completed highway.

The Town Board has directed the Town Clerk to place a notice in the Springville Journal to hold a public informational meeting at the next scheduled regular board meeting regarding the Proposed Wind Energy Facilities Law of the Town of Ashford. The SEQRA Form has been completed and the board will review said form for approval at a future meeting.

May 26th correspondence:

1. Cattaraugus County—permitted respiration.
2. Assemblyman Joseph M. Caputo—notification that NYS Legislature has approved Assembly Bill A 6051 and Assembly Bill S 1623 which allows a person to operate a fire truck without a CDL license.
3. Ashford Youth—letter sent letter in regards to Little League Baseball and Softball. The town recreation budget allows for \$150 per team and there are 6 teams this year.
4. Cattaraugus County—sent letter in support of WVDP cleanup in a 10 year time frame.
5. NYS Board of Real Property Services—Tentative Equalization Rate for Ashford is 64%.

The Board reviewed an application for a peddling and soliciting license to approach residents within the Town regarding the purchase of educational books, software, and on line material services for students in use as resources for school. A motion was made by Councilman Pfeffer and seconded by Councilman Davis to have the Town Clerk grant the requested license to Gina Parker (3-0).

Councilman Pfeffer moved that the following resolution be adopted:

RESOLUTION 4-2009

Whereas, The Town of Ashford Town Board contends that the 1998 West Valley Citizens Task Force (WVCTF) final report, along with subsequent letters, comments, and testimony regarding a full cleanup and unrestricted release of the entire site constitutes the only acceptable alternative for the citizens of the Town of Ashford and Western New York, and

Whereas, The citizens of the Town of Ashford have been actively engaged in the actions of the WVDP for the last 30 years as participants in numerous citizen groups, The West Valley Citizen Task Force, and through comments in the 1996 Draft Environmental Impact Statement, and,

Whereas, The Town of Ashford has paid, and continues to pay, a massive price for the existence of the WVDP both in terms of image and economy and,

Whereas, we seek a complete cleanup and unrestricted release of the entire site as the ultimate end state for the WVDP and,

This is to certify that:
 This is a true and
 correct copy.

Patricia R. Dashnaw, Town Clerk

89-1

89-1

DOE and NYSERDA acknowledge the commentor's desire for a complete cleanup and unrestricted release of the entire WNYNSC and support for the Preferred Alternative with the noted caveats. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

89-2

89-2

DOE and NYSERDA appreciate commentor's participation in the efforts to address WNYNSC.

89-3

89-2

DOE and NYSERDA note the comment.

89-1
cont'd

89-3

**Commentor No. 89 (cont'd): Patricia R. Dashnaw, Registrar,
Town Clerk, Town of Ashford Resolution 4-2009**

1074

Whereas, The geological profile of the West Valley Demonstration Project is not suitable for long-term storage or disposal of radioactive waste of any mass. Current Nuclear Regulatory Commission (NRC) standards would not permit such a siting today, and

Whereas, Given that the preferred alternative cleans up a large portion of the site in the near future, addresses the North Plateau Groundwater Plume, and increases employment. The Town Board supports the actions of the preferred alternative with the following caveats:

1. Continue public involvement at or above the current level for both phases of the alternative, and beyond if necessary.
2. Review the analysis of current dose/cost projections for the site-wide removal alternative. We, along with the WVCTF and others contend that the results of these findings are inaccurate.
3. Investigate methods by which the tank farm, SDA, NDA, and other contaminated areas can be exhumed and temporarily stored above ground. Any investigation should include public involvement.
4. Working with NYSERDA and the Town, determine methods by which acreage not impacted by contamination, and not needed for site activities be turned over to the Town or respective public agency for reuse. Any such action should be planned in conjunction with the Town of Ashford Planning Board.
5. Seek to shorten the thirty (30) year period between phase one (1) and phase (2) of the preferred alternative to a more reasonable 10 years. This would ensure that the full attention of NY and the DOE would remain focused in a full and complete cleanup to unrestricted release standards.

Now, Therefore Be It Resolved,

The Town Board of the Town of Ashford submits this resolution as its official comments to the Department of Energy supporting the preferred alternative with the above noted caveats.

Councilman Heim seconded the motion, the Supervisor called the rolls of the Town Board with the following results:

Councilman Davis	Aye
Councilman Heim	Aye
Councilwoman Hess	Aye
Councilman Pfeffer	Aye
Supervisor Gerwitz	Aye

The Supervisor declared that the foregoing resolution was duly carried.

The Town Board advises the Town Clerk to send a certified copy of these minutes containing Resolution 4-2009 to NYSERDA as the official comments on the Draft Decommissioning and/or Long-Term Stewardship of the West Valley Demonstration Project supporting the preferred alternative method with the noted caveats.

Highway Superintendent Engels reported that the asphalt grinder demonstration went well and such a machine could prove very useful to the Town of Ashford. The Town Board would like further research to be done to determine the cost of time to operate this piece of equipment before a decision is made.

A motion was made by Heim; seconded by Hess; and carried that the meeting be adjourned at 9:44 p.m. 1074


Patricia R. Dashnaw - Town Clerk

89-4 Comment noted. None of the EIS alternatives involve new onsite low-level radioactive waste burial subject to NRC's "Licensing Requirements for Land Disposal of Radioactive Waste." This EIS analyzes impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC and addresses the requirements and criteria applicable to the actions (see Chapter 5 and Appendix L).

89-5 Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until final decisions are made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate Phase 2 decisions for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

The cost and impacts for the Sitewide Removal Alternative were reviewed and revised for the Final EIS estimates. Changes include an expanded discussion of the Greater-Than-Class C waste disposal cost uncertainty and a revised estimate of nonradiological transportation fatalities.

As explained in Chapter 2, Section 2.5.1, of this EIS, DOE and NYSERDA do not consider the use of existing structures or construction of new aboveground facilities at WNYNSC for indefinite storage of decommissioning waste or long-term management of waste to be a reasonable alternative for further consideration because it would not meet the Purpose and Need for Agency Action described in Chapter 1, Section 1.3.

DOE would support any NYSERDA effort to work with regulators to determine which WNYNSC areas are neither affected by contamination nor required for site activities. Any decision on the transfer of these lands would be a NYSERDA decision.

**Commentor No. 89 (cont'd): Patricia R. Dashnaw, Registrar,
Town Clerk, Town of Ashford Resolution 4-2009**

If the Phased Decisionmaking Alternative is selected for implementation, DOE and NYSERDA agree that a prompt decision regarding Phase 2 would be preferable. The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 90: Judy Catalano

June 4, 2009

Ms. Catherine Boham
EIS Document Manager
US Dept of Energy - WVDP
PO BOX 2368
Germantown, MD 20874

Dear Ms. Boham:

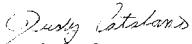
I would like to see the West Valley Nuclear Plant, in Ashford, New York, completely cleaned up and permanently shut down.

With the increased availability and affordability of green energy, there is no further need for nuclear energy. As we all know, it poses a risk to our health and environment, is outrageously expensive and the "where to bury the waste" problem is an overbearing dilemma.

It appears critical that we all focus on renewable energy - solar, geothermal and wind.

Thank you for your time.

Sincerely,


Judy Catalano
57-D Park Club Lane
Amherst, NY 14221

copy: Paul Bembia

|| 90-1

90-1

DOE and NYSERDA note the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 91: Derek Stack, Michael J. Keegan, Gordon Edwards
Great Lakes United



An international coalition to protect and restore
the Great Lakes and St. Lawrence River

Buffalo 120 Dominick College | 4380 Main Street | Amherst, New York | 14220
Toronto 120-215 Spadina Avenue | Toronto, Ontario | M5T 2C7
Montreal 3388 Atkin Street | Montreal, Quebec | H3W 1Y1

Buffalo
 (T) 716-886-0142
 (F) 716-204-9521

Montreal
 (T) 514-396-3333
 (F) 514-396-0297

[glu@glu.org](http://glu.org)
www.glu.org

June 5, 2009

Attention: Ms. Catherine Bohan
 EIS Document Manager
 West Valley Demonstration Project
 U.S. Department of Energy
 P.O. Box 2368
 Germantown, MD 20874

RE: Draft Decommissioning and/or Long-Term Stewardship EIS Comments

Dear Ms. Bohan:

Enclosed find a copy of a resolution approved May 20, 2009 by Great Lakes United, an international coalition dedicated to preserving and restoring the Great Lakes-St. Lawrence River ecosystem, at its twenty-seventh annual meeting, regarding the disposition of West Valley, New York radioactive reprocessing, nuclear power and weapons wastes.

With the submission of this resolution, Great Lakes United urges the U.S. Department of Energy and New York State Energy Research and Development Authority to immediately select the Site-wide Waste Cleanup Removal approach at West Valley in order to effectively protect public health and the Great Lakes region from the site's hazardous radioactivity.

This resolution also conveys Great Lakes United's opposition to radioactive waste reprocessing due to its inevitable risks of nuclear weapons proliferation and environmental devastation and its astronomical costs to taxpayers.

Great Lakes United appreciates the opportunity to present this resolution as official public comment to the EIS proceeding for the West Valley Demonstration Project.

Sincerely,

Derek Stack

Michael J. Keegan

Derek Stack
 Executive Director
 Great Lakes United

Michael J. Keegan
 U.S. Co-Chair
 Great Lakes United Nuclear Free Green Energy Task Force

91-1

91-1

DOE and NYSERDA note the commentator's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

91-2

91-2

Comment noted. Reprocessing and the risks and costs referred to by the commentator are not within the scope of this EIS.

**Commentor No. 91 (cont'd): Derek Stack, Michael J. Keegan,
Gordon Edwards, Great Lakes United**

Gordon Edwards

Gordon Edwards
Canadian Co-Chair
Great Lakes United Nuclear Free Green Energy Task Force

c.c. Frank Murray, President Governor David Paterson
NYSERDA State Capitol
17 Columbia Circle Albany, NY 12224
Albany, NY 12203

Response side of this page intentionally left blank.

**Commentor No. 91 (cont'd): Derek Stack, Michael J. Keegan,
Gordon Edwards, Great Lakes United**



An international coalition to protect and restore
the Great Lakes and St. Lawrence River

Buffalo c/o Darmen College | 4380 Main Street | Amherst, New York 14226
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(F) 514-396-0297

glu@glu.org
www.glu.org

Resolution on the disposal of West Valley, New York Radioactive Reprocessing Wastes

Whereas in 2004 Great Lakes United resolved against the abandonment of highly radioactive wastes, and in support of full exhumation and containment, at the West Valley, NY former nuclear reprocessing and dump site, 30 miles south of Buffalo, upstream of Lakes Erie and Ontario; and,

Whereas the vast majority of the long-lasting hazardous radioactive contamination at the West Valley, New York site is due to the radioactive waste reprocessing performed there; and,

Whereas a broad-based coalition of international, national, state and local environmental, religious, conservation and labor organizations including Great Lakes United are urging the U.S. Department of Energy (DOE) and the New York State Energy Research & Development Authority (NYSERDA) to immediately select the Site-wide Waste Removal cleanup approach as the decommissioning plan at West Valley in order to effectively protect public health and the Great Lakes region; and,

Whereas a recent independent, New York State-funded study, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site*, revealed waste excavation would cost less than \$10 billion, while leaving dangerous buried radioactive waste onsite could cost \$13 billion to \$27 billion if a catastrophic release occurred; and,

Whereas according to *The Real Costs of Cleaning Up Nuclear Waste*, West Valley's radioactive wastes, hazardous for tens of thousands of years, as a result of erosion, will be discharged downstream to Lakes Erie and Ontario in less than 3,000 years, and may be dangerously exposed to the elements in just a few hundred years, posing significant risks to residents immediately downstream, including the Seneca Nation, as well as residents along the shores of Lakes Erie and Ontario; and,

Whereas according to *The Real Costs of Cleaning Up Nuclear Waste*, just 1% of the radioactivity leaking from the West Valley site would expose Lake Erie water users to substantial radiation doses, causing hundreds of cancer deaths, and forcing the replacement of the Buffalo and Erie Counties' drinking water supply, at a cost of hundreds of millions of dollars; and,

Whereas the Phased Decision-Making approach, preferred by DOE and NYSERDA, would clean up only 1% of the site's radioactivity and delay a cleanup decision on the remaining 99% of the radioactivity for up to 30 years.

Therefore, be it resolved that Great Lakes United urges the DOE and NYSERDA to immediately select the Site-wide Waste Removal cleanup approach at West Valley in order to protect public health and the Great Lakes region from the West Valley's hazardous radioactivity; and,

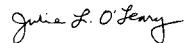
Therefore be it further resolved that Great Lakes United opposes radioactive waste reprocessing due to its inevitable risks of nuclear weapons proliferation and environmental devastation, as well as astronomical cost to taxpayers; and,

- 91-3** It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. The locations and quantities of radionuclides remaining to be addressed are described in Appendix C of this EIS.
- 91-4** DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for a discussion of the report's issues and DOE's and NYSERDA's response.
- 91-5** DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in this EIS. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. In addition to the previously cited Issue Summaries, please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.
- 91-6** DOE and NYSERDA note that the impacts of a release of 1 percent of the site radioactivity referred to by the commentator are taken from the *Synapse Report*. Please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for a discussion of the report's issues and DOE's and NYSERDA's response. See also the response to Comment no. 91-5 regarding the long-term impacts analysis addressed in this EIS.
- 91-7** As noted in the response to Comment no. 91-3, a large percentage of the long-lived radionuclides at WNYNSC have already been addressed. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the

**Commentor No. 91 (cont'd): Derek Stack, Michael J. Keegan,
Gordon Edwards, Great Lakes United**

Therefore be it further resolved to deliver a copy of this resolution to the appropriate DOE and NYSERDA officials by their June 8, 2009 deadline for public comments on the West Valley Draft Environmental Impact Statement and decommissioning plan, as well as to other government agencies and public officials.

I hereby certify that this is a true copy of a resolution adopted at the twenty-seventh annual meeting of Great Lakes United on May 20, 2009.



Julie O'Leary, President

Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be made as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed the Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.

**Commentor No. 92: Sister Sharon Goodremote, FSSJ,
Franciscan Sisters of St. Joseph**



The Revised Draft Environmental Impact Statement for
Decommissioning and/or Long-Term Stewardship at the West Valley
Demonstration Project and Western New York Nuclear Service Center
(Decommissioning and/or Long-Term Stewardship EIS)

NYSERDA

Comment Form

Date: May 11, 2009

Name Sister Sharon Goodremote, fssj.
 Organization Franciscan Sisters of St. Joseph
 Address 5272 Sa Park Ave
 City, State, Zip Code Henderson, NY 14075
 E-mail s.goodremote@swny.org

NOTE: Please do not include personal information (such as address or phone number) if you object to it being included in the Final EIS; comments received will be included in their entirety.

Your Comments on the Draft Decommissioning and/or Long-Term Stewardship EIS

I strongly ask that NYSERDA + U.S. Department of Energy decide & clean the nuclear waste at West Valley completely - now - not 30 years from now. One of the major reasons is that fact that nuclear waste will + has seeped through the soil getting into our fresh water is a very serious concern to me.
 From the information discussed for the past 2 yrs. provided at the public hearing on this issue, then we will know that ground water (low low) will be affected from seeping through to the creeks.
 I have a strong moral concern as well. We cannot as Stewards of God's creation leave nuclear waste with (Over)

Thank You For Your Comments

PLEASE RETURN THIS FORM TO THE REGISTRATION DESK OR SUBMIT BY JUNE 8, 2009 TO:
 U.S. Mail: Catherine Bohan, EIS Document Manager, U.S. Department of Energy, P.O. Box 2368, Germantown, MD 20874
 Toll-Free Fax: 1-866-306-9094
 E-mail: westvalleyeis.com

92-1

92-1

DOE and NYSERDA acknowledge the commentor's preference for prompt and complete removal of nuclear waste at WNYNSC. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement.

92-2

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

92-2

Please refer to the Issue Summary for "Concerns About Potential Contamination of Water" for a discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 92 (cont'd): Sister Sharon Goodremote, FSSJ,
Franciscan Sisters of St. Joseph

the soil & even have one hundred ton or more limit
possibility of it getting into Cattaraugus Creek &
eventually into Lake Erie. Please do the
right & real action - close West Valley
Nuclear Site - All of it. - Now - not
some day & some 20 yrs from now

|| 92-2
cont'd

|| 92-1
cont'd

Response side of this page intentionally left blank.

**Commentor No. 93: Lois Ann Zendarski,
Concerned Citizens of Cattaraugus County**

Concerned Citizens of Cattaraugus County

P.O. BOX 23
FRANKLINVILLE, NEW YORK 14737

June 3, 2009

Ms. Catherine Bohan, Document Manager
West Valley Demonstration Project
US Department of Energy
P.O. Box 2368
Germantown, MD 20874

Dear Ms. Bohan:

It is vitally important to the future of our region that Great Lakes and New York is protected with regard to the cleanup process at the West Valley site. Without a full sitewide cleanup/full exhumation, our drinking water, public health and economy will be affected for multiple generations to come. DOE's preferred alternative is not sufficiently protective because it provides less than a site cleanup and, over time, creates substantially greater risk for human health and the environment than other viable alternatives.

As you know, four options have been presented for cleanup and on behalf of the Concerned Citizens of Cattaraugus County, we wish to formally present to you our choice—which is a full cleanup of the West Valley site. Any other option, be it sitewide closed in place, phased decision making or no action will cause undue harm to our entire region as well as affecting the health and welfare of our Canadian neighbors. Sitewide removal is the safest solution to the problem which will remove the radioactivity from the very unstable site which has proven to have serious erosion problems. Sitewide removal prevents catastrophic radioactive releases into the region's water supplies which include Lakes Erie and Ontario as well as the St. Lawrence Seaway.

A commitment by DOE to fully clean up the West Valley site over the long term is not unreasonable, and DOE has failed to demonstrate the contrary. Because full clean up is reasonable, DOE's preferred alternative fails to meet the requirement that clean ups achieve contaminant reductions "as low as is reasonably achievable," applicable through EPA regulations. As long ago as March 22, 2000, CCCC commented to the Nuclear Regulatory Commission on this deficiency in less than comprehensive clean up goals; these comments are attached and incorporated hereto, as we believe these comments now apply to DOE's clean up goals (see especially comment 10).

The Concerned Citizens of Cattaraugus County opposes any option that would leave radioactive waste buried at the West Valley site. It must be fully captured and removed from the site. There already have been serious delays in getting the site cleaned up and any further delays would exacerbate the problem. Erosion in the area could very quickly send plumes of radioactivity downstream, making Lake Erie radioactively contaminated, not to mention the drinking water of those who live near the site. Anything other than a full site cleanup would require monitoring for perpetuity.

The Concerned Citizens of Cattaraugus County wishes to thank you for this opportunity to comment. It is our mission to help keep Cattaraugus County pristine for all to enjoy.

Enclosed also please find our previous comment dated March 22,2000.

Sincerely,
Lois Ann Zendarski
Lois Ann Zendarski
President-CCCC

93-1

93-1
cont'd

93-2

93-1
cont'd

93-1

DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in this EIS. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. In addition to the previously cited Issue Summaries, please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

This EIS was prepared in accordance with the requirements of NEPA and SEQR to evaluate the environmental impacts for decommissioning and/or long-term stewardship of WNYNSC. The cost-benefit analysis presented in Chapter 4, Section 4.2, of this EIS was performed to support NRC's request for cost-benefit information consistent with its as low as is reasonably achievable (ALARA) analysis guidelines. This cost-benefit analysis follows the principles in the NRC ALARA guidance presented in NUREG-1757, "NRC Consolidated Decommissioning Guidance." Regardless of the results of the cost-benefit analysis, the decommissioning action that is implemented must meet specific radiological dose criteria for protection of human health in accordance with the NRC License Termination Rule. It is noted that the attachment referred to by the commentor applied to the NRC's "Decommissioning Criteria for the WVDP at the West Valley Site" (67 FR 5003), which was issued as a Final Policy Statement.

**Commentor No. 93 (cont'd): Lois Ann Zendarski,
Concerned Citizens of Cattaraugus County**

Concerned Citizens of Cattaraugus County

P.O. BOX 23
FRANKLINVILLE, NEW YORK 14737

March 22, 2000

TO: Jack D. Parrott, Project Scientist
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

SUBJECT: Draft Policy Statement on the decommissioning criteria for the West Valley Demonstration Project and the West Valley site, 64 FR 67952 (Dec. 3, 1999)

Please accept the following comments on the NRC's Draft Policy Statement, which will replace those dated January 28, 2000, and submitted to you prior to the Commission's decision to extend the public comment deadline.

Preliminary Matters

1. Concerned Citizens of Cattaraugus County ("CCCC") is a nonprofit 501(c)(4) corporation formed in 1991 in New York State. As stated in its incorporation papers, CCCC's mission is: "To assure Cattaraugus County's air, soil, water and environment is clean and healthful, and to advocate with the public and governments that policies be implemented and that laws be passed to assure such a clean and healthful environment; to assure that local, state and federal environmental protection laws are enforced; to encourage skills for citizen advocacy for a clean and healthful environment." CCCC has over 400 individual and family members who pay regular dues to the organization. Membership is open to the public. CCCC distributes an irregular newsletter on local environmental issues to our members, area municipal official, libraries and other public places. Members of CCCC's Board of Directors sit on the Cattaraugus County Legislature's Farmersville Task Force of the Cattaraugus County Legislature and the Cattaraugus County Soil and Water Conservation District. CCCC has been a formal party to state environmental permit review proceedings in the Farmersville landfill proposal since 1993 and serves as a watchdog to Cattaraugus county citizens for environmental issues generally.

2. The Citizens Task Force ("CTF") has not included representation from CCCC. Notice of meetings of the CTF has not been provided to CCCC or to the local public. Nor were local stakeholders not included in the CTF invited to the public meeting on decommissioning criteria for West Valley held in Rockville, Maryland, in December, 1998. CCCC learned about this meeting only during the present public comment period. In view of the restricted access of local stakeholders to the ongoing work of the CTF, their absence from the December, 1998, public meeting, and NRC Staff's regular attendance at CTF meetings, (see SECY-98-251, Attachment 4), NRC should make additional efforts to reach out to local municipal officials and other stakeholders in Cattaraugus and Erie counties before deciding on a final policy for the West Valley site. These efforts should include additional opportunities for all local stakeholders to submit comments on the Commission's Policy on West Valley as it evolves.

Response side of this page intentionally left blank.

**Commentor No. 93 (cont'd): Lois Ann Zendarski,
Concerned Citizens of Cattaraugus County**

3. CCCC supports the NRC's proposed action prescribing the LTR for the West Valley site as a whole, including both the West Valley Demonstration Project ("WVDP") and the remainder of the site under NYSERDA's jurisdiction. However, the NRC's proposed action goes beyond prescribing the LTR and seeks to establish a policy for the site. Our concerns go primarily to the need to recognize under the Policy the unique features of the site as a whole.

Separate areas and separate reviews under the Draft Policy

4. The Draft Policy Statement appears to treat the site as composed of separate parts to which decommissioning standards will be applied at different times. 64 FR 67954, at p. 67953 ("Decommissioning Criteria for the NDA and SDA" (bifurcating application of criteria between the NDA and the SDA) and "Decommissioning Criteria for License CSF-1" (deferring application of criteria "to the termination of NYSERDA's NRC license on the West Valley site [until] that license is reactivated"). Treating the West Valley site as separate parts appears to be a substantial departure from NRC policy. SECY-98-251, note 1 (October 30, 1998) ("NRC, DOE, and NYSERDA have long favored addressing environmental impacts on a site-wide basis. Therefore, the EIS, the decommissioning criteria, and long-term control alternatives discussed in [SECY-98-251] cover both DOE's completion of the project and NYSERDA's closure of the site."). See also id., Attachment 3 (recognizing no less than twelve distinct waste disposal areas (WMAs) inside and outside the boundaries of the WVDP and recognizing the presence of at least one "[c]ontaminated ground-water plume that crosses several WMAs"). Nothing in the WVDP Act precludes the Commission from applying decontamination and decommissioning ("DandD") criteria on a site-wide basis, since applying standards on a site-wide basis includes and therefore cannot be inconsistent NRC's duties under the Act. Does "prescribing" DandD criteria under the Policy require those criteria be "applied" to the site as a whole? Or, will DandD criteria be applied to separate parts of the site at different times?

5. The Draft Policy "rel[ies] on the DOE/NYSERDA's EIS for [NEPA] purpose[s]." Draft Policy Statement, 64 FR 67952, at p. 67954 ("Environmental Analysis"). Will the DOE/NYSERDA EIS impose cleanup standards on the entire site, or will that EIS lead to cleanup standards applicable to only a portion of the West Valley site?

6. NRC has set forth as a general policy for decommissioning that "[t]he final status survey is the radiation survey performed after an area has been fully characterized, remediation has been completed, and the licensee believes that the area is ready to be released." DG-4006 (sect.2, para. 1). Cf. also id. ("The purpose of the final status survey is to demonstrate that the area meets the radiological criteria for license termination."). Will the twelve waste disposal areas at the West Valley site each be considered separate "areas" or will the Draft Policy require a holistic final status survey that considers the entire West Valley the relevant "area" for purposes of final characterization and remediation?

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**Commentor No. 93 (cont'd): Lois Ann Zendarski,
Concerned Citizens of Cattaraugus County**

Additional specificity is needed for the Commission's Policy on the West Valley Site

7. NRC, DG-4006 Regulatory Position 1.1 (para. 3) contemplates that a license termination plan is an optional obligation of the licensee. The Policy should state that DOE will be required to submit a license termination plan.
8. Where, as here, groundwater contamination is present and significant, current guidance recommends survey methods tailored to the specific site. Cf. DG-4006, sect. 2.11.1 ("The MARSSIM final status survey method was designed specifically for residual radioactivity in the top 15 centimeters of soil."); id. at sect. 2.11.4. ("The nature of appropriate ground water surveys should be determined on a site-specific basis and is outside the scope of this guide.") How will the final status survey method address groundwater contamination and cleanup standards for groundwater contamination? Under the Draft Policy, will exposure standards be set for both radiological and non-radiological hazardous substances?
9. For purposes of cost-benefit analysis under the Policy, benefits of remediation of any and all areas of the West Valley site cannot be calculated on the basis of "future occupants of the site," (DG-4006, sect. 3.1.1.), for a number of important reasons. The most important of these reasons follows from the high degree of erosion at the site and the significant known groundwater contamination and, while not fully characterized, highly likely potential for further and continuing groundwater contamination. Because the area is heavily used for hunting, sports fishing, and water recreation, it is unreasonable to expect that persons engaged in such activities can be kept from direct and indirect (e.g., through consumption of plants and animals exposed to contamination from the site) exposure to surface and subsurface waters from the site. Such persons include nearby residents as well as occasional tourists. Impacts on non-occupant hunting, fishing, and other recreational users should be included in any cost-benefit analysis under the Policy. Because the West Valley site is located over a federally-designated sole source aquifer, (52 FR 36100 (September 25, 1987) (Cattaraugus Creek Sole Source Aquifer)), thousands of residents who will not be "future occupants of the site" will be potentially directly effected by levels of remediation determined under the cost-benefit analysis. Impacts, including the potential for future impacts, on these off-site resident users of the site's underlying aquifer should be included in any cost-benefit analysis under the Policy. Because members of the Seneca Nation of Indians ("SNI") use the waters of Cattaraugus Creek in special ways determined by their distinctive culture, compared to sports and recreational tourists and nearby non-Indian residents, and because these waters may be contaminated now or in the future as a result of the highly erosive conditions at the West Valley site, these special uses must be considered and the benefits of remediation for SNI members must be included in the calculation of benefits under the Policy. The Policy should state that benefits to non-occupants including the important groups discussed above must be included in any cost-benefit analysis of remediation alternatives.
10. DG-4006, sect. 3.1.6., recommends that where ground water contamination is present at a site and where the residual radioactivity is diluted in an aquifer of large volume and there is also an "existing population deriving its drinking water from a downstream supply using a downstream supply," the required calculation of the collective dose from consumption of the ground water for

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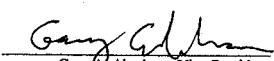
**Commentor No. 93 (cont'd): Lois Ann Zendarski,
Concerned Citizens of Cattaraugus County**

purposes of achieving ALARA (i.e., reduction of radiation to levels that are "as low as is reasonably achievable") should not be limited to the site critical group. (Id., quoting LTR, 62 FR 39058, at 39075). Rather, the collective dose for the existing population that relies on the contaminated aquifer for its drinking water "should be included in the ALARA calculation" and "the possibility of reducing the collective dose [to those using the aquifer] by remediation should be one of the items evaluated." Id. The West Valley site is located directly over a sole source aquifer. (52 FR 36100 (September 25, 1987)). Will the Policy on West Valley require that any collective dose calculation for purposes of a future final status survey include in its ALARA calculation the population within the area of the Cattaraugus Creek Sole Source Aquifer? If so, will this be the population at the time of the final status survey is performed?

11. License termination under restricted conditions is possible if certain requirements are met. 10 CFR § 20.1403. Neither the disjunctive ("or") or the conjunctive ("and") is used in the list of requirements, but NRC's Draft Guidance states that all the requirements must be met. DG-4006(4). The Commission's Policy on West Valley should clarify the nature of certain of these requirements beyond what is set forth in DG-4006 and the Policy should explicitly rule out the use of certain requirements set forth in DG-4006, sect. 4, due to the unique nature of the West Valley site.

12. May the licensee under the Draft Policy avoid the dose requirements under the LTR by reliance on ALARA? Or, is ALARA to be applied only for purposes of remediation that exceeds the LTR's dose limits?

Respectfully submitted for CCCC by:



Gary A. Abraham, Vice-President

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**Commentor No. 94: Anne Rabe, Coordinator,
Center for Health, Environment & Justice (CHEJ)**



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Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
Department of Energy
PO Box 2368
Germantown, MD 20874

May 28, 2009

Dear Ms. Bohan:

Our national organization represents thousands of New York members who care deeply about protecting the Great Lakes region of Western New York. The only way that government can truly protect this precious resource is by selecting the Sitewide Removal Alternative for the West Valley site.

Our comments on the West Valley nuclear waste site DEIS cover the following points.

- 1) Support Sitewide Removal Alternative: A Waste Excavation Cleanup.
- 2) Oppose Leaving Buried Waste On Site: It is Expensive and a Serious Environmental and Public Health Risk.
- 3) Oppose Phased Decision-Making as it Delays Cleanup of an Estimated 99% of the Site's Radioactivity for up to 30 Years.
- 4) Revisions Are Needed on Flawed DEIS

Thank you for considering our comments. Please let us know if you have any questions or require additional information.

Sincerely,

A handwritten signature in black ink that reads "Anne Rabe".

Anne Rabe
Coordinator
BE SAFE Precautionary Action Campaign
Center for Health, Environment & Justice
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**Commentor No. 94 (cont'd): Anne Rabe, Coordinator,
Center for Health, Environment & Justice (CHEJ)**

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CHEJ Comments on West Valley DEIS

1) Support Sitewide Removal Alternative

We urge DOE to select Sitewide Removal as it is the only Alternative that achieves the following objectives.

- Provides a complete and comprehensive cleanup of the entire site through excavation of radioactive and toxic waste, including any off-site contamination.
- Provides a permanent and safe solution that removes radioactive waste from a site with serious erosion problems, earthquake hazards, and a sole source aquifer.
- Prevents any catastrophic releases which could cause pollute community drinking water supplies, Lakes Erie and Ontario, harm public health and cost billions of dollars.
- Significantly lowers health risks to nearby communities, leaving behind a contamination-free area after 64 years
- Provides the most cost-effective approach over the long term according to a recent study. An independent, state-funded study, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site*, revealed leaving buried waste at the site is both high risk and expensive while a waste excavation cleanup presents the least risk to a large population and the lowest cost. Over 1000 years, waste excavation costs \$9.9 billion while onsite buried waste costs \$13 billion, and \$27 billion if a catastrophic release occurred.

2) Oppose Leaving Buried Waste On Site: It is Expensive and a Serious Environmental and Public Health Risk.

We strongly oppose leaving buried waste on site for the following reasons.

- Erosion is a powerful and fast moving force at the West Valley site as it sits on a geologically young landscape which is undergoing a relatively rapid rate of erosion. Michael P. Wilson, Ph.D., SUNY Fredonia Professor of Geosciences found in the FCA study that "Nuclear wastes, radioactive for tens of thousands of years, will be consumed by erosion and discharged downstream to Lakes Erie and Ontario in less than 3,000 years and may be dangerously exposed in less than 200 or 300 years."
- Scientists found the site poses a significant danger to people who live along nearby creeks, Buffalo residents and people living along the shores of Lakes Erie and Ontario. If just 1% of radioactivity leaked from the site, Lake Erie water users would be exposed to substantial radiation, causing hundreds of cancer deaths, and Buffalo and Erie County water replacement would cost hundreds of millions of dollars.
- The DEIS ignores the fact that the site must be maintained into perpetuity if buried waste is left on site. In this case, perpetuity is not a dozen years, or even two or three generations—the buried radioactive waste would have to be monitored, tracked, and maintained in place for tens of thousands of years with burdensome and

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DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative, as well as opposition to leaving waste on site and the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes," "Concerns about Potential Contamination of Water," and "Conclusions of the *Synapse Report*" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and 4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives. Chapter 4, Section 4.2, of this EIS presents an evaluation of cost-benefit considerations related to the alternatives. Section 4.2.1 compares costs; Section 4.2.2 summarizes the population doses for different work elements from each alternative; and Section 4.2.3 discusses the cost-effectiveness of each decommissioning alternative.

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DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. As stated in the Issue Summary on "Conclusions of the *Synapse Report*," the erosion analysis in this Final EIS is considered to be consistent with state-of-the-art analytical capabilities. The uncertainties in the erosion analysis are acknowledged in the discussions on erosion in Section 2 of this CRD and Appendix F of this EIS.

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Please refer to the Issue Summary "Concerns about Potential Contamination of Water" for a discussion of this issue and DOE's and NYSERDA's Response.

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Center for Health, Environment & Justice (CHEJ)**

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expensive maintenance costs. The EIS failed to analyze long term costs of monitoring and maintaining controls at the site for even 1,000 years.

■ **NYSERDA Raised Serious Problems with Key Aspects of DEIS.** Essentially NYSERDA stated that the DOE's environmental assessments are scientifically indefensible for long term erosion, engineering controls and health impacts, as summarized below from the *Forward of the DEIS*.

► **The soil erosion analysis over the long term is not scientifically defensible and should not be used for long-term decision making.** Using the current erosion models, predictions of population doses will not be accurate for the long term.

► **The groundwater contaminant transport analysis and modeling cannot be relied on in predicting public radiation doses and long term cleanup decisions.**

► **Engineered barriers performance has not been substantiated and may be overly optimistic.** Such barriers (caps, slurry walls, etc.) are critical to waste containment, and over the long term public radiation doses could be underestimated.

► **The DEIS should be reframed to reflect the applicable federal requirements.** The DEIS should be reframed to reflect the applicable federal requirements. The License Termination Rule (LTR) is the applicable federal regulation, not portions of NRC's low-level disposal regulations. It is not logical to assess the impacts from decommissioning actions that must meet the LTR requirements, but use other, not applicable regulations, to structure the analysis.

► **The waste exhumation analysis is overly conservative and based on extreme conditions, resulting in maximal costs.** Alternative methods could reduce the costs of exhumation and waste disposal.

► **The long-term performance assessment for the in-place Closure alternative is "seriously flawed and scientifically indefensible."**

3) Oppose Phased Decision Making Preferred Alternative

Under this Alternative, Phase 1 would include moving vitrified high-level waste to a new storage facility. The Phase 1 new cleanup work includes demolishing the process building in order to excavate the strontium plume source area, cleaning up the lagoons and installing barriers for groundwater contamination. All of this new cleanup work addresses only 1.2% of the total radioactivity on the site. Decisions on a majority of the waste, or 99% of the radioactivity, will be addressed in Phase 2 including high-level waste tanks, and both radioactive waste burial areas (NDA and SDA), or approximately 600,000 curies. Public participation on the Phase 2 decision making process is not explained.

We oppose the Phased Decision Making Alternative for the following reasons, as well as the reasons stated above on the buried waste option.

■ **The potential environmental and health impacts of leaving 99% of the radioactivity on site for another 30 years was not studied.** For instance, the high-level waste tanks, with 320,000 curies of radioactivity, are nearing the end of their useful

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94-4 As acknowledged in this EIS, long-term monitoring and maintenance would be required for alternatives that would leave waste on site. This EIS provides a summary description of current and potential future environmental monitoring programs. The descriptions of the alternatives were revised to further describe the use of engineered barriers and long-term monitoring and maintenance. Long-term monitoring and maintenance are described in Chapter 2, Sections 2.4.2.6 and 2.4.3.8. Long-term monitoring and institutional controls are also discussed in Chapter 6. Additional information about current and proposed monitoring and institutional controls is provided in Appendices C, H, and I. Chapter 2, Table 2-4, includes estimates of the environmental consequences if (1) monitoring and maintenance are successful (institutional controls remain in place) and (2) monitoring and maintenance programs fail (institutional controls are lost). Chapter 4, Section 4.2, of this EIS includes monitoring and maintenance costs for the alternatives that would leave waste on site.

Detailed information regarding long-term monitoring and maintenance programs and institutional controls under alternatives that would leave waste on site has not been specifically defined at this time. Such definition would occur after an alternative is selected for implementation and would include consultation with appropriate regulatory authorities. An element of these long-term programs would be development of plans and procedures for responding to emergencies that would include coordination and agreements with local police and fire departments and medical facilities.

94-5 DOE disagrees with many of the points raised in NYSERDA's View, which is included as the Foreword to this EIS. At the core, differences between DOE and NYSERDA center on different views about the nature of analysis required for an EIS and the attendant level of acceptable risk associated with any uncertainties in that analysis as it relates to decisionmaking. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, this EIS (1) acknowledges the information limitation and its relevance to environmental consequence, (2) summarizes existing credible scientific evidence, and (3) presents an analysis using a theoretical approach that is generally accepted by the scientific community involved in such analysis. This Final EIS contains text boxes in the relevant subject matter areas that acknowledge the differences of opinion between DOE and NYSERDA. In general, DOE's position is that the Agency spent much time and effort engaging highly qualified and respected experts in hydrology and hydrological transport, landscape evolution

**Commentor No. 94 (cont'd): Anne Rabe, Coordinator,
Center for Health, Environment & Justice (CHEJ)**

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life (50 years) and any leaks could seriously pollute the sole source aquifer. The Decommissioning Plan (DP) claims that the high-level waste tanks will be empty at the start of Phase 1, yet neither the DEIS or DP state how and when the tanks would be actually emptied.

■ **State Law Requires a Complete Plan in DEIS.** The Phased Decision Making Alternative not only fails to tell the public about key elements of Phase 1, such as data collection, but it is fails to tell the public about what future actions would be done in Phase 2, which could be a violation of the State Environmental Quality Review Act (SEQRA) and NEPA. These laws requires that a DEIS have a complete plan and that all potential impacts be examined in detail in the DEIS; it does not allow segmentation of an action and an incomplete plan such as the phased decision making proposal.

Basically, there is no way that DOE can do an environmental impact analysis on a final cleanup plan when it has failed to make a decision on the final cleanup. How can DOE study the impacts of the cleanup method in a DEIS when it has not been selected? Clearly, DOE would need to do another DEIS when the cleanup method has finally been selected. But, at a minimum and from a fairness and public policy perspective, this DEIS is illegal and in violation of the basic tenets of NEPA and SEQRA since there has been absolutely no analysis of the environmental impacts of the yet-to-be-selected cleanup method.

■ Given the past record of decades of delay, the two phased approach with a lengthy 30 year timetable is not responsive or responsible in addressing dangerous contamination. The site sits on top of a sole source aquifer and has been plagued with problems, such as radioactive contaminated groundwater, and radioactivity from the site has been found as far away as the shore at the juncture of the Niagara River and Lake Ontario demonstrating a potential for the leaking site to contaminate drinking water supplies. For instance, the buried high-level waste area (NDA) has been undergoing measures to limit water flow, and a large amount of high-level radioactive waste is buried in deep holes 50 to 70 feet deep which pose a significant risk of leaks to the sole source aquifer.

■ The public was provided with almost no information on the data collection under Phase 1, which is essential to determining the extent of future decontamination work in Phase 2. If data collection is inadequate, a safe cleanup in Phase 2 is less likely. There is no plan for future public participation on Phase 2 activities and this is unacceptable.

4) Revisions Needed on Flawed DEIS.

■ **Information Needed on Monitoring and Institutional Controls.** The DEIS includes cleanup options where long-lasting radioactive waste is left buried on site, yet there is a serious lack of information on the monitoring and maintenance of engineering and institutional controls to ensure radioactive waste is safely contained. Funds and procedures should also be described that will be in place to respond immediately to any toxic releases. This information is absolutely critical to evaluate whether or not the site can be safely maintained if waste is left buried on site. The full monitoring,

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(erosion), human health and environmental risk analysis, and other technical fields, and stands behind the analyses performed for this EIS.

Engineered barriers: A text box has been added to Chapter 4, Section 4.1.10 to acknowledge the limited data about the long-term performance of the engineered barriers and to direct the reader to the discussion of conservative assumptions made for the EIS analysis.

Applicable Federal regulations: A text box has been added to Chapter 1, Section 1.3 of this EIS to address a similar comment in NYSERDA's View. It explains that the long-term performance assessment in this EIS meets DOE's NEPA guidance and precedent, while also using the requirements of NRC's License Termination Rule (10 CFR Part 20, Subpart E) and the WVDP Policy Statement for the long-term performance analysis for this EIS.

Cost estimates: The approach to estimating costs and the resulting cost estimate for the Sitewide Removal Alternative were reviewed and revised for this Final EIS. The revised cost estimate is presented in Chapter 4, Section 4.2.

Long-term performance assessment for the Sitewide Close-In-Place Alternative: As noted above, DOE disagrees with many of the points in NYSERDA's View, including the opinion that the long-term performance assessment for the Sitewide Close-In-Place Alternative is "seriously flawed and scientifically indefensible." Chapter 1, Section 1.8, of this EIS provides a roadmap of the DOE response to the specific issues raised in the NYSERDA View that are the basis for NYSERDA's assertion.

Please see the previously cited Issue Summaries for responses to portions of this comment. The additional issues cited by the commentator are discussed in the following paragraphs:

Percentage of activity removed under Phase 1 of the Phased Decisionmaking Alternative: It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A

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maintenance and institutional control program needs to be described in detail under each alternative.

■ **Include Climate Change Impacts.** The DEIS states that it does not anticipate there will be any climate change and climate-change related impacts for the next 10,000 years. This is unacceptable and should be corrected. Climate change is a well-established problem and CHEJ recently researched the impacts of climate change-related extreme weather conditions and its impact on Federal Superfund toxic waste sites. Clearly, these are relevant and applicable to the state's largest nuclear waste site, West Valley.

Below are excerpts from our report, *Superfund: In the Eye of the Storm*, which highlight the need for DOE to address this critical problem and its impact on West Valley in the final EIS. (Visit http://www.besafenet.com/media/superfund_2009.shtml)

Executive Summary

"Today our nation faces a new threat to the health and safety of the American people—disruption and damage at Superfund sites caused by extreme weather conditions brought on by climate change. Hazardous waste sites can discharge and release large quantities of toxic substances when subject to flooding, tornados and hurricanes. The increased costs from cleanup and disruption caused by extreme weather events place a tremendous financial burden on the already financially ailing Superfund program.

Extreme weather events brought on by climate change is a significant threat to Superfund sites, the worst contaminated sites in the country. Hurricanes, tornados and intense heavy rains leading to flooding are occurring more often and with greater intensity and have dispersed toxic contamination at Superfund sites. As these events are becoming more frequent and more intense, climate-change related weather events are posing a significant threat to the future integrity of many Superfund toxic waste sites."

Chapter 1: Climate Change and Extreme Weather Conditions

"As the climate warms in response to increasing atmospheric greenhouse gases, escalating changes in extreme weather are expected. It has been well established in recent scientific reports that the intensity of these extreme events will increase in the future. For instance, the International Panel on Climate Change (IPCC), a preeminent scientific research group on climate change comprised of the world's leading scientists, has issued a series of reports on the increase of climate change-related weather events. The most recent report concluded that "warming of the climate is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea levels." Their reports join many others in demonstrating there is a scientific consensus that the earth is warming primarily as a result of emissions from human activities. This global warming will lead to serious, potentially catastrophic impacts including increased flooding, drought, and hurricane intensity.

There is growing scientific evidence that a warming world will be accompanied by changes in the intensity, duration, frequency, and geographic extent of weather and

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decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Public involvement: Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until final decisions are made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate the Phase 2 decision for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

High-level radioactive waste tanks: DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory,

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climate extremes. This is expected to lead to an increase in areas affected by drought, more frequent and intense heavy downpours with a higher total rainfall, more frequent heat waves and warm spells, and more intense hurricanes and tornadoes.^{8,9} In recent decades, there is already evidence that extreme rainfall has increased in some regions, leading to an increase in flooding. For example, many believe the heavy rain and subsequent flooding in the Midwest in June 2008 was a climate change-related extreme weather event. The flooding there has been compared to intense rain and flooding that occurred in 1993 which were thought to be a once-in-500-years event.

These changes in extreme weather will have a significant impact on all sectors of the economy and the environment—including Superfund toxic contaminated sites—and will impact people's health and well-being. Climate change-related extreme weather conditions cause property damage, injury, loss of life and threaten the existence of some species and ecosystems. From 1980 to 2006, there were 70 weather-related disasters in the United States with overall damages exceeding \$1 billion. Such impacts are among the most serious challenges to society in coping with a changing climate. However, it may be that the more insidious impacts are harder to fully ascertain and may pose much greater risks, such as the long-term impacts of flooding hazardous waste sites and spreading highly toxic chemicals throughout a community. Despite the growing evidence, it is difficult to fully determine if a specific extreme weather event is due to a specific cause, such as increasing greenhouse gases. There are two reasons for this: 1) extreme weather events usually are caused by a combination of factors; and 2) a wide range of extreme events are a normal occurrence even in an unchanging climate. This is because some factors, such as sea surface temperatures, may be strongly affected by human activities, while others may not. Science is just not able to conclusively detect the influence of a human activity on a specific extreme weather event. Nevertheless, the scientific analysis of global warming over the past century strongly suggests it is likely that extreme weather events, such as heat waves, have increased due to greenhouse warming, while the likelihood of other events, such as frost or extremely cold nights, has decreased.

Atlantic Hurricanes

One example of escalating extreme weather conditions is the increased intensity of hurricanes. An analysis of the latest scientific research by the U.S. Climate Change Science Program, working with the National Oceanic and Atmospheric Administration, drew the following conclusions about hurricanes:

- Since approximately 1970, the Atlantic Ocean tropical storms and hurricane destruction potential has increased substantially. For instance, over the past two decades, there has been an increase in extreme wave height characteristics associated with more frequent and intense hurricanes.
- It is very likely that the greenhouse gas increases linked to human activities have contributed to increased sea surface temperatures in the hurricane formation region. Since there is a strong connection between Atlantic tropical sea surface temperatures and Atlantic hurricane activity, this suggests a human contribution to recent hurricane activity.

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DOE has developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flows into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being further reduced by tank drying.

Additionally, much of the residual contamination in the tanks is attached (i.e., "fixed") to metal surfaces and is not readily mobile. Chapter 2, Section 2.3.1, of this EIS, as well as text in the *Phase 1 Decommissioning Plan for the West Valley Demonstration Project (Phase 1 Decommissioning Plan)*, have been clarified to acknowledge that the liquids remaining in the tanks will be dried as a result of installation and operation of the tank and vault drying system and that this drying will be complete before any Waste Tank Farm decommissioning actions are initiated.

Offsite Contamination: The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program. The decommissioning measures to manage the North Plateau Groundwater Plume and other sources of contamination at WNYNSC would reduce the consequences to humans and the environment.

Compliance with NEPA and SEQR: If the Phased Decisionmaking Alternative is selected and documented in DOE's Record of Decision and NYSERDA's Findings Statement, cleanup would occur in two separate phases. As part of the description of the decommissioning activities under the Phased Decisionmaking Alternative, Chapter 2, Section 2.4.3.3, of this EIS provides a discussion of the data collection, studies, and monitoring that would be performed during implementation of Phase 1,

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■ For North Atlantic and North Pacific hurricanes, it is likely that rainfall, wind speeds, and storm surge levels will increase in response to human-caused global warming. Hurricane activity models under climate change scenarios predict that tropical Atlantic sea surface temperatures will warm dramatically during the 21st century with temperatures in the atmosphere closest to the surface warming even more so. These hurricane models indicate that while Atlantic hurricanes and tropical storms will be substantially reduced in number, they will be stronger with significantly more intense rainfall.

As the climate-change related extreme weather events are becoming more frequent and more intense, they are posing a significant threat to the future integrity of many Superfund sites. The strong winds of hurricanes and tornadoes can cause significant damage such as disrupting contaminated soils and moving waste barrels long distances, or damaging protective liners covering dangerous toxic waste dumps. Flooding can dislodge buried waste, displace chemicals stored above ground, and spread contamination in soil.

Extreme weather conditions that have impacted Superfund sites include Hurricanes Ike in 2008, Katrina and Rita in 2005, and Ivan in 2004; tornadoes in Oklahoma and Iowa in 2008 and related flooding in Iowa, Kansas, and Missouri in 2008.

In the Gulf Coast region alone, 56 Superfund sites were impacted by hurricanes from 2004 to 2008. This region is one of the most heavily industrialized and polluted areas in the nation. Hurricane force winds and floodwaters stirred up toxic chemicals, oil and pesticides and dispersed them across the region."

■ **Eliminate Discounting.** The agencies inappropriately use discounting in their cost analysis of the cleanup options. The total costs of their analysis should be an undiscounted cost. The economic technique known as 'discounting' undervalues important environmental resources like the Great Lakes and sole source aquifers, as well as future generations. The economists who authored the FCA Study critiqued the use of discounting in nuclear waste cleanups over long time periods for the following reasons. In standard capital investments, a discount rate is applied to account for future interest earnings. For instance, at a 3 percent discount rate, \$103 next year has a present value of \$100 today, because \$100 is the amount one would have to put in the bank today at 3 percent interest, in order to end up with \$103 next year. But, since West Valley's waste is radioactive for tens of thousands of years, a cost analysis should start out with at least a review over the next 1,000 years as a first step.

Over periods of 1000 years, any substantial discount rate implies that the health and wellbeing of future generations has no present value—or no worth to us today. Since the cleanup options are meant to protect the public for many generations, we cannot reasonably assume that there is no value to public health in the year 1000. Also, the existence of regulatory requirements for protection of sites that will remain dangerous for 1,000 years must imply that we care today about health hazards that will be experienced in 3008. Costs and benefits incurred in that distant year must have a significant present value; otherwise, we could ignore them and we could "prove" via

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as well as the purpose of each of these activities. The overall intent of these Phase 1 activities is to further characterize the site and to research technology developments and engineering to aid consensus decisionmaking for Phase 2 actions.

DOE and NYSERDA believe that this EIS fulfills the requirements of NEPA and SEQR. The environmental impacts of implementing Phase 1 of the Phased Decisionmaking Alternative are described for each resource area in Chapter 4 of this EIS. If this alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. For each resource area, Chapter 4 discusses the impacts that would occur if either removal or close-in-place is selected for Phase 2. The chapter also discusses which alternative(s) bound the impacts in the event that continued active management is selected for the SDA. The short-term impacts of a Phase 2 decision that involves continued active management of the SDA are bounded by either the removal or close-in-place impacts. The post-decommissioning impacts of a continued active management decision for the SDA, which include staffing, occupational exposure, and waste generation related to SDA monitoring and maintenance, as well as long-term impacts on public health and safety, would be similar to the no action impacts for the SDA.

DOE has not segmented the activities proposed in this EIS; instead, DOE has prepared this single, comprehensive EIS for the decommissioning and long-term stewardship of WNYNSC. This EIS adequately analyzes the totality of environmental impacts, including costs, of a broad spectrum of reasonable alternatives that meet the respective purposes and needs of DOE and NYSERDA (Sitewide Close-In-Place, Phased Decisionmaking, and Sitewide Removal), as well as the No Action Alternative.

While the Phased Decisionmaking Alternative temporarily defers a final decision on the disposition of the Waste Tank Farm, the NDA, and the Construction and Demolition Debris Landfill, DOE believes that the impacts of this deferred decision are adequately analyzed within this current EIS. Of course, as with all tiered decisions, DOE would continue to assess the results of any site-specific studies along with any emerging technologies to ascertain whether or not a Supplemental

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discounting that it is not cost-effective to spend anything today on our successors a thousand years down the road. At a discount rate of 1.4 percent, considered low by many economists, \$1 million in 3008 has a present value of \$1 today. Thus it would not be worth spending more than \$1 today to prevent \$1 million of harm in 3008. To validate the commonsense idea that outcomes in 3008 matter today, the discount rate must be no more than zero. **If we care about the long-term impacts of today's nuclear waste, then the only supportable discount rate is zero.** While the choice of a discount rate for short term decisions is an economic question, the choice of an intergenerational discount rate is a matter of ethics and policy. The value of future lives is a strong argument for not using an economic discount rate in this analysis.

■ **Public Disclosure is Inadequate.** There appears to be a major discrepancy in the two documents; the DEIS states that DOE will be involved in both Phase I & 2 of the Phased Decision Making Alternative. But, the Decommissioning Plan appears to describe a situation where DOE could leave the site and any responsibility at the end of Phase I in approximately 30 years. If this were the case, it could leave New York State with the responsibility for cleaning up an estimated 99% of the site's radioactivity. This would obviously be a major change, yet there are only a few references in the Plan. **It is critical that DOE confirm they will continue their responsibility and commitment to fully remediate the site.**

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EIS is warranted prior to any Phase 2 decision. Based upon data available to date, however, DOE believes this EIS adequately evaluates the environmental impacts associated with the range of reasonable alternatives and the Agency has vigorously resisted all efforts to "segment" this single comprehensive decommissioning EIS into separate NEPA documents.

It is NYSERDA's position that segmentation under SEQR refers to the improper division of one project into multiple smaller projects to circumvent SEQR requirements. NYSERDA does not believe that improper segmentation would be involved under the Phased Decisionmaking Alternative because the Phase 1 actions proposed under the Preferred Alternative would be independent of and would not bias actions conducted in Phase 2. In other words, the actions proposed under Phase 1 would not automatically trigger certain actions under Phase 2; to the contrary, DOE and NYSERDA could opt for any alternative or combination of alternatives during Phase 2. The test for improper segmentation is whether or not projects (in this case Phase 1 and Phase 2) are interdependent. In this case, they are clearly not.

94-7

Please see the response to Comment no. 94-4 for a discussion of monitoring and institutional controls.

Funding for emergency response to toxic releases: Although the estimated costs of monitoring and maintaining institutional controls for the Sitewide Close-In-Place Alternative are included in Chapter 4, Section 4.2, funding of these activities, including for emergency response to toxic releases, is not within the scope of this EIS.

This EIS was prepared to evaluate the environmental impacts of the alternatives for decommissioning and/or long-term stewardship of WNYNSC, a legally required step to support a decision on a course of action. The U.S. Congress and the President are responsible for establishing funding levels for various Federal Government programs, while the New York State Legislature and the Governor are responsible for establishing funding levels for state government programs. Implementation of the decision made in DOE's Record of Decision and NYSERDA's Findings Statement is contingent on the level of funding allocated.

94-8

The analysis in this EIS recognizes the potential for climate change to influence the long-term consequences of waste management. Climate changes, whether natural or influenced by human actions, could change the nature and amount of precipitation. Appendix H, Section H.3.1, of both the Revised Draft EIS and

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the Final EIS discusses the sensitivity of groundwater flow to changes in annual precipitation. The revised erosion prediction used for the unmitigated erosion dose analysis is based on the assumption that storms could occur more frequently than indicated by current records. This prediction includes the effects of storms of greater severity than the one that occurred in the region in August 2009. The use of this higher erosion rate associated with an elevated precipitation rate is discussed in Appendix H, Section H.2.2.1. Chapter 4, Section 4.3.5, has been revised to include a discussion of how the uncertainties about future climate change are addressed in this EIS.

- 94-9** DOE and NYSERDA acknowledge the commentor's objection to discounting and interest rates used in the cost-benefit analysis included in the Revised Draft EIS. Please see the Issue Summary for "Questions about Cost-Benefit Analysis" in Section 2 of this CRD for further discussion of this issue and DOE and NYSERDA's response.
- The cost-benefit analysis presented in Chapter 4, Section 4.2, of the Revised Draft EIS was performed to support NRC's request for cost-benefit information consistent with its as low as is reasonably achievable (ALARA) analysis guidelines. This cost-benefit analysis follows the principles in the NRC ALARA guidance presented in NUREG-1757, "NRC Consolidated Decommissioning Guidance." The analysis in Section 4.2 has been revised for this Final EIS and uses several relatively low discount rates (1, 3, and 5 percent) to investigate the sensitivity of the results to lower discount rates.
- 94-10** DOE and NYSERDA acknowledge the commentor's concern about continued DOE participation in the cleanup of the WNYNSC site. DOE will remain on site until it completes its responsibilities as assigned under the West Valley Demonstration Project Act. DOE would not leave the site after completion of the Phase 1 actions because it would not have completed the actions required under the Act. The description of the Phased Decisionmaking Alternative in Chapter 2 of this EIS has been revised to clarify this, and the wording in the *Phase 1 Decommissioning Plan* has been revised to avoid the implication that DOE would leave the site at the end of Phase 1.

Commentor No. 95: West Valley Citizen Task Force



THE WEST VALLEY CITIZEN TASK FORCE

May 27, 2009

Ms. Catherine Bohan, EIS Document Manager
West Valley Demonstration Project
U.S. Department of Energy
P.O. Box 2368, Germantown, MD 20874

RE: West Valley Citizen Task Force Comments on the Revised Draft Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center – November 2008.

Dear Ms. Bohan,

These comments on the Revised Draft Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center – November 2008 (DEIS) have been prepared by the West Valley Citizen Task Force.

The West Valley Citizen Task Force supports all Phase 1 activities being accomplished without delay. Further, the CTF supports the full site-wide removal alternative. In the event that the Phased Decisionmaking Alternative is selected, the CTF would support a Record of Decision for Phase 1 and insists that a supplemental EIS be required for Phase 2.

Background

After being convened by NYSERDA and DOE, the West Valley Citizen Task Force (CTF) held its first meeting on January 29, 1997. At that meeting we approved and adopted our Ground Rules. Those Ground Rules include, as a major purpose, for the CTF to *"assist in the development of a preferred alternative for the completion of the West Valley Demonstration Project and cleanup, closure and/or long-term management of the facilities at the site."*

The CTF met for approximately 18 months and, on July 29, 1998, issued a Final Report setting forth our Policies and Priorities and Guidelines for the Preferred Alternative. We draw your attention to the Final Report which is attached. Some elements of the Final Report have been implemented, such as vitrification, emptying the drum cell, and removal and shipment of the spent fuel assemblies. We stand by the conclusions reached in our Report for the elements which have not yet been implemented.

West Valley Citizen Task Force
c/o The Legue Group
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860-521-9122

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95-1 DOE notes the comment. See the following detailed responses.

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Since the issuance of the Report, we have met monthly with DOE and NYSERDA to stay apprised of the progress on cleanup activities and planning at the West Valley Demonstration Project (WVDP) and the Western New York Nuclear Service Center and to provide input on the development of a preferred alternative. We believe this level of active and ongoing involvement provides us with a unique and informed perspective to comment on the DEIS.

Below and attached are our comments. The General Comments, immediately following, set forth broad philosophical principles and additional examples or support for our concerns. Also attached are a number of specific comments on particular parts of the document.

The CTF appreciates the progress to date and the work of the Core Team agencies in arriving at a Preferred Alternative, something that was missing from the 1996 DEIS. The Core Team agencies are to be commended for overcoming significant differences and for working together. The CTF appreciates that DOE and NYSERDA are planning to accomplish cleanup work at the Site that the CTF deems essential including the removal of the source area of the North Plateau Groundwater Plume and a significant number of the contaminated facilities. However, for the reasons stated below we contend that further analysis will result in the sensible conclusion of the need for site-wide removal.

General Comments

There are a number of themes which run through our comments and which, if addressed, would result in changes we would like to see reflected in the Final EIS and Record of Decision.

Concerns with Phased Decision Making and Future Public Engagement

Fundamental concerns with the conclusions and assumptions in the DEIS include:

- The Phased Decisionmaking Alternative is tantamount to an Interim Remedial Action. A determination of impacts for issuance of a FINAL EIS for Phase 2 is not possible without a comprehensive determination of action and subsequent impacts. Therefore, if the Phased Decisionmaking Alternative is selected, a FINAL EIS and ROD cannot be issued for other than Phase 1 activities.
- The Phased Decisionmaking approach contained in the Preferred Alternative postpones the ultimate decision as to the level of cleanup and disposition of the wastes at the Site for an unnecessarily long time which is unacceptable. The CTF expects:
 - a. Studies should be conducted starting immediately and the final decision should be made as soon as practicable but no later than ten years.
 - b. The opportunity for public review and comment contained in this DEIS may be sufficient for the Phase 1 decisions. However, any future decisions that will result in the full cleanup and closure of the WVDP and the cessation of DOE involvement or in the possible long-term storage or disposal of wastes at the Site must be subject to additional NEPA/SEQRA public review and comment.

95-2 DOE's position is that all of the alternatives addressed in this EIS are complete and consistent with NEPA requirements. For the Phased Decisionmaking Alternative, Phase 2 impacts are bounded by the impacts determined for the Sitewide Removal and Sitewide Close-In-Place Alternatives as presented in Chapter 4 of this EIS. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate Phase 2 decisions for the SDA and balance of WNYNSC.

If the Phased Decisionmaking Alternative is selected for implementation, DOE and NYSERDA would comply with NEPA and SEQR requirements in making the Phase 2 decision.

Also note that the term "Interim Remedial Action" is taken from CERCLA. WNYNSC is not a Federal CERCLA site.

95-3 If the Phased Decisionmaking Alternative is selected for implementation, DOE and NYSERDA agree that prompt decisions regarding Phase 2 would be preferable. The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until final decisions are made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

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- c. If an ongoing assessment period occurs, there will be many interim decisions and site work which will have far reaching impacts on human health and the environment; these decisions and the planning for the work should be subject to regular ongoing consultation with the public.
- Even if full site cleanup is selected in the FEIS and ROD, important decisions remain concerning implementation. If the Phased Decisionmaking Alternative is selected even more significant decisions about the future of the Site are deferred. In either of these events, the public should not only be involved but should actively participate in influencing agency decisions. The agencies should:
 - o Commit to continuing public engagement through the CTF,
 - o Allow for a public representative on the Core Team, and
 - o Commit in the FEIS to an appropriate EIS and NEPA process for any Phase 2 decision, if the Phased Decisionmaking Approach is selected.
- DOE and NYSERDA should make commitments in preparing for and conducting regulatory reviews, permitting and licensing processes overseen by other appropriate agencies to seek and incorporate the views of the community in making decisions regarding the future of the Site.

Long Term Risks and Site Suitability

- Site Suitability. Underlying the CTF's goal that the cleanup result in unrestricted release of the Site is the assertion that the Site is not suitable for the long-term storage of long-lived radionuclides. In the years since the Site was selected and the facilities constructed, the government and the public has come to more clearly understand the dangers associated with radioactive wastes and the conditions and criteria that will maximize protection of human health and safety and the environment during the handling, management, reprocessing, storage and disposal of radioactive materials. The Western New York Nuclear Service Center Site does not meet existing NRC licensing criteria. Because the Site does not meet current licensing criteria, a logical assumption is that it is not safe for the long-term storage or disposal of wastes. Therefore, the CTF maintains as a goal the release of the Site for unrestricted future use of the land. The Site should not be used for long-term waste storage.
- There is significant risk associated with radionuclides remaining at the Site in their present state for a prolonged period. A more thorough analysis of risks, erosion modeling, volumes of waste and transportation methods will: a) revise the current analysis, b) require revision of the EIS, and c) indicate that removal of wastes is the most prudent option. We contend:
 - o Institutional controls likely may not endure for as long as projected,
 - o Dose modeling seems understated compared to earlier estimates,
 - o Erosion estimates seem understated,

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95-3 <i>cont'd</i>	<p>NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate Phase 2 decisions for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.</p>
95-4	<p>DOE and NYSERDA activities at WNYNSC are regulated through a variety of regulatory review, permitting, and licensing processes overseen by Federal and state authorities. These processes are referenced and discussed in Chapter 1, Section 1.3, and Chapter 5 of this EIS.</p>
95-5	<p>DOE acknowledges the commentator's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. The site characteristics, both hydrologic and erosional, are considered in the long-term performance assessment included in this EIS. If DOE and NYSERDA choose close-in-place management for any radioactive waste remaining after completion of decommissioning activities, such closure would be coordinated with the appropriate regulatory authorities in accordance with applicable standards.</p>
95-6	<p>Please see the response to Comment no. 95-2.</p> <p>This EIS makes no projection about the durability of institutional controls. The EIS analyses are based on the following bounding conditions: (1) ongoing institutional controls and (2) permanent loss of institutional controls after 100 years. It is expected that future impacts would lie between those two bounds, and the specific consequences would depend on the specific nature and timing of future human actions.</p> <p>The projections of long-term doses are lower than the 1996 estimates because: (1) the performance assessment models have been revised to include more specific features (gully development, more realistic modeling of flow around engineered barriers) and (2) the in-place closure barrier designs have been refined to more effectively divert precipitation away from contaminants and to inhibit intrusion.</p> <p>Please see the Issue Summary "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for a discussion of this issue and DOE's response.</p> <p>The analysis in this EIS recognizes the potential for climate change to influence the long-term consequences of waste management. Climate changes, whether</p>

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- The impacts of climate change and extreme weather events have not been adequately addressed,
- Impacts to engineered barriers are unpredictable,
- There is an inherent danger when dealing with radionuclides, chemical and other hazardous materials,
- Any event that causes a major release of material from the Site will contaminate the Lower Great Lakes which are a priceless natural resource, and
- Any event that causes a major release of material from the Site will contaminate one of the largest bodies of freshwater in the world, which presently serves as the water supply of Buffalo and many other communities in Western New York, as well as Ontario and other downstream communities in the United States and Canada.
- The Policies and Priorities articulated in the CTF 1998 Final Report support the work in the proposed Preferred Alternative Phase 1. The CTF strongly encourages that this work be completed without further delay and in a manner that facilitates and does not impede future complete cleanup of the Site. The CTF desires that performance measurements for this work be clearly articulated and adhered to.
- The CTF stands by the Policies and Priorities articulated in its 1998 Final Report. Including, among others:
 - Protection of long-term human health and safety and of the environment is paramount.
 - Given the CTF's knowledge of the geologic, hydrologic and climate conditions, the Site does not appear to be suitable for long term, permanent storage or disposal of long-lived radionuclides. The level of risk from exposure is such that reliance on institutional controls over a prolonged period, hundreds or thousands of years, is not feasible.
- Analyses and studies should be performed during Phase 1 which assess the best methods of site decommissioning. Based on other studies and information available to us, we expect that the new studies will support the eventual goal of a full cleanup of the Site.

Need for Studies and Evaluations to Support Phase 2 Decisions

- The CTF understands that not all critical information, characterizations, studies and technologies may exist at this time to make a conclusive decision on the procedures and methodologies for removal of wastes. The CTF also understands that no long-term storage or disposal solution exists for orphan and Transuranic wastes at this time. The CTF further understands that technological advances may increase the safety of waste retrieval processes with potentially lower costs. As its name implies, the West Valley Demonstration Project, because of its small size and special circumstances as a commercial and government facility, is a suitable site to develop and pilot new and emerging technologies to remove onsite buried waste and the High Level Waste Tanks. As with the vitrification process, those new techniques and technologies will

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natural or influenced by human actions, could change the nature and amount of precipitation. Appendix H, Section H.3.1, of both the Revised Draft EIS and the Final EIS discusses the sensitivity of groundwater flow to changes in annual precipitation. The revised erosion prediction used for the unmitigated erosion dose analysis is based on the assumption that storms could occur more frequently than indicated by current records. This prediction includes the effects of storms of greater severity than the one that occurred in the region in August 2009. The use of this higher erosion rate associated with an elevated precipitation rate is discussed in Appendix H, Section H.2.2.1. Chapter 4, Section 4.3.5, has been revised to include a discussion of how the uncertainties about future climate change are addressed in this EIS.

A text box has been added to Chapter 4, Section 4.1.10 to acknowledge the limited data about the long-term performance of the engineered barriers and to direct the reader to the discussion of conservative assumptions made for the EIS analysis.

DOE and NYSERDA note the comment on the inherent danger when dealing with radionuclides, chemical and other hazardous materials. This EIS accounts for the human health risks from exposure to radionuclides and chemicals; the results of this analysis are presented in Chapter 4.

This EIS analyzes the radiological and nonradiological consequences of minor and major events to postulated onsite receptors and postulated near and distant downstream water users.

Please refer to the Issue Summary "Concerns about Potential Contamination of Water" for a discussion of this issue and DOE's and NYSERDA's response.

DOE and NYSERDA acknowledge the commentator's support for the activities to be performed under Phase 1 of the Phased Decisionmaking Alternative and, if the alternative is selected, intend to conduct Phase 1 in a manner that would not preclude the selection of any Phase 2 alternative. DOE and NYSERDA are committed to protecting long-term human health and safety and the environment. Site geologic, hydrologic, and climate characteristics are considered in the long-term performance assessment in this EIS, as are long-term human health impacts in the event of loss of institutional controls.

A variety of studies is expected to be performed during Phase 1 to support a decision about Phase 2 actions if the Phased Decisionmaking Alternative is selected. These are discussed in Chapter 2, Section 2.4.3.3, of this EIS. As

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be valuable in facilitating a proper cleanup and could serve as a stimulus for similar action elsewhere.

- The CTF insists that no additional wastes will be brought to WVDP for treatment or storage.
- The CTF recognizes a number of the decisions for the Site are impacted by national considerations and political decisions concerning the long-term disposition of high-level radioactive wastes. Consequently, some wastes could remain at the Site for a period of several decades after exhumation while awaiting relocation to a high-level radioactive waste repository. The CTF expects that all decisions regarding such wastes will be guided by the conclusion that the only appropriate, final action with regard to these wastes is for them to be removed from the Site.

During such time as this larger question of a national high-level waste repository or the ability of other facilities within the DOE complex to store wastes awaiting a determination on a national repository, the CTF insists that the WIR determination not be used and that wastes on the Site will be exhumed and temporarily stored in a manner that allows for its monitoring to readily, safely and regularly determine if the materials are leaking or migrating.

The CTF expects that all wastes be excavated and placed in a structure for temporary storage where monitoring and retrieval for repackaging and recontainment, if necessary, will be relatively easy. Short term studies should be conducted to ensure that this temporary storage can be accomplished safely.

The CTF expects that any structures built to contain wastes in the ground or above the ground at the Site will be constructed to withstand severe natural events such as tornadoes, earthquakes, and the hazards of flooding and erosion. The CTF expects that such structures also have the ability to withstand intentionally destructive acts. The CTF expects that all wastes that remain at the Site will be stored in such a way that they can be retrieved if the containment system and/or packaging fail. The CTF expects that an alternative storage system will be developed so as to be readily available should the primary containment system fail.

- Specific Commitments to Assessments and Pilot Studies. The CTF encourages DOE and NYSERDA to conduct assessments studies and pilot projects with the purpose of assessing technologies and processes for safely removing the high-level waste tanks, the NRC-Licensed Disposal Area and the State-Licensed Disposal Area. These activities should be initiated at the outset of Phase 1 so as to ensure timely planning and decision making. The public should be fully informed and consulted in these efforts.

As part of the ongoing permitting process for the Part 373/RCRA program, the New York State Department of Environmental Conservation (NYSDEC) may require mechanisms for assessments and continuation of work. Such permitting requirements might include activities such as pilot exhumation studies and projects. The CTF encourages DOE and NYSERDA to commit to such

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stated in the description of the Phased Decisionmaking Alternative, if the Phased Decisionmaking Alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close in place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements.

DOE and NYSERDA acknowledge the commentor's concerns. It is not consistent with DOE policy to bring additional waste to the WNYNSC site. Waste treatment and disposal were addressed in the *Final Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste (WM PEIS)* (DOE/EIS-0200-F) (DOE 1997). WNYNSC was not considered as a site for treatment and disposal in the WM PEIS and its Records of Decision.

DOE and NYSERDA acknowledge the commentor's recommendations about the decision to be made regarding waste management. It may be noted, however, that the principal purpose of this EIS is to analyze the environmental consequences of alternative decommissioning approaches.

Regarding the specifics of the comment, although the Administration expressed its intent in the 2010 budget request to terminate the Yucca Mountain program while developing nuclear waste disposal alternatives, DOE remains committed to meeting its obligations to manage and ultimately dispose of high-level radioactive waste and spent nuclear fuel (see Chapter 1, Section 1.6.4, of this EIS). The Administration intends to convene a blue ribbon commission to evaluate alternative approaches for meeting these obligations and will provide recommendations that will form the basis for working with Congress to revise the statutory framework for managing and disposing of high-level radioactive waste and spent nuclear fuel.

The implementation of the waste incidental to reprocessing (WIR) process is discussed in this EIS for those waste streams to which it could possibly apply (e.g., see Chapter 4, Section 4.1.11, of this EIS). Use of the WIR process is at the discretion of DOE. A determination that waste is incidental to reprocessing and can be managed as low-level radioactive or transuranic waste depends on meeting the criteria developed to protect human health that is documented in DOE Manual 435.1, "Radioactive Waste Management Manual," and the NRC February 2002 policy statement prescribing the use of NRC's License

Commentor No. 95 (cont'd): The West Valley Citizen Task Force

projects in the EIS and not simply through what may be required by NYSDEC. In addition, the CTF understands that the RCRA process has public participation components; nonetheless, the CTF strongly encourages NYSDEC, DOE and NYSERDA to make these processes robust and ensure public participation beyond the minimally required processes.

Other Comments

- The CTF has expressed concerns with past decreases in environmental monitoring and expects that environmental monitoring will be increased commensurate with Phase 1 and other work performed at the Site.
- Although the CTF understands that Nuclear Regulatory Commission decommissioning criteria are used to evaluate alternatives in relation to doses to a human receptor, the lack of discussion of environmental impacts associated with non-dose related radioactive releases fails to acknowledge the potential harm to other species or the cumulative impacts of slow releases.
- We acknowledge and concur with NYSERDA comments contained in the NYSERDA View.

Conclusion

Additional specific comments on the DEIS are attached, as is our 1998 Final Report. In conclusion, we reiterate the following key points:

1. We support the proposed work associated with the Phase 1 decision.
2. We support the Site-Wide Removal Alternative.
3. We consider the Phased Decision Making Alternative to be tantamount to an interim remedial action. In the event that the Phased Decision Making Alternative is selected, the CTF would support a Record of Decision for Phase 1 and insists that a supplemental EIS be required for Phase 2.
4. We stand by the conclusions and recommendations of our 1998 Final Report.
5. We expect that additional assessments, analyses and studies will be performed, especially with respect to long-term erosion modeling, the transportation analysis and waste volume exhaustion disposal estimates, and risk assessments. We anticipate that these will result in significant recalculations of both cost and risk that will likely show full site cleanup and unrestricted release as the preferred final decision. Further, we expect that these efforts could begin immediately and a final decision made within 10 years.

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Termination Rule as the decommissioning criteria for WNYNSC (67 FR 5003). DOE and NYSERDA acknowledge the commentor's preference that the WIR process not be used.

To the extent possible, any wastes that would be excavated would be shipped off site. This EIS addresses the possibility of temporary storage of orphan waste pending the availability of disposal capacity. As addressed in Chapter 2, Section 2.5.1, however, indefinite onsite storage would not meet the purpose and need of this EIS.

Depending on the nature and quantities of the materials to be contained within the structures, any structures built to support implementation of a decommissioning alternative would be constructed to meet natural or other hazards in accordance with DOE criteria.

Please see the response to Comment no. 95-3 for discussions of Phase 1 activities and public participation prior to the Phase 2 decision.

Environmental monitoring is conducted at WNYNSC in accordance with Federal and state requirements, commensurate with the types of contaminants, contaminant transport and exposure pathways, levels of site activities, and other considerations. DOE annually publishes an environmental report for WNYNSC, which is available at <http://www.wv.doe.gov>. DOE expects that, as part of implementing Phase 1, adjustments would be made as necessary to onsite monitoring activities (e.g., installation of additional groundwater monitoring wells), as addressed in the *Phased Decisionmaking Alternative Technical Report* (WSMS 2009c).

This Final EIS addresses the long-term environmental impacts to biota. Please refer to Chapter 4, Section 4.1.6, under the long-term impacts for the Close-In Place and No Action Alternatives for a description of long-term impacts on biota. A screening-level ecological risk assessment was performed that compared predicted concentrations against published DOE Biota Concentration Guides, which are concentration limits for radionuclides to protect biota. The section has been revised in this Final EIS to reflect the revisions in the long-term performance assessment.

DOE and NYSERDA acknowledge the comment.

As noted in the description of the Phased Decisionmaking Alternative, additional studies and analyses would be conducted as part of the implementation of Phase 1. DOE and NYSERDA would review and assess the information when it is available

Commentor No. 95 (cont'd): The West Valley Citizen Task Force

6. We expect that the public and local communities will be consulted and that meaningful methods of public engagement will be continued or established throughout the time period when decisions are made and work is performed.

Sincerely,

The West Valley Citizen Task Force

Attachments – Specific Comments on:

- DEIS Chapter 1
- DEIS Chapter 2
- DEIS Chapter 4
- Appendices
- West Valley Citizen Task Force Final Report – July 29, 1998

Copy:

Senator Charles E. Schumer
 Senator Kristen E. Gillibrand
 Representative Eric J.J. Massa
 Representative Brian M. Higgins
 Representative Louise M. Slaughter
 Representative Chris Lee
 Governor David A. Paterson
 New York State Senator Catharine M. Young
 New York State Assemblyman Joseph Giglio

|| 95-16

as part of the Phase 2 decisionmaking process. Phase 1 studies would begin after publication of DOE's Record of Decision and NYSERDA's Findings Statement.

Regarding the 30-year timeframe cited by the commentor, as stated in the response to Comment no. 95-3, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.

- 95-16** See the response to Comment no. 95-3 above for a discussion of public participation prior to Phase 2 decisionmaking.
- 95-17** The stated intent to conduct analyses to address the impacts of contamination remaining after completion of Phase 1 activities is consistent with the general EIS

Commentor No. 95 (cont'd): The West Valley Citizen Task Force

New York State Assemblyman Jack Quinn, Jr.
Bryan C. Bower, Director WVDP, DOE
Paul J. Bembia, Director, WVSMP, NYSERDA
Paul A. Giardina, EPA
Timothy Rice, NYSDEC
Gary H. Baker, NYSDOH
Rebecca Tadesse, NRC

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Commentor No. 95 (cont'd): The West Valley Citizen Task Force

General comments

Comment
The DEIS regularly mentions that the impacts for the Preferred Alternative lie somewhere between the Close in Place and Sitewide Removal alternatives. Basically, it assumes that the possible range of impacts have been identified and defined by the two extremes. However, on page 2-45, under the heading of Evaluations to Determine the Phase 2 Approach, the first bullet states that the approach will be based upon "The results of analysis to estimate the impacts of residual radioactivity that would remain after completion of the Phase 1 activities."
It may be academic, or just a bad choice of wording, but there seems to be an inherent contradiction in assuming that all the possible impacts have been identified while saying that the direction of Phase 2 is based upon some future impact analysis.
We are concerned that, if the Phased Decisionmaking Alternative is selected and the Phase 1 work is completed, the DEIS states that DOE will only be required only to perform "operations, monitoring and maintenance...lesser in magnitude to what is currently in place at the site." (Page C-115, Paragraph C.3.3.)
The DEIS regularly refers to the "Close in Place Alternative" impacts as either the upper or lower limit for impact assessment. We are unable to find where the document specifically states that any WMA's not addressed in Phase 1 will be addressed, as a minimum, as specified in the Close in Place alternative. While existing laws may dictate that course, given the unknowns for final disposition of certain waste streams, and the uncertainties associated with the passage of 30 years time, the document should specifically state that "Close in Place", and not "No Further Action", will be the default Phase 2 option should other options involving more cleanup actions not be selected. That being said, the CTF does not support the Close in Place option.
WMA-4 contains the CDDL which should be exhumed. There is a disposal path for this waste, stimulus funds are available for this project and would show a commitment of working toward unrestricted release of the site. This would also make a wonderful pilot project.

DEIS Chapter 1-

Page	Paragraph / Section	Comment
1-5	Para 2 Line 2	<p>"DOE also determined that the Waste Management EIS would be a new EIS, and that the <i>Decommissioning and/or Long-Term Stewardship EIS</i> would instead be considered the revised draft of the 1996 <i>Cleanup and Closure Draft EIS</i>."</p> <p>1) Splitting the original EIS jeopardizes the intent of the original EIS for the entire site and potentially slows work because such a decision is open to legal challenge. 2) The title change from "<i>Cleanup and Closure</i>" to "<i>Decommissioning and/or Long-Term Stewardship</i>" indicates no intention to clean up and close the site.</p> <p>See also: p. 11 Section 1.6.1 which explains the rationale behind the decision to "revise and reissue the 1996 <i>Cleanup and Closure Draft EIS</i>", changing the title to "<i>Decommissioning and/or Long-Term Stewardship EIS</i>".</p> <p>Why did DOE decide not to title the 2008 DEIS the "Revised Cleanup and Closure EIS"?</p>

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conclusion that the impacts for the Phased Decisionmaking Alternative would be bounded by those for the Sitewide Removal and Sitewide Close-In-Place Alternatives. The cited bullet was intended to explain that, during implementation of Phase 1 removal activities, survey measurements and samples would be taken to record the actual field conditions upon completion of the actions. This information would be added to the body of knowledge that would be considered in the Phase 2 decisionmaking process to refine DOE's and NYSERDA's understanding of the impacts, as appropriate. The text of the bullet has been revised to clarify this.

The paragraph referenced in the comment addresses the operations, monitoring, and maintenance program that would take place after implementation of Phase 1 decommissioning actions and before implementation of the Phase 2 decision. The program would be lesser in magnitude to that currently in place at the site for those structures that are decommissioned; however, for the structures and Waste Management Areas that would not be addressed during Phase 1, the operations, monitoring, and maintenance program would continue, except where modified to address the regulations and statutes applicable at the time. The paragraph that explains this has been revised for clarification, and the rest of Appendix C, Section C.3.3, describes the operations, monitoring, and maintenance activities, as well as Phase 1 decommissioning actions, for each Waste Management Area.

In the Final EIS, NYSERDA and DOE have reconsidered the timeframe for making the Phase 2 decision (shortening the time period from up to 30 years to 10 years). NYSERDA has also clarified that for the SDA, alternatives that would be considered for Phase 2 actions, if the Phased Decisionmaking Alternative is selected, will include at least complete exhumation, close-in-place, or continued active management consistent with permit and license requirements. Unlike the West Valley Demonstration Project, the SDA does not have a decommissioning requirement. Through its rigorous monitoring and maintenance program, NYSERDA has demonstrated for the past 25 years that the SDA can be managed safely in its current configuration. However, NYSERDA also recognizes the dynamic nature of the environment at West Valley and decisions made 10 years from now, if the Phased Decisionmaking Alternative is selected, would need to reflect the knowledge gained from scientific studies and data gathering (during Phase 1) as well as continued review of routine monitoring data collected for the SDA. NYSERDA's decisions have been and will continue to be protective of human health and the environment. And, as it has done for Phase 1, NYSERDA would solicit stakeholder input on its Phase 2 decision through a formal public comment period and public hearings.

Commentor No. 95 (cont'd): The West Valley Citizen Task Force

1-5	The flexibility in allowable public dose criteria under the License Termination Rule is disturbing. The public should be able to clearly understand from the document the various possible outcomes and exposures when taking into account the per year TEDE (total effective dose equivalent) beyond 25 millirem per year plus ALARA ("as low as reasonably achievable"). The public also needs to understand the implications of language concerning the failure of institutional controls (something that the Citizen Task Force believes likely over the long term) and the latitude available to DOE in the language if "technically not achievable or prohibitively expensive." Both of these could result in significantly higher TEDE than one might assume. Under some of these circumstances, DOE could apply for alternate criteria and the TEDE may be as high as 600 millirem per year. This is not indicative of the protection of human health and safety as we understand it. Although DOE has indicated that there is no intention to apply for alternate criteria, we cannot assume in the DEIS that such an application will not be made. Ambiguity exists in the application and interpretation of the License Termination Rule and the West Valley Project Demonstration Act. These should be clarified. Would decommissioning of the High-Level Waste Tanks in the ground constitute a "disposal" decision?
1-6	<ul style="list-style-type: none"> • How can the tanks be decontaminated and decommissioned in the ground? • If the material inside is dried, would it not still be radioactive? • Does the LTR apply to that material? • "Such requirements as NRC will prescribe"... What determines the end of NRC involvement in the site? • Will the disposal requirements specified under the West Valley Demonstration Project Act apply and under what circumstances?
1-8	Can NRC disapprove of the DOE plan at some later point?
1-8	As it deals with non-DOE, non-Project and non-SDA waste, can NRC, in resuming its regulatory role, exercise any authority to force parties to take action? i.e. take any action once the West Valley Demonstration Project Act is completed?
1-10	1-5 Decisions... "...to complete WVDP and either close or manage..." Cleanup is not mentioned.

DEIS Chapter 2-

Page	Paragraph / Section	Comment
2-1	2.1	Line 2 should read "Review Act (SEQR), this revised draft environmental impact statement (DEIS) document should use "DEIS" universally.
2-1	2.1	3rd bullet - remove "the Preferred Alternative" by identifying the preferred alternative in the body of the document, especially in the introduction; it infers a pre-determination prior to the presentation of impacts.
2-1	2.1	Last paragraph: The DEIS refers to the Final EIS and Record of Decision. If the Phased Decisionmaking Alternative is selected, a FINAL EIS and ROD can only

Please see the Issue Summary for "Modified Phased Decisionmaking Alternative" in Section 2 of this CRD for further discussion of DOE's and NYSERDA's options for the Phase 2 decision, if the Phased Decisionmaking Alternative is selected.

95-19 As addressed in Appendix C, Section C.2.4, of this EIS, the Construction and Demolition Debris Landfill (CDDL) was used for disposal of nonradioactive waste. In 1986, closure of the CDDL was approved and certified by NYSDEC; it is currently identified as a solid waste management unit subject to corrective action requirements pursuant to the RCRA 3008(h) Consent Order. Because the CDDL is located in the flow path of the North Plateau Groundwater Plume, it is possible that waste and material removed from the CDDL would require handling as radioactive waste. For this reason, if the Phased Decisionmaking Alternative is selected for implementation, it appears reasonable and appropriate to address possible removal or in-place closure of the CDDL as part of the Phase 2 decision to be made regarding the remaining portions of the entire North Plateau Groundwater Plume.

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Once DOE's Record of Decision is issued, it may be possible to use stimulus funds for some of the actions. DOE will explore options for use of the funds at that time.

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The commentator raises a concern that splitting the 1996 *Draft Environmental Impact Statement for Completion of the West Valley Demonstration Project and Closure or Long-Term Management of Facilities at the Western New York Nuclear Service Center (Cleanup and Closure Draft EIS)* into two EISs opens the decision to legal challenge. However, DOE has already been sued on this issue and prevailed in court. A lawsuit was brought against DOE in 2005 after it decided to split the 1996 *Cleanup and Closure Draft EIS* into two EISs. On August 31, 2009, the 2nd Circuit Court of Appeals upheld a lower-court decision that found DOE acted properly when it issued the *West Valley Demonstration Project Waste Management Environmental Impact Statement* (DOE/EIS-0337). In its opinion, the 2nd Circuit Court stated that, "separating the consideration of the waste management and the closure issues was not impermissible segmentation." The court went on to say that agencies such as DOE "must often undertake multifaceted actions that have complex, interdependent environmental impacts," and that they must make "reasonable judgments about what actions should be analyzed together and what should be analyzed separately."

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Chapter 1, Section 1.2, of this EIS provides a detailed explanation of this EIS's development, including why the 1996 *Cleanup and Closure Draft EIS* was split into two EISs. This section provides a much more comprehensive discussion on this

Commentor No. 95 (cont'd): The West Valley Citizen Task Force

		be issued for the Phase 1 decision; otherwise the Phased Decisionmaking Alternative would be tantamount to an Interim Remedial Action. A determination of impacts for issue of a FINAL EIS is not possible without a comprehensive determination of action and subsequent impacts.
2-18	2.3.2.2 Lagoon 1 paragraph	It is not clear what the "Old Hardstand" is? The term "hardstand" should be defined in context in the document.
2-27	2.3.2.11	No activity is planned for WMA 11. Is the Scrap Material Landfill to be closed in place?
2-31	2.4	4th paragraph - delete (the Preferred Alternative) per the comment above
2-32	Para 2	The document should clearly describe the conditions or situations where a Supplemental EIS would be prepared.
2-43	Section 2.4.3.1	Second bullet, the term "defense determination" and its implications should be clearly defined. Fifth bullet should explain why the cleanup of contamination greater than 0.5 meters is deferred to Phase 2.
2-46	2.4.3.2 2 nd bullet	This text should be clarified to indicate what measures in addition to the downgradient barrier wall will be taken to minimize infiltration of groundwater into the excavation needed for the below grade structure and soil removal work. DOE has indicated verbally that a sheet piling wall will be installed upgradient, this should be clarified in writing in the DEIS.
2-60	2.6.4	1st bullet - Should read: The Sitewide Removal Alternative would ultimately result in a complete release of site land available for unrestricted reuse. While it would incur the greatest , it would provide the least long term radiological dose.

DEIS Chapter 4-

Page	Paragraph / Section	Comment
	General	The Analysis of Impacts appears to focus on non-radiological impacts from the proposed site activity according to the various alternatives. The analysis of exposures is discussed in terms of Human Health and Safety and does not address the threat to the environment in general or the impacts on other species except in the context of human consumption. The analysis should include a discussion of potential environmental impacts in terms of ecological and cumulative impacts, outside of human exposure, to current and future possible uncontrolled radiological releases.
	General	The analysis should include economic impacts from contamination to the environment. For example, limitations on fishing that would have a detrimental economic impact on business and tourism associated with recreational fishing.
	General	Will radiological releases below criteria be considered and impacts analyzed?
4-11	Table 4-3	Do the traffic volume impacts in Table 4-2 mesh with shipment projections in

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subject than Section 1.6.1. DOE does not agree with the commentor's statement that the change in title from *Cleanup and Closure Draft EIS to Decommissioning and/or Long-Term Stewardship EIS* somehow lessens its commitment to clean up and close WNYNSC. DOE remains committed to meeting its responsibilities under the West Valley Demonstration Act, to protecting the environment, and to ensuring the safety and health of workers at WNYNSC and the public.

This EIS will support decisions about actions to complete WVDP and to either close or manage WNYNSC. Once a decommissioning approach is selected and announced in a DOE Record of Decision and a NYSERDA Findings Statement, decommissioning would proceed in accordance with all applicable regulatory requirements, including those of NRC. NRC described its regulatory role and announced its plans for applying the License Termination Rule to activities conducted under the West Valley Demonstration Project Act, including decommissioning of the high-level radioactive waste tanks, in its February 1, 2002, *Decommissioning Criteria for the West Valley Demonstration Project* (67 FR 5003). (See Chapter 1, Sections 1.2 and 1.3, and Chapter 5 of this EIS for a discussion of the roles of NRC and other regulators and the Federal and New York State regulations that would be applied to site decommissioning.) A preliminary discussion of compliance with the principal decommissioning regulations applicable to the site is presented in Appendix L of this EIS, although, as stated in the appendix, specific compliance scenarios would be determined and justified as part of the decommissioning plan preparation, review, and approval process.

If a close-in-place decision were to be made for the Waste Tank Farm, the entire decommissioning plan would be evaluated for compliance with the WVDP Policy Statement and License Termination Rule. Contamination on the NRC-regulated portion of the site would be considered "residual contamination" (NRC 2006b).

- If in-place-closure were selected for the Waste Tank Farm, decommissioning would occur as described in Chapter 2, Section 2.4.2.1 under WMA 3, of this EIS. These decommissioning actions are described in more detail in Appendix C, Section C.3.2.3.
- The residual contamination in the tank would be radioactive regardless of whether it is wet or dry.
- The decommissioning criteria for the WVDP, which includes the Waste Tank Farm, are described in the NRC Decommissioning Criteria Policy Statement prescribing the License Termination Rule.

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		Table 4-52 on page 4-105? If these address different analyses that should be made more clear and, if appropriate. The units of analysis should be comparable.
4-12	Para 2 Line 3	"All shipments ... assumed to be by truck" this paragraph should be clarified to reflect that the assumption of shipment by truck is for purposes of roadway impacts only. How is this assumption carried through into the calculation of risk?
4-22	Para 2 Line 2	This paragraph should be clarified, if this is in fact the case, to reflect that only non-radiological releases are being considered in this section. The document should also more clearly articulate the difference between a high risk event (we assume a radiological release) and a higher likelihood event (sedimentation). Is sedimentation the greatest risk to local surface water quality?
4-22	Para 6	Long term negative surface water impacts would be improved..... (mitigated and/or eliminated?)
4-23	Para 4.1.2	Shouldn't the line read "implementation of the Sitewide Removal Alternative"?
4-23	Section 4.1.4.2 Para 2 line 4	Typo: "exposure surfaces" should read "exposed surfaces"
4-26	Section 4.1.4.4	This section infers that No Action would result in no impacts. While the "No Action Alternative" is not viable, wouldn't an evaluation of the long term, potentially critical impacts be more appropriate?
4-87	4 th paragraph	The paragraph concerning integration of groundwater and erosion models should be revised. Because no state-of-the-art model exists to integrate ground water and erosion models, the assumption that the impacts are cumulative is not necessarily a conservative approach. The analysis should examine the possibility of exponential or other impacts from the combined interaction of groundwater flow and erosion.

DEIS Appendices-

App.	Page/Paragraph / Section	Comment
C	Section C.2 Page C.1 et Seq	Under C.2, the DEIS provides Tables showing Estimated Chemical Contamination in kilograms. Does this represent soil, ground water or materials of construction in each facility? To report these numbers in kilograms does not provide any meaningful information to the reader. In addition, the DEIS in Table C-2, page C-5, reports 187 kg of lead in the Main Process Plant Building. Page C-50 reports 10,000 kg of lead in the leaded glass Viewing windows of the Main Process Plant Building. This inconsistency is also seen in the report for the Vitrification Facility (66kg vs. 1,360 kg in the windows) The tables showing chemical contamination show "contaminant" and "contamination" as in Table C-2, then "chemical" and "amount" as in C-13. These tables should be consistent.

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- It is expected that NRC's involvement at the site would cease once the WVDP is complete and NYSERDA's NRC license has been terminated.
 - There are no disposal requirements specified under the WVDP Act that would apply to the Waste Tank Farm if the in-place-closure option was selected.
- This comment cites only the first sentence of this paragraph. The remainder of the paragraph specifies that the decision concerning decommissioning of WNYNSC facilities, including the NDA; exhumation or management of the SDA; and remediation and/or management of areas of contaminated soil, sediment and groundwater would involve clean up to levels specified by regulatory requirements.
- The term "revised draft" is used in the title of the Revised Draft EIS; therefore, it was not necessary to restate it in every instance. For the Final EIS, the term "revised draft" is no longer applicable. The term "EIS" is appropriate for the final publication.
- Section 1502.14e of the *U.S. Code of Federal Regulations* (40 CFR 1502) requires that the preferred alternative be identified in the Revised Draft EIS if one exists, and that a preferred alternative be identified in the Final EIS unless another law prohibits the expression of such a preference. Identification of the preferred alternative does not mean that DOE has not considered the impacts associated with all of the alternatives.
- DOE determined a range of impacts for the Phased Decisionmaking Alternative that incorporates potential Phase 2 impacts. The environmental impacts of implementing Phase 1 of the Phased Decisionmaking Alternative are described for each resource area in Chapter 4 of this EIS. If this alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. For each resource area, Chapter 4 discusses the impacts that would occur if either removal or close-in-place is selected for Phase 2. The chapter also discusses which alternative(s) bound the impacts in the event that continued active management is selected for the SDA. The short-term impacts of a Phase 2 decision that involves continued active management of the SDA are bounded by either the removal or close-in-place impacts. The post-decommissioning impacts of a continued active management decision for the SDA, which include staffing, occupational exposure, and waste generation related

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to SDA monitoring and maintenance, as well as long-term impacts on public health and safety, would be similar to the no action impacts for the SDA.

- 95-26** Chapter 2, Section 2.3.2.2, of this EIS has been revised to state that the Old Hardstand was a dirt or gravel staging area used to store radioactive equipment in Waste Management Area 5.
- 95-27** Chapter 2, Section 2.4, of this EIS summarizes the activities to be conducted for the Scrap Material Landfill under each alternative. For the Sitewide Removal Alternative, the waste would be exhumed and any contaminated soil, sediment, and groundwater would be remediated to levels supporting unrestricted release. No decommissioning activities would take place for the Scrap Material Landfill under the Sitewide Close-In-Place Alternative and Phase 1 of the Phased Decisionmaking Alternative.
- 95-28** Please see the response to Comment no. 95-24.
- 95-29** Chapter 2, Section 2.4, of this EIS adequately describes when a Supplemental EIS would be prepared.
- 95-30** The term "defense determination" is explained in Chapter 2 of this EIS, along with the statement that the Waste Isolation Pilot Plant can only receive and dispose of defense waste.

The scope of the Phase 1 removal actions is limited to excavations of 0.5 meters (2 feet) or less to provide a basis for quantifying the environmental impacts. In addition, if deeper contamination is found, then further characterization activities could be performed in Phase 1 and the areas effectively remediated in Phase 2. The assumption regarding the depth of excavations is sufficient as stated.
- 95-31** Chapter 2, Sections 2.4.1.3 and 2.4.3.5, of this EIS were revised to state that, in addition to a downgradient barrier wall, an upgradient barrier wall consisting of sheet pile would be constructed under the Sitewide Removal Alternative and the Phased Decisionmaking Alternative. This information is consistent with Appendix C, Sections C.3.1.1.7, C.3.3.1.4, and C.4.7, of this EIS.
- 95-32** Chapter 2, Section 2.6.4, of this EIS has been revised to reflect changes made for the Final EIS. The Sitewide Removal Alternative would allow unrestricted release of the WNYNSC site, as stated by the commentor. As summarized in Chapter 2 and discussed in more detail in Chapter 4, the long-term impacts of this alternative are

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Acknowledgments

The West Valley Citizen Task Force members wish to acknowledge the participation of two members who were unable to remain with the Task Force until the completion of these recommendations.

The Task Force dedicates this Report to the memory of Elaine Belt, who passed away in June 1998. Elaine Belt contributed greatly to the success of the Task Force; her enthusiasm and dedication to the community will be remembered.

The Task Force also extends its appreciation to Richard Timm, former Supervisor of the Town of Concord, for his participation and support.

less than the other alternatives in that onsite residents and offsite members of the public would receive lesser doses. Some short-term impacts related to the Sitewide Removal Alternative, however, would be greater than for the other alternatives (e.g., cost, transportation impacts, and worker dose). DOE will consider the short- and long-term impacts of each alternative when making its decision.

- 95-33** This Final EIS addresses potential impacts to terrestrial animals and aquatic biota due to long-term releases of radionuclides to the environment under the Sitewide Close-In-Place and No Action Alternatives. This Final EIS also contains an expanded analysis of impacts, including a screening-level ecological risk assessment.
- 95-34** To understand the potential for local adverse ecological impacts from possible long-term release of radionuclides for the alternatives that would leave waste at the site, a screening-level ecological risk assessment was performed (Chapter 4, Sections 4.1.6.2 and 4.1.6.4). On the basis of the screening analysis for the Sitewide Close-In-Place Alternative, it is concluded that long-term releases would not result in long-term ecological consequences for receptors along Buttermilk Creek and terrestrial receptors along Franks Creek. The projected water concentrations for Franks Creek slightly exceeded the DOE screening-level concentrations for aquatic biota; however, as explained in Chapter 4, Section 4.1.6.2, aquatic biota exposed to surface water in Franks Creek are unlikely to experience unacceptable risk of long-term adverse effects because the screening concentration limits are conservative. Thus it is unlikely that business and tourism would be affected if the Close-In-Place Alternative is selected.
- 95-35** This EIS estimates the potential releases that would result from implementing each of the alternatives, including those that are less than release criteria. The impacts of these releases are analyzed. Please refer to the discussion of human health impacts and long-term impacts in Chapter 4, Sections 4.1.9 and 4.1.10.
- 95-36** The waste shipments identified in Chapter 4, Table 4-52, of this EIS are included in the total traffic volumes and associated impacts identified in Tables 4-2 and 4-3.
- 95-37** The text was clarified to indicate that the assumption was made to provide an upper-bound estimate of traffic volumes. The analysis in this section addresses traffic congestion. Radiological and nonradiological risks from shipments of waste and construction materials are addressed in Chapter 4, Section 4.1.12. Please also see the response to Comment no. 95-36.

Commentor No. 95 (cont'd): The West Valley Citizen Task Force

- 95-38** Although Chapter 4, Section 4.1.4.1, addresses possible radiological as well as nonradiological releases to surface water, it is believed that sedimentation is the greatest risk to local surface water quality during decommissioning. The next to last paragraph in the surface water section addresses releases in liquid effluents that could contain radiological constituents and would be discharged in accordance with regulatory permits. The last paragraph notes that implementing the alternative would improve long-term surface water quality because less residual contamination (which would again include radiological constituents) would be on site. With respect to higher-risk events, Chapter 4, Section 4.1.9.2, addresses public impacts that could result from accidents that could occur at WNYNSC, while Chapter 4, Section 4.4, addresses impacts that could result from intentional destructive acts at WNYNSC. The analysis performed for Section 4.1.9.2 showed that the consequences and risks of postulated accidents involving liquid releases are bounded by analyzed accidents involving the airborne release of radionuclides. A similar determination was made for Section 4.4 for an intentional destructive act that could cause a liquid release to a surface stream.
- 95-39** The text was clarified to state that, “natural features to prevent erosion would be restored.”
- 95-40** The text has been revised to state, “...implementation of the Sitewide Removal Alternative.”
- 95-41** The text has been revised as suggested.
- 95-42** Chapter 4, Section 4.1.4.4, of this EIS includes an analysis of long-term impacts to surface water quality associated with the No Action Alternative. For the Final EIS, the analysis was edited for greater clarity.
- 95-43** There is no known scientific basis for assuming an exponential change in the impact from the combination of groundwater flow and erosion.
- 95-44** The text associated with each table explains the nature of the contamination. For example, at the bottom of page C-4 of the Revised Draft EIS, the chemical contamination is described as being “present in both the above-grade and below-grade portions of the Main Plant Process Building.” In Table C-9, the chemical inventory is shown only for the contents of the tanks and process lines. The tables do not include the leaded windows. The text associated with each table of chemical inventories in Appendix C has been revised for this Final EIS to further clarify the nature of the chemical contamination, and the titles and headers for these tables

Commentor No. 95 (cont'd): The West Valley Citizen Task Force

were revised as necessary to be consistent and accurate. The format used in this EIS is to include only one set of units in each table and provide conversions to a second set of units as table notes. This is done to minimize the complexity and size of the tables.

**Commentor No. 96: John Filippelli, Chief,
Strategic Planning and Multi-Media Programs' Branch,
United States Environmental Protection Agency**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

JUN - 4 2005

Catherine Bohan, EIS Document Manager
West Valley Demonstration Project
U.S. Department of Energy
P.O. Box 2368
Germantown, MD 20874

Rating: EC-1

Dear Ms. Bohan:

The U.S. Environmental Protection Agency (EPA) has reviewed the revised draft environmental impact statement (RDEIS) for the Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center (WNYNSC) (CEQ #20080489). The WNYNSC is a 3,340 acre site located 30 miles south of Buffalo, New York. The WNYNSC was originally licensed by the Atomic Energy Commission in 1966, and closed in 1972. The site was the home of the only operational commercial nuclear fuel reprocessing facility in the United States. This review was conducted in accordance with Section 309 of the Clean Air Act, and the National Environmental Policy Act (NEPA).

In 1980, the West Valley Demonstration Act required the Department of Energy (DOE) to decontaminate and decommission, in accordance with any requirements prescribed by the Nuclear Regulatory Commission, the waste storage tanks and facilities used in the solidification of high-level radioactive waste, along with material and hardware used in connection with the West Valley Demonstration Project. This RDEIS consists of an analysis of environmental impacts associated with a range of reasonable alternatives for decommissioning and/or long-term stewardship of WNYNSC, as well as a No Action Alternative. The preferred alternative is the Phased Decision-making Alternative.

Under the Preferred Alternative, decommissioning would be accomplished in two phases: Phase 1 decisions would include removal of all Waste Management Area (WMA) 1 facilities, the source area of the North Plateau Groundwater Plume, and the lagoons in WMA 2. Phase 1 activities would also include additional characterization of site contamination and studies to provide additional technical information in support of the technical approach to be used to complete site decommissioning. Phase 2 would support the completion of decommissioning actions or long-term management. In general, the Phased Decision-making Alternative involves near-term decommissioning and removal

96-1

96-1 Rating noted.

***Commentor No. 96 (cont'd): John Filippelli, Chief,
Strategic Planning and Multi-Media Programs' Branch,
United States Environmental Protection Agency***

actions where there is agency consensus and undertakes characterization work and studies that could facilitate future decision-making for the remaining facilities or areas.

Based on our review of the RDEIS and the complex nature and long timeframe of the project, the EPA has rated the project and document "Environmental Concerns - Adequate" (EC-1). EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. (Rating descriptions are enclosed.)

Long-Term Storage

The Final EIS must include an update about the status of the Yucca Mountain Repository, and identify any additional environmental impacts that may occur at the WNYNSC due to the long-term storage of high level radioactive waste.

Air Quality

While Cattaraugus County is in attainment area of the National Ambient Air Quality Standards, EPA recommends that DOE utilize all possible measures to reduce emissions from off-road construction equipment. These measures could include lower-sulfur fuel exhaust retrofit technology, alternative fuels, and/or operational limitations. EPA also offers the following additional recommendations: (1) regularly maintain and tune engines and perform inspections; (2) require the use of newer diesel equipment; (3) reduce the number of heavy equipment trips; (4) reduce the amount of heavy equipment idling; and (5) avoid or minimize the siting of laydown areas near residences and sensitive receptors.

Sole Source Aquifer

As the site is located in the Cattaraugus Creek Aquifer System, designated by the EPA as a Sole Source Aquifer on September 25, 1987 (citation 52 FR36100), EPA has also reviewed the project in accordance with Section 1424(e) of the 1974 Safe Drinking Water Act, PL 93-523. Based on our review of the information provided, we do not anticipate that the preferred alternative will result in significant adverse impacts to ground water quality. Accordingly, the project satisfies the requirements of Section 1424(e).

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| <p>96-1
<i>cont'd</i></p> | <p>96-2</p> <p>As indicated in the Administration's fiscal year 2010 budget request, the Administration intends to terminate the Yucca Mountain program while developing nuclear waste disposal alternatives. Notwithstanding this decision to terminate the Yucca Mountain program, DOE remains committed to meeting its obligations to manage and ultimately dispose of high-level radioactive waste and spent nuclear fuel. The Administration intends to convene a blue ribbon commission to evaluate alternative approaches for meeting these obligations. The commission will provide the opportunity for a meaningful dialogue on how best to address this challenging issue and will provide recommendations that will form the basis for working with the U.S. Congress to revise the statutory framework for managing and disposing of high-level radioactive waste and spent nuclear fuel.</p> |
| <p>96-2</p> | <p>Until a disposition decision is made and implemented, the high-level radioactive waste canisters at WNYNSC will be safely stored on site. Impacts of onsite storage for approximately 30 years are presented in this EIS. The text in Chapter 2, Section 2.6.1, has been revised to provide the annual impacts of long-term storage of high-level radioactive waste at WNYNSC.</p> |
| <p>96-3</p> | <p>96-3</p> <p>Chapter 6, Section 6.4, of this EIS was modified to supplement the air quality measures already identified in this section. The mitigating measures were expanded to include the two not already identified in the discussion: reduction of the number of heavy equipment trips and minimization of laydown areas near residences and sensitive receptors.</p> |
| <p>96-4</p> | <p>96-4</p> <p>DOE and NYSERDA note the comment.</p> |

**Commentor No. 96 (cont'd): John Filippelli, Chief,
Strategic Planning and Multi-Media Programs' Branch,
United States Environmental Protection Agency**

Surface Water

On page 3-51, Section 3.6.1.1, the text states that several surface water locations "are scheduled for sampling in 2007." This information should be updated.

EPA also recommends that any near-term vegetation mitigation, particularly near surface waters, be created with plants native to western New York.

Additional detailed comments by document section or page are enclosed. Thank you for the opportunity to comment on this project. If you have any questions concerning our comments, please contact Lingard Knutson of my staff at (212) 637-3747.

Sincerely yours,



John Filippelli, Chief
Strategic Planning and Multi-Media Programs Branch

Enclosures

|| 96-5
|| 96-6

**96-5
96-6**

The statement in Chapter 3, Section 3.6.1.1, was updated for this Final EIS to show that the results from sampling in 2007 were considered.

Chapter 6, Section 6.3, of this EIS was revised to call for the use of native western New York plants to the extent practicable for any short-term vegetation mitigation.

***Commentor No. 96 (cont'd): John Filippelli, Chief,
Strategic Planning and Multi-Media Programs' Branch,
United States Environmental Protection Agency***

June 2009

**Additional EPA Region 2 Comments to the Decommissioning and/or Long-Term
Stewardship at the West Valley Demonstration Project and Western New York
Nuclear Service Center RDEIS**

Chapter 3, Section 3.13.2: EPA's National Environmental Performance Track program has been terminated; update accordingly.

Page 1-9, 1st paragraph: add “, if required,” between “assess” and “the ability of...”

Page 1-9, 5th paragraph: Replace the paragraph with the following: DOE and NYSERDA are required to comply with the RCRA requirements for the management of hazardous wastes at and the remedial actions/cleanup of their respective site, as applicable. NYSDEC is the primary responsible agency for overseeing the management of hazardous wastes at the sites pursuant to the NYSDEC Part 373/RCRA requirements, and would issue a permit for the proper management of hazardous waste. NYSDEC and EPA are jointly responsible for the oversight of the site remedial actions/cleanup performed under the 1992 RCRA 3008(h) Consent Order. The aforementioned NYSDEC Part 373/RCRA permit, if and when issued, may also include applicable RCRA corrective action provisions which require remedial actions/cleanup necessary for the sites.

Section 2.2, 3rd paragraph, 2nd to last sentence: (1) replace “regulated facilities” with “hazardous wastes.”; (2) replace “containing hazardous waste or constituents.” with “and the implementation of remedial actions/cleanup necessary for the sites with respect to any hazardous waste constituents.”

Section 2.3.2.6. Table 2.2: needs to be revised to reflect that ground underneath the Old Sewage Treatment Facility needs to be decommissioned, as noted in the second paragraph under the section.

Section 3.6.2 Groundwater. Page 3-66, 1st Paragraph: Provide information on the effectiveness of the North Plateau Groundwater Remediation System in reducing Strontium-90 discounting any effectiveness due to dilution.

Appendix L, Page L-1, First Bullet: add “and/or other relevant RCRA oversight documents, if any.”

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| <p>Chapter 3, Sections 3.2 and 3.13.2, of this EIS were revised to note the termination of the National Environmental Performance Track program.</p> <p>The text was revised as requested.</p> <p>The text has been revised to state:</p> <p>“DOE and NYSERDA are required to comply with the RCRA requirements for management of hazardous wastes and the remedial actions/cleanup of their respective portions of WNYNSC, as applicable. NYSDEC is the primary responsible agency for overseeing the management of hazardous wastes at the sites pursuant to the NYSDEC Part 373/RCRA requirements, and would issue a permit for the proper management of hazardous waste. EPA and NYSDEC are jointly responsible for the oversight of the site remedial actions/cleanup performed under the 1992 RCRA 3008(h) Consent Order. The aforementioned NYSDEC Part 373/RCRA permit, if and when issued, may also include applicable RCRA corrective action provisions which require remedial actions/cleanup necessary for specific portions of the site.”</p> <p>Chapter 2, Section 2.2, has been revised as recommended.</p> <p>Chapter 2, Table 2-2, lists contamination in facilities still in existence at the starting point of this EIS, not general areas of ground contamination that may exist. Acknowledgement in Section 2.3.2.6 of the need to address possible contamination beneath where the Old Sewage Treatment Facility used to be is sufficient to describe this activity.</p> <p>Chapter 3, Section 3.6.2, has been revised to add additional information regarding the effectiveness of the North Plateau Groundwater Remediation System in reducing strontium-90 contamination.</p> <p>Although this specific edit was not made, this bullet was edited for clarity consistent with guidance from NYSDEC.</p> | <p>96-7</p> <p>96-8</p> <p>96-9</p> <p>96-10</p> <p>96-11</p> <p>96-12</p> <p>96-13</p> |
|--|---|

Commentor No. 97: Virginia W. Bradley

VIRGINIA W. BRADLEY
75 Guilford Lane, Unit 1
Williamsville, NY 14221

May 16, 2009

Catherine Bohan, EIS Document Manager
West Valley Demonstration Project
U.S. Department of Energy
P.O. Box 2368
Germantown, MD 20874

Dear Ms. Bohan,

I am writing you in support of the Sitewide Removal Alternative (full waste excavation cleanup) for the West Valley Demonstration Project (WVDP) as described in the Draft Environmental Impact Statement issued by the DOE and the NYS Energy & Research Authority of December 2008.

This alternative provides a permanent and safe solution to the problems, it removes the radioactive waste from an unstable site with serious erosion problems, and it provides the most cost-effective solution.

I oppose the Preferred Alternative, which would delay the final cleanup for the majority of the nuclear wastes for another 30 years, leaving most of it on the site. Any delay in removal of the waste exacerbates the known threats to human health and safety. Radioactivity from the site has already been found at the juncture

97-1

97-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative and opposition to the Preferred Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

Chapter 4, Section 4.2, of this EIS presents an evaluation of cost-benefit considerations related to the alternatives. Section 4.2.1 compares costs; Section 4.2.2 summarizes the population doses for different work elements from each alternative; and Section 4.2.3 discusses the cost-effectiveness of each decommissioning alternative.

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal (below established

Commentor No. 97 (cont'd): Virginia W. Bradley

of the Niagara River and Lake Ontario, and ground water contaminated by nuclear waste is moving toward local streams.

Sincerely,

Virginia W. Bradley
Virginia W. Bradley

Copy: President Barack Obama
Senator Charles Schumer
Senator Kristen Gillibrand
Rep. Brian M. Higgins
Rep. Chris Lee
Rep. Louise Slaughter
Rep. Eric Massa

|| 97-1
cont'd

standards), as demonstrated by the results from the ongoing environmental monitoring program. The decommissioning measures currently being taken to manage the North Plateau Groundwater Plume and other sources of contamination at WNYNSC would reduce the consequences to humans and the environment.

Commentor No. 98: Lawrence A. Krantz

June 8, 2009

Lawrence A Krantz
9180 Goodnuff Lane NE
Bemidji, MN 56601-9780

Complete cleanup and removal of nuclear waste at this site needs to be done now. It makes no sense, no matter how small risk, to put our Great Lakes in threat of any degree of nuclear contamination. Thank you for considering my comments.

98-I

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DOE and NYSERDA acknowledge the commentor's preference for complete cleanup and removal of nuclear waste at this site now. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

**Commentor No. 99: Robert M. Graber, Clerk,
State of New York, Legislature of Erie County**

STATE OF NEW YORK

LEGISLATURE OF ERIE COUNTY
CLERK'S OFFICE

BUFFALO, N.Y., MAY 28, 2009

TO WHOM IT MAY CONCERN:

I HEREBY CERTIFY, That at the 10th Session of the Legislature of Erie County, held in the Legislative Chambers, in the City of Buffalo, on the Twenty-Eighth day of May, 2009 A.D., a Resolution was adopted, of which the following is a true copy:

A RESOLUTION TO BE SUBMITTED BY
LEGISLATORS IANNELLO, MARINELLI, WHYTE,
MILLER-WILLIAMS, GRANT, REYNOLDS, MILLS, KOZUB, KENNEDY,
KONST, MAZUR, WROBLEWSKI & LOUGHREN

WHEREAS, located thirty miles south of Buffalo, New York, the West Valley nuclear site is contaminated with vast amounts of toxic and radioactive waste, including plutonium, uranium, strontium-90 and iodine-129; and

WHEREAS, these chemicals are known to cause leukemia and cancer, even at very low doses over a long period of time; and

WHEREAS, this site was abandoned in 1976 by Nuclear Fuel Services, thereby passing cleanup responsibilities on to the government and taxpayers; and

WHEREAS, the site is located on a sole source aquifer and has been known to create radioactive groundwater which has been identified as far away as the shore of the Niagara River and Lake Ontario; and

WHEREAS, this raises the issue of potentially dangerous leakage into the drinking water supplies for millions of people; and

WHEREAS, the United States Department of Energy (DOE) and the New York State Energy Research and Development Corporation (NYSERDA) originally proposed leaving the buried waste onsite, including high level radioactive waste tanks which could leak contamination at the end of their useful lives; and

WHEREAS, a recent cost study focused on the costs of digging up radioactive waste versus leaving waste buried onsite for the next 1,000 years and found that a full waste excavation cleanup costs less at \$9.9 billion, and presents the least risk to the population than leaving buried waste onsite, which is \$13 billion and carries high risks of catastrophic release of radioactive waste into the drinking water supplies; and

WHEREAS, scientists have determined that erosion is a powerful and fast moving force in the West Valley region, adding to the risk factor that if leakage occurs, dangerous radioactive waste could pollute local, regional and international waterways into Lake Erie, the Niagara River and beyond; and

WHEREAS, it is feared that if as little as 1% of radioactivity leaked from the site, Lake Erie water users could be exposed to substantial radiation, cancer deaths, and the cost of water replacement could be in the millions to just Erie County and Buffalo; and

ATTEST

ROBERT M. GRABER
Clerk of the Legislature of Erie County

99-1

WNYNSC has inventories of radionuclides and hazardous chemical constituents in the facilities (buildings, lagoons, and waste disposal areas) as well as environmental contamination from past facility operations (e.g., in the North Plateau Groundwater Plume). A description of the facilities and inventories of the radionuclides and hazardous chemical constituents is included in Appendix C of this EIS. This EIS was prepared to evaluate the potential environmental impacts, including impacts from radiological and hazardous chemical constituents, of alternatives for decommissioning and/or long-term stewardship of the site.

99-1

The commentor is correct that scientific studies have not clearly demonstrated the existence of a threshold below which exposure to ionizing radiation conveys no risk of health effects. By assuming that the risk of health effects at low doses is proportional to the exposure (i.e., doubling the exposure also doubles the risk), regulatory agencies such as EPA and NRC have adopted a prudent approach to establishing standards to protect human health and the environment from the effects of ionizing radiation. EPA typically regulates radiation exposure based on a lifetime cancer risk of 1×10^{-6} to 1×10^{-4} (1 in a million to 1 in 10,000), consistent with its approach for chemical carcinogens. NRC's license termination dose criterion of 25 millirem per year total effective dose equivalent is consistent with the recommendations of advisory bodies such as the International Commission on Radiological Protection to limit exposures to members of the public from individual sources of radiation. Estimated exposures from the alternatives considered in this EIS are presented throughout this document in a manner that allows a comparison with these levels of protection.

99-2

Chapter 1 of this EIS summarizes the history of WNYNSC. Section 1.1 provides an accurate history of the development of the site and how DOE and NYSERDA became responsible for their respective roles.

99-3

Chapter 3, Section 3.6.2.1, of this EIS addresses groundwater at WNYNSC that was contaminated due to past activities (for example, the North Plateau Groundwater Plume). This EIS was prepared to evaluate the environmental impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC. Under all of the action alternatives, DOE would either remove contamination sources, mitigate their impacts to groundwater, or both. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the North Plateau Groundwater Plume. Potential groundwater impacts associated with the EIS alternatives are discussed in Chapter 4, Sections 4.1.4 and 4.1.10, and Appendix H of this Final EIS.

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**Commentor No. 99 (cont'd): Robert M. Graber, Clerk,
State of New York, Legislature of Erie County**

STATE OF NEW YORK

LEGISLATURE OF ERIE COUNTY
CLERK'S OFFICE

BUFFALO, N.Y., MAY 28, 2009

TO WHOM IT MAY CONCERN:

I **HEREBY CERTIFY**, That at the 10th Session of the Legislature of Erie County, held in the Legislative Chambers, in the City of Buffalo, on the Twenty-Eighth day of May, 2009 A.D., a Resolution was adopted, of which the following is a true copy:

WHEREAS, scientists and economists both conclude that if the radioactive wastes are left in the ground at West Valley, and should any release occur, it would have expensive and disastrous consequences irreparably contaminating the water supply of the Great Lakes region, and the costs of maintaining buried waste is far more costly than removal; and

WHEREAS, in 1997 a Citizen Task Force (CTF) was formed to assist in the development of a preferred alternative for the West Valley Demonstration Project and cleanup, closure or long-term management of the facilities at the site; and

WHEREAS, the Citizens Task Force has been meeting regularly with the DOE and NYSERDA and have arrived at a preferred alternative that DOE and NYSERDA are planning to accomplish cleanup work at the site that the CTF deems essential, including the removal of the source area of the North Plateau Groundwater Plume and a significant number of the contaminated facilities.

NOW, THEREFORE, BE IT

RESOLVED, that the County of Erie supports full cleanup of the entire West Valley nuclear waste site through waste excavation; and be it further

RESOLVED, that the cleanup process standards be as protective as current state radiation standards and unrestricted use toxic standards, and are fully protective of vulnerable populations, including children, fish, wildlife and water; and be it further

RESOLVED, that the County of Erie supports the work of the proposed Preferred Alternative Phase I work plan and that it be completed without further delay and in a manner that enhances future decisions for total cleanup of the West Valley site; and be it further

RESOLVED, that while Phase 1 removal takes place, ongoing discussions continue with the general public, the CTF, the Doe and NYSERDA, keeping in mind, the eventual goal of a full cleanup of the site; and be it further

RESOLVED, that certified copies of this resolution be forwarded to our State and Federal Representatives, the US Department of Energy and the NYS Energy Research and Development Authority.

REFERENCE: INTRO 10-3 (2009) AS AMENDED

ATTEST

ROBERT M. GRABER
Clerk of the Legislature of Erie County

99-8

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99-10

The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program.

99-4 Some of the alternatives evaluated in this EIS, including the Preferred Alternative (Phased Decisionmaking), could result in some facilities and waste remaining on the site, including the high-level radioactive waste tanks. Under the Phased Decisionmaking Alternative, action would be undertaken during Phase 1 for all facilities except the Waste Tank Farm, NDA, SDA, and Construction and Demolition Debris Landfill. Options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close in place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. DOE is required by the West Valley Demonstration Project Act to decontaminate and decommission the waste storage tanks and facilities used to solidify high-level radioactive waste, as well as any material and hardware used in connection with the WVDP, in accordance with such requirements as NRC may prescribe.

DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE has developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flows into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being further

**Commentor No. 99 (cont'd): Robert M. Graber, Clerk,
State of New York, Legislature of Erie County**

reduced by tank drying. Additionally, much of the residual contamination in the tanks is attached (i.e., “fixed”) to metal surfaces and is not readily mobile.

- 99-5 DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for “Conclusions of the *Synapse Report*” in Section 2 of this CRD for a discussion of the report’s issues and DOE’s and NYSERDA’s response.
- 99-6 DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in this EIS. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. In addition to the previously cited Issue Summaries, please see the Issue Summary for “Questions about Long-term Erosion Modeling” in Section 2 of this CRD for further discussion of this issue and DOE’s and NYSERDA’s response.
- 99-7 DOE and NYSERDA note that the impacts of a release of 1 percent of the site radioactivity referred to by the commentator are taken from the *Synapse Report*. Please see the Issue Summary for “Conclusions of the *Synapse Report*” in Section 2 of this CRD for a discussion of the report’s issues and DOE’s and NYSERDA’s response. See also the response to Comment no. 99-6 regarding the long-term impacts analysis addressed in this EIS.
- 99-8 The conclusions referenced in the comment are taken from the *Synapse Report*. As noted above, please see the Issue Summary for “Conclusions of the *Synapse Report*” in Section 2 of this CRD for a discussion of the report’s issues and DOE’s and NYSERDA’s response.
- 99-9 DOE and NYSERDA acknowledge the efforts and contributions of the Citizen Task Force in addressing decommissioning of WNYNSC and development of this EIS. The agencies agree that, if the Phased Decisionmaking Alternative is selected, it

**Commentor No. 99 (cont'd): Robert M. Graber, Clerk,
State of New York, Legislature of Erie County**

is essential to proceed with decommissioning of the contaminated buildings and removal of the North Plateau Groundwater Plume source area.

- 99-10** DOE and NYSERDA acknowledge the commentor's support for full cleanup of the entire WNYNSC through waste excavation. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Agency actions would comply with the applicable cleanup and decommissioning criteria for WNYNSC embodied in Federal and New York State environmental, safety, and health regulatory requirements promulgated under various statutory authorities (see Chapter 5 of this Final EIS). As summarized in Chapter 1, Section 1.3, these regulatory requirements include, in part, RCRA permitting and corrective actions under New York State and/or EPA requirements, decommissioning according to NRC requirements in its License Termination Rule, and EPA assessments of compliance with National Emission Standards for Hazardous Air Pollutants.

DOE and NYSERDA acknowledge the commentor's support for the Phase 1 work of the proposed Preferred Alternative (Phased Decisionmaking Alternative). If this alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements.

Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until final decisions are made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

**Commentor No. 99 (cont'd): Robert M. Graber, Clerk,
State of New York, Legislature of Erie County**

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate Phase 2 decisions for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

Commentor No. 100: Charles Lamb

From: clamb9@roadrunner.com [mailto:clamb9@roadrunner.com]

Sent: Tuesday, March 24, 2009 11:48 PM

To: catherine.m.bohan@wy.doe.gov; Paul J. Bembia

Subject: West Valley Hearings

To Catherine Bohan, US DOE; Paul J. Bembia, NYSERDA

I am contacting you in support of extending the public comment period until at least October 30 with regard to the West Valley Clean Up Plan. The need to clean up this dangerous site has been important for far too long and it is time for action to be taken. In order for the public to have a good say concerning that action, please allow adequate time for people to hear about the issue, understand it, and comment.

I also hope a hearing can be held in the Buffalo area and in Niagara County. Those of us who live in Niagara County near Love Canal and Chemical Waste Management are quite aware of the danger of toxic and atomic wastes. I will comment now, myself, that I think the materials in this site need to be fully exhumed and cleaned up without further delay. Thank you for considering my opinion, and please extend the comment date. Charles Lamb 335 Walnut Lane Youngstown, NY 14174 xxx xxx
xxxx clamb9@roadrunner.com

100-1

100-2

100-3

- 100-1 In response to requests from the public, DOE and NYSERDA extended the original 6-month comment period (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE) for an additional 90 days, through September 8, 2009.
- 100-2 In response to public requests, DOE and NYSERDA held an additional public hearing in Albany, New York, and the hearing originally scheduled for Blasdell, New York, was moved to a more central downtown Buffalo, New York, location.
- 100-3 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 101: Susan Peterson

June 8, 2009

Susan Peterson

101 EdL Lane

Ridgeway, WI 53582

PLEASE help save the Great Lakes from nuclear contamination by supporting a full waste excavation cleanup of West Valley nuclear waste site, located 30 miles south of Buffalo. The federal government proposal to leave vast amounts of nuclear waste at the site for up to 30 years and probably longer is just WRONG. In an independent study sponsored by CHEJ, scientists found leaving buried waste on site poses real threat to the lakes, and the safest, most cost effective way to protect the Great Lakes is to dig up the waste.

101-1

101-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes," "Concerns about Potential Contamination of Water," and "Conclusions of the *Synapse Report*" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 102: Elise T. McDowell

June 8, 2009

Elise T. McDowell

9078 Route 240

West Valley, NY 14171

Dear Ms. Bohan: My husband and I attended the public hearing on the Draft EIS at the Ashford Office Complex in May. After reviewing the four alternatives, talking with fellow residents, and listening to the comments offered at the public hearing,I am in suppport of the alternative offering a complete removal of all radioactive waste from the site. I am aware of the length of time and resources it will take , but I believe this alternative will best serve future generations in this area. I do not believe it is wise to leave in place any waste, which has the potential to leach out into our waterways or land. It is time we make decisions regarding responsible disposal of nuclear waste by-products in such a way as to have the least human and environmental impact.

102-1

102-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 103: John L. McDowell

June 8, 2009

John L. McDowell

9078 Route 240

West Valley, NY 14171

I believe that the alternative requiring the total removal of all waste from the site be the one chosen. Furthermore, all animals should be tested for radioactive exposure for the health and welfare of wildlife and humans with whom they may come in contact. In the final contract, it should be stated that the vacant property would not be used for a subdivision or multi-family housing.

103-1

103-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

DOE's site monitoring program addresses media (air, water, crops) where wildlife and humans could come into contact with radioactive contamination. The monitoring program also obtains samples from venison and fish collected at locations where the highest concentrations of transported contaminants might be expected. Monitoring results are reported in the annual sitewide environmental reports, as well as in assessments of impacts to humans and aquatic and terrestrial biota.

NYSERDA is responsible for working with local authorities to determine the use of WNYNSC when it is released. Please note that if the Sitewide Removal Alternative is selected and the site is released for unrestricted use, use of the property for a subdivision or multi-family housing might be permissible.

**Commentor No. 104: Roberta Wiernik, National Resources Specialist,
League of Women Voters of New York**



The League of Women Voters of New York State
62 Grand Street, Albany, New York 12207
Phone: 518-465-4312 Fax: 518-405-0812
www.lwwny.org E-Mail: lwwny@lwwny.org

August 20, 2009

Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
U.S. Department of Energy
P.O. Box 2368
Germantown, MD 20874.
<http://www.westvalleyeis.com>

RE: *Draft Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center (DOE/EIS-0226-D (Revised))*

Dear Ms. Bohan:

The League of Women Voters of New York State (League) believes that the protection of public health and safety, and of the environment, is paramount in a civilized society. The final cleanup plan for the West Valley nuclear waste site will have a major impact on the future environment and populace of the eastern Great Lakes region for years to come.

Therefore, the League strongly recommends that the Department of Energy (DOE) and New York State Energy Research and Development Agency (NYSERDA) commit to the Sitewide Removal Alternative for West Valley, the only alternative that provides for a comprehensive cleanup of the entire nuclear waste site.

The League has worked for almost ninety years to promote and ensure public participation in the decision-making process at all levels of the government. Over the years, the League has supported numerous pieces of legislation aimed at ensuring a healthy environment and citizen rights. League members believe that all sources of contamination must be eliminated if at all possible, especially those that may affect the supply of clean air and fresh water, our most precious natural resources.

The West Valley site is subject to high precipitation and aggressive erosion, rendering it unsuitable for storage of hazardous chemical and or radioactive waste underground. Such storage could result in contamination of the water system for millions of people in New York State, eastern Canada, and the St. Lawrence region.

- 104-1** DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes," "Concerns about Potential Contamination of Water," and "Conclusions of the *Synapse Report*" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

Please note that under any of the action alternatives, DOE would take actions to remove or mitigate the impacts of the North Plateau Groundwater Plume.

Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until final decisions are made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate Phase 2 decisions for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

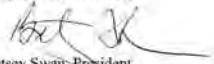
Commentor No. 104 (cont'd): Roberta Wiernik, National Resources Specialist, League of Women Voters of New York

Although the preferred alternative for this DEIS does address cleanup of one apparent source of serious contamination, it ignores the plume that is still spreading, and it defers further decision on that and other serious issues at the site for up to thirty years. This is unacceptable.

Rather than committing the DOE or NYSERDA to full cleanup of the West Valley site, the Draft Environmental Impact Statement (DEIS) proposes a "phased decision-making" with no guarantee of public participation in future decisions regarding waste, some of which will remain radioactive for thousands of generations. The people deserve a complete cleanup that would allow full, unrestricted use of the land in the future.

Although there are risks involved in removing the waste from the ground, leaving it there continues the risk ad infinitum. Removing contamination creates a short-term risk, but allows long-term safe use of the property. The state-funded study, The Real Costs of Cleaning Up Nuclear Waste (A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site) concluded that, in the long term, leaving buried waste on site is high risk and expensive, while full cleanup presents the least risk and the lowest cost. It is obvious that the most cost-effective and health-ensuring alternative for the site is full exhumation of the radioactive and chemical contaminants already in the ground, and removal of all sources of future contamination.

Respectfully submitted,



Betsey Swan, President



Roberta Wiernik, Natural Resources Specialist

**104-I
cont'd**

Response side of this page intentionally left blank.

***Commentor No. 105: John Allen,
New York Interfaith Power and Light***

June 8, 2009

John Allen

New York Interfaith Power & Light

401 Parsons Drive

Syracuse, NY 13219

I support the complete site-wide removal plan for clean-up of the West Valley nuclear waste site.

105-1

105-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 106: Alanson D. Aird

June 8, 2009

Alanson D. Aird

41 Ely Drive

Fayetteville, NY 13066

I support the complete “Sitewide Removal Alternative” as the most effective plan for full cleanup of the West Valley nuclear waste site. I agree with opinions in the Higgins-Massa letter to Secretary Chu, Sierra Club (Atlantic Chapter) and New York Interfaith Power and Light letters, which also support complete Sitewide Removal and cleanup. I am extremely distressed that this horrible situation developed and is threatening people and environment near and far. Please act quickly. Thank you.

106-1

106-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative and request for quick action. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for “Support for Sitewide Removal of All Radioactive and Hazardous Wastes” in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 107: Jeanne Fudala

June 8, 2009

**Jeanne Fudala
1697 School Street
Alpine, NY 14805-9793**

I believe that a complete cleanup of the West Valley nuclearwaste site is the only alternative that provides sufficient safety in the long run. I am concerned about the West Valley site's vulnerability to erosion and, consequently, that long term storage of radioactive waste there could seriously contaminate the Great Lakes over the centuries. Please clean up the site!

107-1

107-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

Commentor No. 108: Lori Danison

June 8, 2009

Lori Danison

16 WoodviewCt

Hamburg, NY 14075

I support a full clean up (fully excavate, clean, and remove all contaminated buildings and soil) of the West Valley Demonstration Project. It is critical to stop the radioactive contamination of the air and water leading into Lake Erie. I also believe that too many tax dollars have been wasted with little to show. Please clean up and shut down WVDP.

108-1

108-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 109: Chris Tobin

June 8, 2009

Chris Tobin

Coldent

Hamburg, NY

Living here is a privilage, that is disappearing!!!!

|| 109-1

109-1 DOE and NYSERDA note the comment.

Commentor No. 110: Raymond C. Vaughan, Ph.D.

COMMENTS ON THE 2008 DRAFT EIS (DOE/EIS-0226-D (Revised))

Raymond C. Vaughan, Ph.D.
June 5, 2009

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Appendix C: Hansen, W.R. (1971). "Effects at Anchorage," in The Great Alaska Earthquake of 1964, Washington, DC: National Academy of Sciences.	
Appendix D: Holcombe, T.L.; Taylor, L.A.; Reid, D.F.; Warren, J.S.; Vincent, P.A.; and Herdendorf, C.E. (2003). "Revised Lake Erie Postglacial Lake Level History Based on New Detailed Bathymetry," Journal of Great Lakes Research 29, 681-704.	
Appendix E: Newman, W.S.; Marcus, L.F.; and Pardi, R.R. (1981). "Palaeogeodesy: Late Quaternary geoidal configurations as determined by ancient sea levels," in Sea Level, Ice, and Climatic Change, IAHS Publication No. 131, Wallingford, UK: IAHS Press.	
Appendix F: Vaughan, R.C. (1994). "Geologic and Hydrologic Implications of the Buried Bedrock Valley that Extends from the Western New York Nuclear Service Center into Erie County, N.Y.", in Geology Reports of the Coalition on West Valley Nuclear Wastes, East Concord, NY: Coalition on West Valley Nuclear Wastes, 1994.	
Appendix G: Vaughan, R.C. (2005). "Fault Relationships and Basement Structure, Cattaraugus Creek Watershed, Western New York State," Thesis Proposal #2, presented to Department of Geology, State University of New York at Buffalo.	
Appendix H: Vaughan, R. and McGoldrick, K. (1993). "Structural Evidence for Deep, Northwest-Trending Fractures Under the Western New York Nuclear Service Center," in Geology Reports of the Coalition on West Valley Nuclear Wastes, East Concord, NY: Coalition on West Valley Nuclear Wastes, 1994.	
Appendix I: Vaughan, R.; McGoldrick, K.; Rauch, J.; Kent, C.; and Mathe, G. (1993). "Confirmation of Anomalous Westward Dip Between Springville and West Valley, N.Y.", in Geology Reports of the Coalition on West Valley Nuclear Wastes, East Concord, NY: Coalition on West Valley Nuclear Wastes, 1994.	

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Commentor No. 110 (cont'd): Raymond C. Vaughan, Ph.D.

COMMENTS ON THE 2008 DRAFT EIS (DOE/EIS-0226-D (Revised))

Raymond C. Vaughan, Ph.D.
 135 East Main Street
 Hamburg, NY 14075
 June 5, 2009

I support all Phase I activities being accomplished without delay. With respect to the alternatives presented in the 2008 Draft EIS, I support full site-wide removal. In the event that the phased decisionmaking alternative is selected, I would support a Record of Decision for Phase I, but with several additional conditions listed below that relate to Phase II decisionmaking. The conditions involve a reasonably short deadline for that decisionmaking, a clear commitment to additional studies, and continuation/implementation of public participation processes. See my additional comments below with respect to National Environmental Policy Act (NEPA) procedures for Phase II.

In accordance with positions taken by the Coalition on West Valley Nuclear Wastes and the West Valley Citizen Task Force (CTF), I consider the West Valley site to be unsuitable for long-term storage or disposal of wastes; existing wastes must be removed from the site. This conclusion is based not only on several existing erosion studies but also on my professional understanding of the factors that make the site highly susceptible to erosion. These factors include a) the site's location on unconsolidated glacial fill that is undergoing active downcutting by a geomorphically young stream network, b) the low drainage density of the stream network, implying that the network is geomorphically immature and that drainage density will increase over time, c) the presence of convex-upward stream reaches, side slopes that exceed a stable angle of repose, and generally steep stream gradients within the stream network, d) the widespread occurrence of slumping and other mass movement along stream banks within the West Valley site and throughout the Cattaraugus Creek drainage basin, e) the observed upstream migration of knickpoints (e.g., along Franks Creek), f) the existence of groundwater seepage pathways that will likely contribute to the headward advance of gullies and the stream capture of Franks Creek by Buttermilk Creek, and g) the effects of climate change and the associated increase in the frequency and/or magnitude of extreme weather events such as intense storms that will aggravate erosion at the site.

Recent erosion modeling results in the 2008 Draft EIS (DOE/EIS-0226-D (Revised)) purport to show no serious risk from erosion; however, these results are based on naive assumptions and are generally unreliable, as discussed below in more detail. The treatment of erosion is one of the more serious defects in the 2008 Draft EIS.

Although I recognize the need for full cleanup of the site to avoid erosional breaching of waste containment and consequent contamination of Cattaraugus Creek and downstream waters of the Great Lakes, I also recognize the possibility that phased decisionmaking (presented as the

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|--------------|---|
| 110-1 | DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative as well as support for accomplishing the Phase 1 activities promptly if the Phased Decisionmaking Alternative is selected. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response. The additional conditions referred to by the commentor are addressed below in response to Comment no. 110-3 which describes the conditions in more detail. |
| 110-2 | DOE and NYSERDA acknowledge the commentor's opinion that WNYNSC is not suitable for long-term storage or disposal of wastes. |
| 110-3 | <p>The erosion analysis presented in this EIS is state-of-the-art and uses theoretical approaches generally accepted by the scientific community involved in long-term erosion predictions. The assumptions used in the analysis are not considered to be naive. The assumptions and models have been described and documented in the EIS and account for the physical processes of erosion. Please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of the methodology used to evaluate the potential impacts associated with erosion, modeling calibration and methodology, and updates to this Final EIS since the release of the Revised Draft EIS.</p> <p>DOE and NYSERDA will meet the spirit of the additional conditions listed by the commentor if the Phased Decisionmaking Alternative is selected. As noted in the description of the Phased Decisionmaking Alternative, additional studies and analyses would be conducted as part of the implementation of Phase 1. The agencies would review and assess the information when it is available as part of the Phase 2 decisionmaking process. Phase 1 studies would begin after publication of DOE's Record of Decision and NYSERDA's Findings Statement.</p> <p>Regarding the 30-year timeframe, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.</p> |

Commentor No. 110 (cont'd): Raymond C. Vaughan, Ph.D.

preferred alternative in the 2008 Draft EIS) may be selected as a way to allow important work to continue at the West Valley site while Phase II decisions are made on decommissioning of the high-level waste tanks and two burial grounds. In the event that the phased decisionmaking alternative is selected, the following conditions should be met:

- Additional studies need to be done promptly and competently to support Phase II decisionmaking;
- A reasonably short and enforceable deadline of 10 years (not 30 years) needs to be set for Phase II decisionmaking;
- The following public participation processes need to be guaranteed through Phase II decisionmaking:
 - Continuation of the CTF in addition to the Quarterly Public Meetings and other processes guaranteed by the 1987 Stipulation of Compromise Settlement;
 - Involvement of a CTF member in any ongoing Core Team meetings, deliberations, and recommendations; and
 - Provision for formal NEPA procedures (Draft EIS, public comment period, etc.) for Phase II decisionmaking.

Some of the above conditions, such as the 10-year deadline, would modify the phased decisionmaking alternative as currently proposed. Such modifications are reasonable from the standpoint of public policy and are offered as a way to salvage an otherwise flawed "phased decisionmaking" alternative, in the event the alternative is selected. "Phased decisionmaking," as currently proposed, would defer and delay major decisions for decades, and it would further muddy the procedures of an EIS process that is already 21 years old. My conditions listed above would impose a time limit on the long-overdue West Valley site closure decision while providing sufficient time for adequate studies. My conditions would also ensure that the ongoing decision process includes widely recognized forms of public participation. My conditions would allow the interagency "Core Team" to continue to meet and shape West Valley site policy but would limit their ability to do so behind closed doors.

My detailed comments are set forth below. These include comments numbered 1 through 125 which I submitted almost thirteen years ago on the 1996 Draft EIS (DOE/EIS-0226-D), and also many entirely new comments which are numbered 126 onward, and also many new supplementary comments numbered 1A, etc., which are intended to supplement or update my original 1996 comments as needed.

My 1996 comments are resubmitted here for two reasons. First, despite DOE's claims to the contrary, few if any of my comments on the 1996 Draft EIS have been addressed. Good

2

**110-3
cont'd**

Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until a final decision is made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate the Phase 2 decision for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

110-4

Please refer to Chapter 1, Section 1.2, of this EIS for a review of the history of the development of this EIS, as well as Appendix A for a summary of the comments received on the 1996 *Draft Environmental Impact Statement for Completion of the West Valley Demonstration Project and Closure or Long-Term Management of Facilities at the Western New York Nuclear Service Center (Cleanup and Closure Draft EIS)* (DOE/EIS-0226-D). An index of commentors is given on Table A-1.

This CRD addresses comments on the 2008 Revised Draft EIS. In the decade or more since the public comments were received on the 1996 *Cleanup and Closure Draft EIS*, actions have been taken either in response to public comments or to help answer some of the issues raised by them.

This EIS addresses different alternatives than the 1996 *Cleanup and Closure Draft EIS*. There has been additional characterization of the site, and new erosion models have been developed. Thus, comments that are specific to the 1996 alternatives, models, and regulatory status are not addressed in detail in this CRD. Where a comment on the 1996 *Cleanup and Closure Draft EIS* remains applicable to the 2008 Revised Draft EIS, the comment has been delineated and a response has been provided in this CRD.

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examples are my comments 17, 91, 92, and 111, but various other examples could also be cited. Except where I specifically note otherwise, I am resubmitting my 1996 comments so that they will be addressed. Second, my 1996 comments are resubmitted here because I doubt the legality of the 2008 Draft EIS, particularly its compliance with NEPA requirements such as 10 CFR 1021.314. My comments here are directed to the legally prevailing Draft EIS for West Valley site closure and decommissioning, whichever that turns out to be.

Some of my 1996 comments are expressed in the first person plural ("we"), reflecting the fact that I made those comments as a member of the Coalition on West Valley Nuclear Wastes.

ORAL COMMENTS ON WEST VALLEY DRAFT EIS (made August 6, 1996)

1. Employment graph compiled from Appendix I of the DEIS shows that Alternative I or II is in the best economic interest of the region. (See attached copy of graph.)

1A. The graph from my 1996 comments is attached as Figure 1. This graph deals with the alternatives presented in the 1996 Draft EIS, but the same point can be made for the 2008 Draft EIS: Full cleanup of the site is preferable in terms of both regional employment and environmental protection. Compared to the close-in-place alternative, full clean-up provides substantially greater employment. Such work can and should be done safely if it includes careful planning and adherence to safe work practices, as has been shown by the generally good safety record of the West Valley Demonstration Project.

2. An EIS provides the basis for decisionmaking. That's the legal function of an EIS. It compiles, analyzes, and summarizes the facts needed for decisionmaking.

3. According to law (WVDP Act), the decision on completing the West Valley Demonstration Project must be based on decontamination and decommissioning (D&D) requirements prescribed by NRC, but these do not exist yet.

3A. My 1996 statement that NRC's D&D requirements "do not exist yet" is no longer true; these requirements were published in the *Federal Register* on February 1, 2002. However, DOE still needs to address my concern that "[a]ccording to law (WVDP Act), the decision on completing the West Valley Demonstration Project must be based on decontamination and decommissioning (D&D) requirements prescribed by NRC..." Part of the problem is that both DOE and NRC seem to treat NRC's requirements as guidance rather than enforceable requirements. Neither agency provides or recognizes an enforcement mechanism for what Congress intended to be "requirements" for decontamination and decommissioning. Part of the problem is NRC's separate process – the Decommissioning Plan – which will evaluate DOE's decommissioning proposals yet is largely divorced from the NEPA decisionmaking process that creates a Record of Decision based on Draft and Final EIS documents. There is an overall lack of enforceability, or a lack of clarity about how enforcement would work, in the event that

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110-5 As noted by the commentor, the alternative that involves complete site cleanup would have a larger impact on the local economy. As discussed in Chapter 4, Section 4.1.8 of this EIS, the Site-Wide Removal Alternative would have long-lasting elevated levels of employment, but would not significantly affect regional unemployment. As with any of the decommissioning alternatives, employment associated with the WNYNSC would be lower than current levels at the end of the decommissioning activities. Regarding environmental protection, a key element of this EIS is providing an analysis of the potential environmental impacts to aid in decommissioning decisionmaking.

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

110-6 The purpose of an EIS under NEPA and its implementing regulations is to ensure that (1) Federal agencies consider the potential environmental impacts of proposed actions in their decisionmaking processes, (2) the potentially affected public has the opportunity to review and comment on those actions, and (3) the opinions of the public are also considered in preparing the EIS, and thus, by the decisionmakers.

The Council on Environmental Quality's *Regulations for Implementing NEPA* (40 CFR 1502.22) provide guidance for addressing incomplete and unavailable information when preparing an EIS. Chapter 4, Section 4.3, of this EIS provides a discussion of the nature of incomplete and unavailable information, as well as the manner in which the environmental analysis deals with the data limitations, for five resource areas: worker exposure, transportation, waste management, public health and safety during decommissioning actions, and human health impacts resulting from long-term release and transport.

110-7 As noted in the revised comment since the comments were provided in 1996, NRC issued its "Decommissioning Criteria for the WVDP at the West Valley Site; Final Policy Statement" (67 *Federal Register* 5003). In this notice, NRC announced its decision to apply its License Termination Rule (10 CFR 20, Subpart E) as the decommissioning goal for the entire NRC-licensed site. The issuance of the West Valley Decommissioning Policy Statement and a summary of the radiological criteria that would apply in accordance with the License Termination Rule are presented in Chapter 1, Section 1.2 of this EIS.

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NRC finds that DOE's decommissioning proposals do *not* meet the NRC requirements.

4. The Draft EIS claims to be the basis for decisionmaking for completing the WVDP. We have asked DOE by letter how the decision can be made, and an EIS and Record of Decision issued, without the necessary D&D requirements from NRC. We have gotten no clear answer from DOE.

5. We conclude from the above information that either a) DOE is proceeding illegally to make a decision, and is going through a sham EIS process, without having the D&D requirements that are needed as a legal basis for decisionmaking, or b) DOE recognizes that existing policy statements by NRC have already set certain bounds on what NRC will allow, and DOE will make its decision accordingly within these bounds.

6. Over the past nine years we have engaged in a three-way communication with DOE and NRC, mostly through correspondence. NRC's letters and supporting documents contain some clear statements of NRC's requirements and expectations. These set some clear bounds on DOE's decision. In a letter dated April 10, 1996, NRC reaffirmed its past statements on this matter.

7. We assume that DOE has a complete file of this three-way communication among NRC, DOE, and us. We recently sent a set of photocopies to Hal Brodie to ensure that NYSERDA has a complete file.

8. It is clear from NRC's various letters and supporting documents that Alternative III of the EIS would not be allowed by NRC. DOE must therefore avoid any decision that chooses Alternative III.

9. Alternative III relies on long-term institutional control and on ongoing active maintenance of erosion-control facilities, both of which are unacceptable to NRC. In the absence of long-term institutional control and ongoing active maintenance, Alternative III produces unacceptably high radiation exposures. (See, for example, pages D-40 and D-41 of Appendix D of the DEIS.) DOE must therefore exclude Alternative III from consideration.

10. An EIS provides the legal basis for decisionmaking by compiling, analyzing, and summarizing the relevant facts. We conclude that no decision can be based on facts or analyses that are missing from the EIS.

11. As noted in my letter to DOE dated November 5, 1995, the DEIS omits entire areas of analysis (e.g., Buttermilk Creek erosion and hydrology of the bedrock-valley aquifer) that are essential to the decisions that this EIS is intended to support. We conclude that DOE must exclude from consideration any alternative that is sensitive to Buttermilk Creek erosion or to the hydrology of the bedrock-valley aquifer.

11A. Hydrogeology of the bedrock-valley aquifer continues to be omitted from the 2008 Draft EIS, so this portion of comment 11 remains relevant. Buttermilk Creek erosion is

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In addition, cost-benefit analysis has been included in Chapter 4, Section 4.2, of the Revised Draft EIS to support NRC's request for cost-benefit information consistent with its as low as is reasonably achievable (ALARA) analysis guidelines.

The decommissioning options evaluated in this EIS are all intended to comply with the criteria in the West Valley Decommissioning Policy Statement and/or the NRC License Termination Rule. The relationship between this EIS and subsequent regulatory processes, such as the NRC review of the *Phase 1 Decommissioning Plan for the West Valley Demonstration Project*, is described in Chapter 1, Section 1.3. The nature of the NRC and DOE relationship for the WVDP is described in the West Valley Demonstration Project Act.

The alternatives evaluated in the current EIS include a Sitewide Close-In-Place Alternative and a Phased Decisionmaking Alternative that could result in an eventual decision to close in place. Please refer to Chapter 1, Section 1.2 regarding application of the NRC License Termination Rule to site decommissioning.

This Final EIS has been revised and expanded to incorporate additional information on the valley bedrock. The updated groundwater flow model for the site incorporates and extends into the upper bedrock under the North and South Plateaus, as described in Appendix E, Section E.3, of this EIS. The revised analysis also makes use of available hydrologic and contaminant transport information. Further, sensitivity analyses were conducted to provide insight into the uncertainty in the long-term impact estimates, as described in Appendix E of this Final EIS, which has also been revised to acknowledge the commentator's 1994 report.

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- addressed, but not adequately, in the 2008 Draft EIS, as discussed below in more detail.
12. As noted in the DEIS, the Global Erosion Control strategy associated with Alternative III would redirect the flow of tributary streams and thereby increase the flow of water through the erosion-prone section of Buttermilk Creek. The severity of erosion along Buttermilk Creek at existing water flow rates is well known and is documented, for example, in studies by Albanese, Boothroyd, and others and in our own annual photographs. The DEIS does not assess the impact of the aggravated erosion associated with the increased flow rates of the Global Erosion Control strategy. We conclude that this EIS process cannot support any decision that relies on the Global Erosion Control strategy.
13. The aggravated erosion along Buttermilk Creek resulting from the Global Erosion Control strategy is a sufficiently large and complex problem (especially when considered in conjunction with related events such as stream capture) that any analysis must be available for review and public scrutiny. An unreviewed and unreviewable analysis in the Final EIS would not be acceptable.
14. The Global Erosion Control strategy associated with Alternative III would redirect the flow of tributary streams along the boundary between the bedrock wall of the valley and the glacial fill of the valley. This boundary is a recharge area for the bedrock-valley aquifer. No substantive studies of this aquifer have been done. We conclude that this EIS process cannot support any decision that relies on the Global Erosion Control strategy.
15. The DEIS suggests that bedrock locations such as the western side of the site near Dutch Hill and the eastern side of the site near Heinz Road may be suitable for waste-disposal facilities. (For example, see p. 3-159.) Any such bedrock location is in a recharge area for the bedrock-valley aquifer. No substantive studies of this aquifer have been done. We conclude that this EIS process cannot support any decision that involves disposal of wastes upgradient of the bedrock-valley aquifer.
16. The hydrology of the bedrock-valley aquifer is a sufficiently large and complex problem (especially when considered in conjunction with related groundwater resources such as the Springville aquifer) that any analysis must be available for review and public scrutiny. An unreviewed and unreviewable analysis in the Final EIS would not be acceptable.
17. My report on the bedrock-valley aquifer dated January 16, 1994, is not referenced in the DEIS. The report, which is included in our Geology Reports volume, is the best available summary of what is known, and not yet known, about the bedrock valley aquifer. The report is known to DOE and SAIC and was mentioned, for example, in item 42 of DOE's "Responses to Coalition Comments – Geologic Issues," sent with DOE's cover letter dated January 3, 1995. It should be included as a reference in the EIS.
- 17A. DOE's failure to respond to my comment 17 illustrates a wider lack-of-response

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- 110-10** Please see the response to Comment no. 110-4 regarding comments on the 1996 *Cleanup and Closure Draft EIS*. The Global Erosion Control strategy is not included in this EIS.

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problem that applies to various comments made on the 1996 Draft EIS. This particular comment is simple and straightforward – it requests that my report on the bedrock-valley aquifer dated January 16, 1994, be included as a reference in the EIS – but the comment has been ignored. The report is not obscure; it was cited in DOE's above-mentioned cover letter dated January 3, 1995, and is also attached as Appendix F to my January 5, 2008, memo entitled "Issues the Core Team Needs to Address" (attached hereto as Appendix E and posted on CTF website at www.westvalleyctf.org/2008_Materials/2008-01-Materials/Core_Team_Issues-Vaughan_with_Appendices.pdf). The report has been sent in the past to both DOE and NRC and is also included in the above-referenced booklet entitled *Geology Reports of the Coalition on West Valley Nuclear Wastes*. Despite the availability of this report, and contrary to DOE's claim that it has responded to comments (see page 1-11 and also Appendix A of the 2008 Draft EIS), the bedrock-valley aquifer report has not been referenced, acknowledged, discussed, or rebutted in the 2008 Draft EIS.

WRITTEN COMMENTS ON WEST VALLEY DRAFT EIS (made September 21, 1996)

Issues that involve NRC and other agencies

18. In my oral comments 6 and 7, I referred to various communications among NRC, DOE, and us. Those communications, which contain a number of relevant policy and position statements from NRC, are designated Appendix A and submitted herewith as part of my comments.
19. Two additional NRC memos from 1990 and 1991 are designated Appendix B and submitted herewith as part of my comments. Both memos express NRC's intention of developing decontamination and decommissioning (D&D) requirements in conjunction with the West Valley EIS. A similar viewpoint is expressed in the NRC letter to DOE dated January 30, 1991 (Appendix A, page A61).
20. In the NRC memo dated December 7, 1990 (Appendix B, page B1), R. Davis Hurt stated that "NRC's prescription of decontamination and decommissioning requirements will have an effect on the cost and feasibility of the various site closure options ..." We believe this is true. We do not believe the alternatives presented in the Draft EIS can be properly assessed in the absence of the D&D requirements.
21. In the NRC letter dated May 17, 1995 (Appendix A, page A65), Gary C. Comfort stated that "In its current [interagency draft] form, the draft EIS does not define, and likely will not lead to, clear and specific definitions of criteria for decommissioning and decontamination (D&D) alternatives for the Project facilities. As a result, it does not provide an evident basis for NRC to discharge its National Environmental Policy Act (NEPA) responsibilities effectively. The EIS may be a useful document for DOE in developing the strategy for WVDP to pursue, including a strategy for D&D. However, until that strategy is developed further and D&D alternatives are identified specifically, the NRC has little upon which to base any conclusion regarding the

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potential environmental impact of WVDP's D&D activities." This is a valid and serious concern. The public can do no better than NRC in assessing such environmental impacts.

22. Despite the missing D&D requirements, a relatively clear picture of NRC's requirements and expectations can be obtained from the various communications in Appendix A. According to many of those communications, NRC expects DOE to conduct analyses and assessments comparable to those used in developing 10 CFR Part 61.

23. In the NRC letter dated April 10, 1996 (Appendix A, page A59), Carl J. Paperiello stated that "During 1991 and 1992, NRC discussed issues regarding the prescription of D&D criteria and the definition of 'transuranic waste' through written correspondence and in meetings. Throughout these discussions, NRC has stated that, prior to NRC accepting a concentration of 100 nanocuries per gram as a definition for 'transuranic waste,' DOE must provide NRC with a performance assessment comparable to that developed for 10 CFR Part 61."

24. In the NRC letter dated August 18, 1987 (Appendix A, page A7), Malcolm R. Knapp stated that "before NRC considers accepting a concentration limit other than 10 nCi/gm for transuranic radionuclides, DOE must conduct additional analyses [which ...] should show that the mix of Project wastes expected to be disposed of will meet the performance objectives in Part 61, given the specific concentrations of radionuclides expected in that waste. Project waste disposal should be evaluated against the performance objectives in 10 CFR Part 61 to demonstrate protection of public health and safety."

25. The NRC Task Plan of April 27, 1988 (Appendix A, pages A13-A24) contains many recommendations on using analyses and performance objectives from 10 CFR Part 61 for assessing the performance of the West Valley site.

26. In the NRC letter dated June 8, 1992 (Appendix A, page A37), Robert M. Bernero refers to various sections of 10 CFR Part 61, including its performance objectives, standards for waste acceptability as stated in 10 CFR 61.23, and analyses to be conducted in accordance with 10 CFR 61.12 and 61.13.

27. The West Valley Draft EIS, on pages 3-156 to 3-161, reviews and rates the West Valley site against the site suitability and disposal facility design requirements of 10 CFR Part 61. The Draft EIS acknowledges that the West Valley site and/or facility would have difficulty meeting some of the requirements, including 10 CFR 61.50(a) (7), 61.50(a) (8), 61.50(a) (10), 61.51(a) (1), and 61.51(a) (2), such that the performance objectives of 10 CFR Part 61 may not be met.

28. DOE believes that the requirements of 10 CFR Part 61 are not strictly applicable to the West Valley site and facility. (See Draft EIS, pages 3-155 and 3-156.) While this may be true, the failure of the site and facility to meet the above requirements should serve as a red flag. The site suitability and facility design requirements were not adopted arbitrarily. They are intended to predict, with a high degree of success, whether a site is capable of isolating wastes over the

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110-11 DOE and NYSERDA agree that the strict applicability of 10 CFR Part 61 criteria to the WNYNSC is dependent on whether low-level waste burial is performed. None of the EIS alternatives involve new onsite low-level radioactive waste burial.

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lifetime of the radiological hazard.

- 28A. The question of whether requirements of 10 CFR Part 61 are "strictly applicable to the West Valley site" is partly dependent on whether DOE conducts low-level waste disposal under §2(4) of the West Valley Demonstration Project Act.
29. In summary, NRC expects DOE to show that the West Valley site and facility can meet the performance objectives of 10 CFR Part 61. NRC expects DOE to use assumptions, analysis methods, and performance assessments based on 10 CFR Part 61, yet such assumptions, methods, and assessments generally lead to the conclusion that the performance objectives of 10 CFR Part 61 cannot be met by alternatives that leave wastes onsite at West Valley. DOE should therefore be able to predict, with a high degree of confidence, whether Alternative III and other alternatives that leave waste onsite will meet the expectations, criteria, and requirements of NRC.

29A. Comment 29 was written prior to NRC's West Valley Policy Statement (67 *Federal Register* 5003, February 1, 2002) which specified decommissioning criteria for the site. Those criteria, rather than 10 CFR Part 61, now govern decommissioning under §2(5) of the West Valley Demonstration Project Act. However, comment 29 remains relevant to "alternatives that leave waste onsite" inasmuch as onsite disposal would invoke §2(4) of the West Valley Demonstration Project Act. Disposal must be done "in accordance with applicable licensing requirements" which, for low-level waste, would generally be 10 CFR 61 or the analogous state requirements.

30. Strictly speaking, NRC has asked DOE to apply the performance objectives, assumptions, and analysis methods of 10 CFR Part 61 to a specific category of waste at West Valley. However, NRC also has formal approval authority over most other wastes at the site, either through its statutory role in prescribing D&D requirements or through its role in reinstating, converting, or terminating the existing facility license CSF-I.

31. Based on the way NRC has dealt with D&D requirements and license proceedings at other sites, DOE and NYSERDA may be able to judge, with a high degree of confidence, whether each alternative presented in the Draft EIS will meet NRC's expectations, criteria, and requirements.

32. Strictly speaking, NRC has asked DOE to apply the performance objectives, assumptions, and analysis methods of 10 CFR Part 61 to a specific category of waste at West Valley. However, NRC has stated clearly that it expects DOE to evaluate the performance of the site as a whole (Appendix A, pages A11 and A16). From this perspective, the performance objectives, assumptions, and analysis methods of 10 CFR Part 61 are applicable to the whole site.

33. In the Task Plan of April 27, 1988 (Appendix A, page A17), NRC described the manner in which it wants DOE to evaluate the West Valley site as a whole. Specifically, NRC asked DOE to carry out two sets of analyses: "One analysis should be conducted to address only the WVDP wastes and disposal facilities for those wastes. A second analysis should evaluate the incremental

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- 110-12** Please see the response to Comment no. 110-7 regarding the NRC's West Valley Decommissioning Policy Statement and application of the NRC License Termination Rule. DOE has been and will continue to work with NRC to assess the compliance of planned WNYNSC decommissioning actions with the requirements of the NRC policy statement on decommissioning criteria for the WVDP.

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impacts of the disposal of WVDP wastes with the impacts from all other wastes disposed at West Valley. The impacts should not exceed the 10 CFR Part 61 performance objectives."

34. In the Task Plan of April 27, 1988 (Appendix A, page A18), NRC specifically stated that the assumptions used by DOE in its pathway analyses should include the following: "Institutional control over the site is lost after 100 years allowing an inadvertent intruder to have access to the site."

35. The Draft EIS shows clearly that alternatives which leave waste onsite at West Valley cannot meet the performance objectives of 10 CFR Part 61 if institutional control is lost after 100 years. DOE should therefore be able to predict, with a high degree of confidence, that Alternative III and other such alternatives will not meet the expectations, criteria, and requirements of NRC.

36. In the Task Plan of April 27, 1988 (Appendix A, page A18), NRC specifically stated that the assumptions used by DOE in its pathway analyses should include the following: "After 500 years intruder barriers and engineered erosion control measures are no longer effective."

37. For Alternative III and other alternatives that leave waste onsite at West Valley, the Draft EIS relies heavily on the effectiveness of engineered erosion control measures. Time periods well beyond 500 years are assumed. See, for example, pages D-26 and D-38 of the Draft EIS. Loss of effectiveness of these erosion control measures has severe consequences, resulting in radiation exposures that greatly exceed the performance objectives of 10 CFR Part 61. See, for example, pages D-40 and D-41. DOE should therefore be able to predict, with a high degree of confidence, that Alternative III and other such alternatives will not meet the expectations, criteria, and requirements of NRC.

38. The NRC Task Plan of April 27, 1988 (Appendix A, page A19) lists items that must be considered in evaluating the West Valley site's ability to meet the 10 CFR Part 61 performance objectives. The list includes "Long term stability effects of the site on the dose pathway models." In other words, if the exposure pathways change as the site deteriorates, any such changes must be taken into consideration.

39. In the NRC letter dated June 8, 1992 (Appendix A, page A37), Robert M. Bernero cites 10 CFR 61.13 as useful guidance for DOE's analyses of the West Valley site. In part, 10 CFR 61.13 requires that "Analyses of the long-term stability of the disposal site and the need for ongoing active maintenance after closure must be based upon analyses of active natural processes such as erosion, mass wasting, slope failure, settlement of wastes and backfill, infiltration through covers over disposal areas and adjacent soils, and surface drainage of the disposal site. The analyses must provide reasonable assurance that there will not be a need for ongoing active maintenance of the disposal site following closure."

40. The Draft EIS clearly demonstrates that the West Valley site has poor long-term stability. Alternative III and other alternatives which leave wastes onsite at West Valley cannot meet the

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110-13 The NRC's West Valley Decommissioning Policy Statement and License Termination Rule, not 10 CFR Part 61, apply to the decommissioning of the WNYNSC. This EIS evaluates a variety of scenarios and the long-term impacts to offsite and onsite receptors. The scenarios include consideration of an intruder, loss of institutional control, and unmitigated erosion.

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performance objectives of 10 CFR Part 61 without ongoing active maintenance. See, for example, pages 5-83 and 5-84. DOE should therefore be able to predict, with a high degree of confidence, that Alternative III and other such alternatives will not meet the expectations, criteria, and requirements of NRC.

Other agencies, including DEC, EPA, Corps of Engineers

41. There are at least two water-quality issues which are not adequately addressed in the Draft EIS. Both involve agency approvals. One such issue is the diversion of tributaries of Buttermilk Creek under the Global Erosion Control strategy. The other is the protection of groundwater within the Cattaraugus Creek Basin Aquifer.

41A. Diversion of tributaries of Buttermilk Creek under the Global Erosion Control strategy was proposed in the 1996 Draft EIS but not the 2008 Draft EIS; hence this portion of comment 41 and subsequent comments does not apply to the 2008 Draft EIS. However, comments pertaining to protection of groundwater within the Cattaraugus Creek Basin Aquifer remain relevant under either Draft EIS.

42. Inadequate representation or misrepresentation of relevant issues and impacts in an EIS hinders good decisionmaking. Those who submit comments (whether they be government agencies or members of the public) are deprived of the opportunity to comment on matters of substance but must instead point out errors and omissions, which, when rectified in the Final EIS, do not usually have the benefit of substantive comments from agencies and the public.

43. We presume that the affected agencies will comment on the same two water-quality issues that we find inadequately addressed in the Draft EIS. While those agencies can speak for themselves regarding their expectations and areas of involvement, we offer our own comments as well.

44. The proposed diversion of tributaries of Buttermilk Creek under the Global Erosion Control strategy would apparently require approvals from both New York state DEC and the U.S. Army Corps of Engineers. The nature and substance of each such approval should be (but are not) discussed in the Draft EIS.

45. In addition to DEC and the Corps of Engineers, EPA approval would also apparently be required for diversion of the tributaries of Buttermilk Creek. Probable leakage from the diverted tributary streams into the bedrock-valley aquifer (see my oral comment no. 14) would require EPA involvement as part of EPA's role in reviewing federally financed projects within the Cattaraugus Creek Basin Aquifer.

46. We believe that the stream diversion proposed under the Global Erosion Control strategy of Alternative III would require at least a SPDES permit from DEC and some type of approval from the Corps of Engineers. A major factor in the approvals from both agencies would be the

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110-14 As noted by the commentor, the issue pertaining to diversion of Buttermilk Creek tributaries is not relevant to this EIS. The comments that pertain to the 2008 Revised Draft EIS, including comments pertaining to groundwater, are addressed in some of the responses below. Chapter 3, Section 3.6.2.2, of this EIS describes the Cattaraugus Creek Basin Aquifer System, while Section 3.6.2.1 addresses groundwater at WNYNSC that was contaminated due to past activities. Potential groundwater impacts associated with the EIS alternatives are discussed in Chapter 4 (Sections 4.1.4 and 4.1.10) and Appendix H of this Final EIS.

110-15

110-15 DOE and NYSERDA made the 2008 Revised Draft EIS available to Federal and state agencies and the public for review and comment. As they deemed appropriate, the agencies commented on subjects in their areas of responsibility or expertise. All comments from the agencies and the public, including those identifying substantive issues, errors, omissions, or preferences were considered in finalizing the EIS.

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radioactive and other contamination carried into Buttermilk Creek at a point further upstream from the current point of entry. As a result, approximately two additional miles of Buttermilk Creek would be newly exposed to radioactive and other pollutants. In deciding whether such diversion would be acceptable, both DEC and the Corps would need to look at long-term as well as short-term site performance.

47. The omission of important issues from the Draft EIS (e.g., agency approvals for stream diversion) is inappropriate and irresponsible. DOE tends to argue that the EIS process covers only broad alternatives and that further details will be evaluated after a decision has been made to pursue one of the broad alternatives. We maintain that any EIS must evaluate reasonably foreseeable impacts of reasonably foreseeable details; otherwise the EIS process is segmented and cannot support informed decisionmaking. In this case, the diversion of tributary streams is such an integral part of Alternative III that the major issues, including agency approvals, should have been included in the Draft EIS. To omit or defer consideration of these issues is segmentation.

48. The roles of DEC and EPA in protecting the Cattaraugus Creek Basin Aquifer are described in the Draft EIS, pages B-1, B-5, and B-6. However, the Draft EIS fails to provide any meaningful basis for analyzing impacts of the proposed actions on the aquifer. DEC, EPA, and the public will therefore have no opportunity to make substantive comments.

49. On page 4-74, the Draft EIS misrepresents the federally designated Cattaraugus Creek Basin Aquifer by claiming that "the area designated as the sole source aquifer is a drainage basin comprising many unconnected water-bearing zones ..." The claim that the water-bearing zones are "unconnected" is a misrepresentation. At best, it is unsupported by available information.

50. It is clear from available information that the bedrock valley beneath the West Valley site (see, for example, page 4-19 of the Draft EIS) continues northward into Erie County and is the same bedrock valley that contains the Springville aquifer. For a cross-section of the valley at Springville, see Figure 17 of Miller & Staubitz, Hydrogeological Appraisal of Five Selected Aquifers in Erie County, New York, 1985, USGS Water-Resources Investigations Report 84-4334. Whether a hydraulic connection exists is unclear and should be considered an open question.

51. It is clear from available information that the portion of the Western New York Nuclear Service Center west of Rock Springs Road serves as a recharge area for the bedrock-valley aquifer beneath the site. See page 4-26 of the Draft EIS for a brief description. See also arrow on page 4-19 that shows groundwater flowing diagonally downward along the edge of the bedrock valley. Page 4-26 provides some idea of the flow; it cites a yield of 9.5 gallons/minute from a well on the site that was drilled into the edge of the bedrock valley. Thus, the recharge rate into the bedrock-valley aquifer does not appear to be trivial.

52. The fate of water that enters the bedrock-valley aquifer is unknown. See discussion in my

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110-16 The subject passage describing the aquifer as comprising unconnected water-bearing zones is not included in this EIS. The Cattaraugus Creek Basin Aquifer is described in Chapter 3, Section 3.6.2.2.

110-17 DOE notes the commentor's observation and suggestion. As described in Appendix E, Section E.2.3.2, of this EIS, the possibility of a continuous weathered bedrock aquifer has been considered by DOE. As further noted in response to Comment no. 110-9 and described in Appendix E, the updated groundwater flow model of the site incorporates and extends into the upper bedrock. DOE notes that the principal sources of potential groundwater contamination at WNYNSC are all to the east of Rock Springs Road. Groundwater in the bedrock west of Rock Springs Road is very much up-gradient of source materials found on site, i.e., to the left of and uphill as shown Chapter 3, Figures 3-6 and 3-7 and Appendix E, Figures E-31 and E-32 of this EIS. Bedrock groundwater is not monitored since it is not considered to be at risk from potential contamination at the site.

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report on the bedrock-valley aquifer dated January 19, 1994, as cited in my oral comments, no. 17. It is clear that there is no massive or direct hydraulic connection to the Springville aquifer, but a tortuous connection cannot be ruled out, nor can a direct connection to deeper water-bearing layers directly below the shallow Springville aquifer. Either of these possibilities should be of interest to DEC and EPA, given their mandate to protect aquifers within the Cattaraugus Creek Basin.

53. Since there is essentially no radioactive material on the portion of the Western New York Nuclear Service Center west of Rock Springs Road, there does not appear to be an immediate threat of radioactive contamination of the recharge into the bedrock-valley aquifer. However, it should be noted that there is currently no monitoring to confirm or disprove this. As indicated on page 4-26 of the Draft EIS, "no bedrock wells are monitored."

54. There are several foreseeable ways in which alternatives considered in the Draft EIS, especially those that leave waste onsite at West Valley, could threaten to introduce radioactive contamination into the recharge of the bedrock-valley aquifer. One such threat would be contaminated leakage from diverted tributary streams, as noted above in comment 45 and in my oral comment 14. A second possible threat would be intentional placement of waste in recharge areas, as noted in my oral comment 15. A third possible threat would be human-induced or naturally occurring changes in the topography or hydraulic gradients along the contact or boundary between the bedrock hillside and the glacial fill of the valley, i.e., more or less along the course of Rock Springs Road. Such changes in topography or hydraulic gradient could bring contaminated surface water or groundwater from existing facilities (if they remain east of Rock Springs Road) into the recharge flow of the bedrock-valley aquifer. Any of these possibilities should be of interest to DEC and EPA.

55. Our primary concern regarding the bedrock-valley aquifer is that, despite our requests, DOE has refused to study the aquifer to obtain quantitative data. See, for example, Appendix C submitted with these comments, page C14, §42. The result is that DEC, EPA, and the public cannot review the detailed information needed to make an informed decision.

56. Our secondary concern regarding the bedrock-valley aquifer is that the Draft EIS does not describe, summarize, or refer to the best available information. (It makes no reference to my report dated January 16, 1994, nor to any other good summary.) As a result of DOE's decision to withhold this information, DEC, EPA, and the public cannot easily judge what is known, and what is not yet known, about this aquifer system.

Structural geology

Deficiencies in structural-geology report by Gill

57. Page 4-10 of the Draft EIS refers to regional subsurface mapping done by geologist Bradley Gill in order to "determine if faulting could be mapped based on available subsurface well data."

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110-18 This EIS reflects the latest and best available data and analyses relative to the characterization of subsurface faulting and seismic conditions in the vicinity of WNYNSC. As observed by the commentator, the geologic report cited as "Gill 1995" in the 1996 *Cleanup and Closure Draft EIS* has also been revised (Gill 2005). Preparation of this 2005 report included updating subsurface geologic maps (current through December 2003) to incorporate drilling data obtained since the original mapping was completed in 1998. If new wells had been drilled in Gill's study area to the Onondaga, Medina, and Theresa geologic horizons and the geophysical well data had been released from confidentiality and made available, these data were used. With regard to the criticisms of data interpretation raised here and elsewhere by the commentator, the following discussion is offered to provide a general overview of the pitfalls associated with generating subsurface geological maps and drawing conclusions regarding subsurface faulting based solely on geophysical well log and drilling data.

When constructing and reviewing such maps, it is important to understand that there are various inaccuracies inherent in the exploration and drilling process that, both individually and in concert with each other, can significantly affect the final mapped interpretation. These become even more problematic when one tries to micro-analyze the mapped horizon, as it is only intended to represent a projection of the subsurface based on the available data, the accuracy of which is limited to various factors. These issues are addressed by various Geographic Information Systems (GIS) mapping programs by incorporating numerous optional gridding algorithms that generally reflect the data averaged over distances instead of mapping actual data points. While mapping software usually offers an option of "honoring" the data, this practice often results in highly irregular and geologically questionable mapped surfaces. GeoGraphix® mapping software defaults to "not honoring" the data and using the minimum curvature algorithms that have been used in this mapping project. Maps prepared by and used for the Gill 2005 geologic report were generated using GeoGraphix Explorer®, one of the most widely accepted, industry-standard brands of mapping software used in the oil and gas industry today.

Generally, GIS mapping applies a blanket-type grid over the data points and maps the averaged values between points. This involves applying a "smallest-feature" radius and radius of influence that determines how many columns and rows and resulting X-Y spacing will be defined in the grid settings. This can result in certain contours appearing to be on the wrong side of the data point and, in the strictest sense, they are. However, given the discrepancies inherent in the data, attempts to

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Based on Gill's analysis, the Draft EIS concludes that "there was no evidence for faulting based on the regional mapping." We find this conclusion unsupported by the data that Gill set out to analyze.

57A. My rather polemic comments 57 through 82 need to be interpreted in combination with post-1996 evidence of faulting near the West Valley site. New evidence of two deep-seated faults – one at Sardinia and one at the north end of the US 219 bridge over Cattaraugus Creek near Springville – was released in 2001 in the seismic study entitled *Seismic Reflection Survey to Identify Subsurface Faults near the West Valley Demonstration Project*, prepared for West Valley Nuclear Services Company by Bay Geophysical, Traverse City, MI. Questions that still need to be answered about these faults include their strike, geographic extent, surface expression (if any), and evidence of most recent activity or reactivation. These questions can and should be addressed in new studies that would support the Phase II decision in the event that phased decisionmaking is the chosen alternative. Regardless of these outstanding questions, the existence of the two newly recognized faults resolves some – but not all – of the points raised in my comments 57 through 82. Curiously, an updated version of Gill's analysis, cited as Gill (2005) in the 2008 Draft EIS, shows no awareness of the two newly recognized faults that are identified in *Seismic Reflection Survey to Identify Subsurface Faults near the West Valley Demonstration Project*. Gill (2005) discusses the Attica Splay of the Clarendon-Linden Fault (CLF) on pp. 9-13. On p. 9, he notes a lineament system that extends southwesterly from the CLF in central Genesee County through Wyoming County toward the southeastern corner of Erie County, and he remarks that "This is roughly coincident with the area that the Attica Splay is believed to exist, and is possibly an expression of that splay fault system." Another report cited in the 2008 Draft EIS (URS, 2002, "An Update of the Structural Geology in the Vicinity of the Western New York Nuclear Service Center, West Valley, New York") provides a more comprehensive view of the Attica Splay in relation to NE-trending lineaments and in relation to the Sardinia fault identified in *Seismic Reflection Survey to Identify Subsurface Faults near the West Valley Demonstration Project*. See esp. URS (2002), p. 24-29. Returning to Gill (2005), it appears likely that the "distinct structural anomaly" seen in Sardinia near the Krolick #2 well at all three of his mapped horizons (see Gill's Packer Shell and other structure-contour maps) is associated with the Attica Splay, even though he does not recognize it.

58. Gill's mapping and analysis are compiled in his report entitled Regional Geologic Mapping Analysis of Certain Horizons in the Vicinity of the Western New York Nuclear Service Center, Town of Ashford, Cattaraugus County, New York. The report was prepared August 25, 1995, and is listed on page 4-105 of the Draft EIS. Inspection of Gill's report shows several deficiencies that, in my opinion, affect the validity of his conclusions. These deficiencies include careless errors and the practice of forcing data to fit a preconceived conclusion.

59. It is evident from the careless errors that Gill's report was not subject to the same high standards of Quality Assurance and Quality Control that NYSERDA required for the recent

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honor each data point can result in artificial geologic features that do not actually exist due to errors that are impossible to prove or disprove. The trade-off is a balance between adhering to the data and wrongly believing that it is 100 percent accurate, resulting in a false interpretation of the mapped surface, or acknowledging that the data are not entirely accurate because they contain inherent errors, and creating a structure map that addresses this reality through the methodology by which the data are recognized and mapped. When conducting regional mapping, it is generally advisable to accept and adhere to the latter.

Some of the causes for such data discrepancies are as follows. Surveying and site construction during the permitting phase of oil and gas operations often produce significant discrepancies of up to about 5 meters (15 feet) or more in subsurface elevations. These can be the result of inaccurate surveying, significant construction alterations of the surveyed ground surface after the survey, moving the actual staked location, and human error when reporting the elevations and datum used. The drilling and logging phases contain a myriad of other possible errors, including incorrect estimations of rig floor, casing head, rotary table, or Kelly bushing distances from the ground, use of the wrong datum for logging and, to a very limited extent, fatigue-induced stretch in the wirelines. A more common cause of depth error is the drilling rig causing the hole to "corkscrew" instead of drilling straight, which is usually caused by too much weight on the drill string, thus adding considerable apparent depth to the logs. For the latter case, an example is found in a Medina well in Chautauqua County, New York, where the borehole is so deviated that the formations appear to be thicker by more than 60 percent, causing it to appear to be reverse-faulted and considerably deeper than usual. Upon further investigation, it is apparent that this well corkscrews and the logs were never adjusted for true vertical depth.

Another example is a recently-drilled (and still confidential when analyzed) deep well located within 16 kilometers (10 miles) of WNYNSC, where the formations are off by about 13 meters (44 feet) at depth and the well is deviated by about 40 meters (130 feet) at total depth from where it is located at the surface. This is not a designated directional well, and any attempt to map the available log data would result in a one-well anomaly that would be misconstrued as a fault or small depression, as nearby offsets show drastically different subsea values. These factors are of particular concern when structure contour mapping and are often the cause of these one-well anomalies that generate excitement about false geologic features that have alternative explanations. This is why faults should not be assumed from such anomalies until all possibilities have been eliminated and evidence for faulting has

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Clarendon-Linden study in Allegany County.

60. One careless error in Gill's report is the inclusion of a false data point (well 31-009-11722 or G. Schiechtel #1) on Gill's two structure contour maps and one isopach map. This well was abandoned at a depth of 322' due to quicksand; it never penetrated either the Tichenor or the Packer Shell. Gill erroneously shows this well as a data point and uses it to construct contours on both horizons as well as his isopach map.

60A. Comment 60 involves a careless error of my own. Gill's maps show the G. Schiechtel #1 well as "P&A" (plugged and abandoned), reflecting the fact that the well was initially drilled under API number 31-009-11722 but was abandoned at a depth of 322' due to quicksand; it never penetrated either the Tichenor or the Packer Shell. I now recognize that the G. Schiechtel #1 well was redrilled under a new API number (31-009-19765) to a total depth of about 3200' and thus penetrated both the Tichenor and the Packer Shell.

61. Another apparent careless error involves well 31-029-12983 (R. Michalak #1). Gill failed to use the revised Kelly-bushing elevation of 1565' (as shown on a revised completion report in the DEC file), resulting in a 20' error in his Tichenor and Packer Shell elevations for this well.

62. Another apparent careless error involves well 31-029-12920 (H. & J. Emerling #1). Gill's elevation for the base of the Packer Shell in this well should be 1410' - 2791' = -1381'. He uses a value of -1391', which is apparently in error by 10'.

63. A more serious error is Gill's practice of drawing structure contours in areas where data points are absent or sparse or not easily reconciled to a smooth surface. I will address three such areas: the Ashford Hollow area in Ashford, the Spooner Creek area in Concord, and the Beech Tree Road area in Ashford. In all three of these areas, Gill draws unfaulted structure contours in the absence of supporting data. This practice begs the question of whether faults do, or do not, exist in these areas.

64. A telltale sign of Gill's practice of forcing data to fit a preconceived conclusion is the abrupt way in which the widths of his contour intervals change. Near the 31-009-20908 or Miller #1 well on his Packer Shell structure-contour map, for example, the interval from -1875' to -1900' is drawn 1.3" wide, while the adjacent interval from -1900' to -1925' is drawn 0.65" wide. Various other examples can be found as well.

65. The whole purpose of Gill's mapping was to determine if faulting could be either identified or ruled out, based on available well data. In the vicinity of the Miller #1 well on his Packer Shell map, for example, Gill had a choice of A) drawing a fault, B) drawing unfaulted contours, or C) declaring that the data was insufficient to decide between "A" and "B". In choosing "B", despite the odd way he had to bunch up and spread out his contour lines, Gill is forcing the data to fit a preconceived conclusion. In doing so, he begs the question that he set out to answer.

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been found to exist in the well logs in the form of repeated or missing sections or is supported by multiple anomalous data points.

Dr. Katherine J. Beinkafner (1983) points out five criteria applied in judging where a fault was present when contouring within her study area: (1) a change in regional gradient, found by comparison of four or more wells; (2) a minimum displacement of 12 meters (40 feet) (presumably to eliminate smaller, more common errors as previously discussed); (3) interpolation of similar displacement in two separate regions along structural trends; (4) proximity to fold axes mapped at the surface; and (5) fault traces on previous workers' maps.

While these represent Dr. Beinkafner's criteria for judging when to incorporate faulting into a geologic interpretation, they parallel the methods of subsurface mapping of most professional geologists. It is for these reasons that the maps for Gill 2005 were generated using the previously mentioned algorithms and do not reflect a widespread interpretation of faulting based solely on available geophysical log data. Faults most certainly exist to some degree within the study area defined in Gill 2005, but with the exception of the Onondaga faults found in the Bass Island Trend, seismic reflection surveys are necessary to adequately identify them. Since the time that the original mapping was conducted, seismic data have been acquired that provide evidence for faults in various horizons and specific locations.

Further, as partially noted by the commentor, the structural mapping results reported in Gill 2005 have been supplemented by a number of other studies that were considered and are cited in Chapter 3, Section 3.3.1.2, of this EIS. Both of these reports incorporate and reference the seismic reflection survey results from the 2001 report from Bay Geophysical (URS 2002, URS 2004).

110-19 As further described in the response to Comment no. 110-18, this EIS has been revised from the 1996 *Cleanup and Closure Draft EIS* in part to incorporate Gill's updated 2005 analysis, as cited in the EIS. Gill's revised report specifically addresses a second phase of mapping that involved an expansion of the original study area to the north and northeast to determine whether or not faulting could be identified in subsurface geologic strata in that direction. The commentor's suggestion that a preconceived conclusion existed prior to undertaking the study is incorrect, as no data were forced to fit a preconception. The contouring was computer-generated without applying a geologic bias trend. Any deficiencies associated with the Gill 1995 report have been reviewed and determined to be minor in nature, with minimal impact on the outcome of the mapping project.

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66. Given the sparse data, it is difficult to decide conclusively whether a fault exists near the Miller #1 well and, more generally, in the vicinity of Ashford Hollow. Despite the uncertainty, the available evidence favors a fault. Figure 2 submitted with these comments shows a portion of Gill's Packer Shell map on which a line A-A' has been drawn through four wells. Figure 3 is a cross-section through A-A' which implies a 50° to 80° fault, down on the south, in the 0.9-mile gap between the Miller #1 and Glazier #1 wells. This interpretation of the data is less forced than Gill's.

67. If a fault exists between the Miller #1 and Glazier #1 wells, the available well data suggests that the fault trends more or less to the northeast. This tentative conclusion needs to be examined in combination with another piece of evidence mentioned in the Draft EIS, page 4-10: East-northeast trending lineaments "can be discerned on high-altitude aerial photographs in the area between Route 219 on the west and Rock Springs Road on the east, but not all lineaments have a structural origin." We now see possible evidence of a deep structural origin for the lineaments, i.e., a fault on the Packer Shell between the Miller #1 and Glazier #1 wells. Both types of evidence need to be examined together.

68. If an ENE-trending fault passes between the Miller #1 and Glazier #1 wells, it may also be expressed in the ENE-trending valley of Gooseneck Creek. Structural control of Gooseneck Creek should be examined as an additional piece of evidence.

69. Given the sparse data, it is difficult to decide conclusively whether a fault passes between the Miller #1 and Glazier #1 wells. A seismic line should be run to obtain a more definite answer. The cost would be a tiny fraction of the overall site evaluation cost.

70. In the Spooner Creek area, Gill draws unfaulted structure contours on his Packer Shell map. He draws these contours across a gap of almost four miles between the H. & J. Emerling wells in Concord and the Blesy #1 well in Ashford. His contours are unsupported by data in this area.

71. The area in question here (lower Spooner Creek watershed) is situated along the Bass Island Trend, but the structure contours in question are on the base of the Packer Shell, below the salt. Knowing whether the Packer Shell shows a fault beneath the Bass Island Trend is important, both in terms of the site and in terms of the traditional explanation of the Bass Island Trend. Gill begs the question by drawing unfaulted contours where no data points exist.

72. There is insufficient data in the Spooner Creek area to support a definite conclusion. Nevertheless, as in the Ashford Hollow area, the available evidence favors a fault. A line B-B' (similar to line A-A' described above) can be drawn through four wells: Emerling WN-1500, H. & J. Emerling #2, Blesy #1, and Mahl #1. A cross-section along B-B' implies an 85° to 150° fault, down on the south, between the H. & J. Emerling wells in Concord and the Blesy #1 well in Ashford. A similar conclusion can be reached if the line B-B' is drawn through the Emerling WN-1500, H. & J. Emerling #2, Blesy #1, and Harvey #1 wells.

In two cases, revised elevations in the 2005 update made a difference of only a meter or two (several feet) in the geologic mapping. In one instance, the resulting revision allowed the contouring to be spaced more equally, and in three cases, the contours were revised to eliminate closed contours, resulting in a more uniform mapped surface and regional dip.

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| 110-27 | 110-20 | The updated Gill 2005 geologic report, as further described in the response to Comment no. 110-18, is but one of the reference documents that were used by DOE to enhance the geologic and seismologic characterization of WNYNSC since 1996, as reflected in this EIS. Nevertheless, the research, review, and mapping performed by Gill (2005) were done in a manner consistent with generally accepted industry standards. The author in question is certified with the American Association of Petroleum Geologists and has over 25 years of experience in the oil and gas industry in New York State. To compare two entirely separate and unrelated studies on the basis of quality standards is not reasonable without also knowing the scope of each project with respect to the original project structure and scope, funding, and resulting time allocated. |
| 110-28 | 110-29 | DOE notes the commentor's error in the original comment. Indeed, another G. Schictel #1 well, American Petroleum Institute (API) #31-009-19765, was drilled near the first Schictel well on March 5, 1985, and reached a total depth of about 984 meters (3,229 feet) in the Queenston Shale. Using coordinates from the NYSDEC database, the well was used in the generation of the maps prepared for Gill 2005, as cited in this EIS. The well penetrated the mapped horizons and supplied valid data points for the mapping effort. |
| 110-30 | 110-21 | The Michalek #1 well (API #12983) was originally permitted at coordinates 457.2 meters (1,500 feet) south of latitude 42.32.30 and 914.4 meters (3,000 feet) west of longitude 78.42.30. These coordinates result in a topographic ground elevation of 467.9 meters (1,535 feet) with an assumed Kelly bushing elevation of 470.9 meters (1,545 feet). The survey plat contains notations referencing verbal approval from NYSDEC to move the location 30.5 meters (100 feet) north. Additional notations refer to the new location as being 61 meters (200 feet) north and 30.5 meters (100 feet) east, resulting in coordinates of 396.2 meters (1,300 feet) south of latitude 42.32.30 and 883.9 meters (2,900 feet) west of longitude 78.42.30. If this is where the well actually is drilled, it should yield a ground elevation of 472.4 meters (1,550 feet) with a Kelly bushing elevation of 475.5 meters (1,560 feet). However, the completion report shows a ground-level elevation of 474 meters (1,555 feet) and a Kelly bushing elevation of 477 meters (1,565 feet). |
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73. In the absence of data, it is impossible to decide conclusively whether a fault exists on the Packer Shell between the H. & J. Emerling wells in Concord and the Blesy #1 well in Ashford. A new well being drilled in Concord (31-029-22603 or Dzara #1) lies more or less between the H. & J. Emerling wells and the Blesy #1 well. Data from this new well should be obtained to help determine whether a fault exists below the salt in this area.

73A. Data from the Dzara #1 well has been available since 1998. It clearly shows a fault *above* the salt (as can be seen on the gamma log, which shows a 114' repeated section, apparently Bass Island thrusting, at the base of the Onondaga). The presence of a fault below the salt cannot be inferred directly from this well; however, a fault is now known to exist below the salt at a nearby location. The deep-seated fault known as the "Cattaraugus Creek feature," located at the north end of the US 219 bridge over Cattaraugus Creek near Springville, was identified in the 2001 seismic study entitled *Seismic Reflection Survey to Identify Subsurface Faults near the West Valley Demonstration Project*.

74. In addition to the Dzara #1 well data, a seismic line should be either run or purchased. Geodata (918) 584-3366 apparently has two or three commercial seismic lines available in the Spooner Creek area. Such a line should resolve the question of whether a fault lies below the salt in this area.

75. To the east-northeast of the site, in the direction of Beech Tree Road, there are essentially no wells for four miles. Despite the absence of data in this large area, Gill draws unfaulted structure contours on his Packer Shell map. Once again, he begs the question of whether faults exist. (Lacking data, he must assume that no faults exist before he can draw unfaulted contours in this area. Once he has drawn the contours, he uses them to "show" that no faults exist. The logic is circular and the conclusion is worthless.)

76. The nearest well to the north of this area is Schweickert-Scharf #1 (31-009-21860). All the formations penetrated by this well, including the Packer Shell, are anomalously high. Gill mentions this in his report and draws a dome-like bedrock high on his Packer Shell map, but he goes no further, leaving many questions unanswered.

77. What is the structural explanation for such a deep, localized dome? It extends down at least to the Medina. Does it extend all the way to basement? This question should be answerable in the near future, given the unusual depth of the Schweickert-Scharf #1 well and the existence of a few other deep wells, including the recent Ardent well(s), to which Schweickert-Scharf #1 can be compared.

78. Evidence for this bedrock high comes mainly or entirely from the Schweickert-Scharf #1 well. Is the bedrock high really a dome rather than an anticline that persists for several miles? Is it really a dome rather than the upthrown side of a fault? What evidence favors any of the three interpretations? These issues should have been discussed in Gill's report.

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The logging operations are performed last, long after the well has been surveyed, relocated, and drilled, and these amended coordinates are still not shown on the log header. This is suspicious, because these coordinates have been applied to the log header on a label, which is not a typical practice of the loggers, but possibly were applied by NYSDEC. This is why these coordinates were utilized in the original mapping, assuming they would be more accurate. NYSDEC modified the location and elevation data on April 11, 2003, to reflect a location of latitude 42.53809, longitude -78.71911 (decimal degrees), with a datum elevation (log measured from [LMF]) of 477 meters (1,565 feet). This data was incorporated into the latest mapping in support of Gill 2005 and results in elevations that agree with the original mapping.

The coordinates and elevation on the amended completion report may be correct, but the more important point here is to understand that elevation and location discrepancies such as this are not uncommon in oil and gas drilling operations, as previously discussed in the response to Comment no. 110-18. As evidenced by the commentator's raising of this issue, these discrepancies can be used to discredit the validity of any geologic mapping, when in fact they have minimal bearing on the outcome of the work. In this case, the Michalek well lies in the extreme northwest corner of the study area and is almost 11 kilometers (7 miles) away from the central portion of WNYNSC. Any differences between the data sets used might change the contouring slightly by eliminating the slightly anomalously high value for the Michalek well and the resulting closed contour, but they would have no effect on the overall geologic picture.

110-23 DOE assumes that the commentator is referring to H. J. Emerling well #1-1462, whose correct API designation is 31-029-12970 rather than 31-029-12920. There are at least four different sets of coordinates for this well: one found in the old NYSDEC database, one handwritten on the log header, one typed on the log header, and another found on the completion report. Each of these sets of coordinates results in different elevations. Based upon the original NYSDEC information, the Kelly bushing elevation that was used in the mapping performed by Gill (2005) is, in fact, 429.8 meters (1,410 feet), as opposed to 426.7 meters (1,400 feet). These are the original data made available by NYSDEC and are presumed correct. Subsequently, on April 11, 2003, NYSDEC modified its database to reflect a location of latitude 42.52984, longitude -78.73573 (decimal degrees), with a datum elevation of 426.7 meters (1,400 feet). Assuming this elevation is measured from the ground, it yields the same log measured from a datum of 429.8 meters (1,410 feet). Using a drilling depth of 850.7 meters (2,791 feet), this gives a

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79. About 6 years ago, Mitchell Oil Co. ran a seismic line along an overland route, more or less from the Schweickert-Scharf #1 well to Riceville. This seismic line should be acquired to determine whether a deep fault exists in the Beech Tree Road area immediately east of the site.

80. If the Attica Splay of the Clarendon-Linden Fault approaches the West Valley site, it must approach from the direction of this "empty quarter" where no well data exists. The Mitchell Oil seismic line is in exactly the right location to detect faults that approach the West Valley site from that direction. For this reason, the Mitchell Oil seismic line is very important and should be acquired.

81. In summary, Gill's report and maps have not helped answer the question of whether faults exist in areas immediately east, northwest, and southwest of the site (nor whether faults pass directly under or adjacent to the site). As explained above, his structure contours are not reliably drawn in these areas. His work is a useful step in characterizing the local structural geology but additional work, including the three seismic lines indicated above, remains to be done. Ground elevations of several crucial wells used by Gill should be verified.

Structural geology in general

82. The Attica Splay has been mapped southwestward only as far as Varysburg or Java. Reliable mapping must be conducted further to the southwest to determine the southwestward extent, precise location, offset, and other structural details of this fault. If the Attica Splay dips out before reaching Ashford, how and where does it do so?

82A. See comment 57A above.

83. The EIS should acknowledge, compile, and address the evidence for the degree of fracturing of bedrock under the West Valley site. Near-surface bedrock in Western New York is often fractured, but rarely to the degree found under the site. The main evidence is the frequency (nearly 100%) with which test holes that penetrate more than 10 feet into bedrock have encountered vertical or high-angle fractures. It is unusual for vertical or high-angle fractures in bedrock to be so closely spaced that virtually every vertical bore encounters them. Borings that encountered vertical and/or high-angle fractures include the NX#1 core well (31-009-06740) that was drilled as part of the the [sic] 1969-1971 ORNL injection-well test program; the Dames & Moore 74-DMB36, 74-DMB37, and 74-DMB42 wells; and the Dames & Moore HLW-1 well.

84. The Dames & Moore report on the HLW-1 well, for example, contains the following description: "Weathered bedrock was encountered in boring HLW-1 at approximately 110.5 feet below ground surface. More competent rock was encountered at 118.5 feet. Rock core obtained from 118.5 through 149.5 feet possessed low RQD values (i.e., 0 to 16%) and was described as very broken to broken showing slight to moderate degrees of weathering." (From page C-5 of Geotechnical Investigation, High Level Waste Transfer System, West Valley Demonstration Project, Dames & Moore, August 24, 1992.)

subsurface value of minus 420.9 meters (1,381 feet). While this is a correction from the original mapping performed by Gill (1995) and the current mapping supporting Gill (2005) has been revised to reflect the correction, like the Michalek well discussed in response to Comment no. 110-22, this is another case where the resulting value does not change the overall geologic interpretation.

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110-24 DOE disagrees with the characterization of the mapping practice employed by Gill (2005), as further described in the response to Comment no. 110-12. It is important to point out that the maps created for the study in question were prepared on a regional geologic basis. In at least two areas, specifically Ashford Hollow and Spooner Creek, New York, the contours were extended across sparse data to tie into control that exists just outside of the study area. The areas certainly could have been contoured with dashed lines to acknowledge a lack of data, but that still would not have supported an interpretation of a fault. When structure contour mapping, it is generally accepted that there should never be an assumption of faulting without some evidence in favor of it. If several data points work in concert to constitute an anomaly such as a closed high, rapid change in strike, abrupt increase in the rate of dip, etc., a fault should be considered. Also, if a fault is identified in a well log, then faulting will have to be incorporated into the geologic interpretation. However, these criteria did not exist for the data evaluated. The most definitive identification of faults, without evidence of repeated or missing geophysical log sections, is done through the acquisition and proper interpretation of adequate seismic data.

110-25 At the time the original mapping was generated, contour spacing around the Miller #1 well did in fact change slightly, increasing in the approach to the vicinity of the Hebron #1 well to the south. At that time, however, this did not constitute a preconceived conclusion, but instead a drawing of the contours to fit the data. In the vicinity of the Miller #1 and the Glazier #1 wells, only four data points were available at the time the original map was created. Given the areal extent, that was not enough information upon which to base a fault. Additional drilling would most certainly provide a clearer understanding of this dip increase, but this interpretation was made using available data. Since publication of the original mapping, additional wells have been drilled and geophysical data have been released from NYSDEC.

Currently, there are more data to the north and northeast of the Miller well, resulting in perfectly spaced computer-generated contours of 0.4 inches on both sides of the

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85. A summary of the evidence for, probable cause of, and future implications of the highly fractured bedrock should be given in the EIS. This is part of the site description and site evaluation needed for an informed decision.

86. The EIS does not refer to the report by Vaughan & McGoldrick entitled "Structural Evidence for Deep Northwest-Trending Fractures under the Western New York Nuclear Service Center," dated September 13, 1993. This report, which is included in our Geology Reports volume, should be noted in the EIS. If DOE or SAIC has done any field work that reinforces or refutes its conclusions, such work should be described as well.

Unresolved geology issues (for which DOE indicated a need for further resolution)

87. See Appendix C submitted with these comments for DOE's January 3, 1995, responses to a number of geology questions we had raised in 1994. Several of the DOE responses refer to studies that were being conducted that might resolve, or help resolve, the concerns we had raised. In many cases the Draft EIS makes no reference to the outcome or the existence of the studies that were being done, nor is there any citation of a post-1994 source that might contain the necessary information. It is unacceptable for DOE to drop these various issues without explanation or comment. DOE acknowledged that these issues were important in 1995.

88. In §§3 and 4 (page C2) of Appendix C, DOE said that the Attica Splay "is still being evaluated as a possible seismogenic source for the site" and that "As part of the preparation of the EIS, a continuing survey of the Attica Splay and Clarendon/Linden fault zone will include a survey of structural studies, models, and maps." We see nothing in the Draft EIS to indicate that this work was done. Information on the Attica Splay and its relation to the site remains inadequate.

89. In §24 (page C8) of Appendix C, DOE indicated that the EPRI earthquake catalog would be compared with updated catalogs. We see no indication in the Draft EIS that this has been done. The Draft EIS continues to rely on the outdated and inferior EPRI catalog.

90. In §§25 and 26 (page C8) of Appendix C, DOE said that modeling of earthquake amplification would be done and that the results would be used to determine effects on structures, soil liquefaction, and mass wasting. The draft EIS (page M-4) indicates that the first half of this work, i.e., the amplification modeling, has been done. There is no indication that the second half of the work has been done. This is a serious omission, especially in relation to landsliding, slumping, and mass wasting.

91. In §§11(b), 32, 33, 35, and 37 (pages C4, C10, C11, and C12) of Appendix C, DOE refers to work being done to better understand and quantify the processes of gully formation and propagation. It is clear from the Draft EIS that this important work has not been done and that gully processes are not integrated into the erosion models used for comparing alternatives. As a result of not integrating gully processes into its erosion models, the Draft EIS underestimates the

Miller datapoint, as reflected in the mapping to support Gill 2005. There is still a general lack of data to the southwest of this well.

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severity of erosion.

91A. DOE has not addressed comment 91 in any meaningful way; the 2008 Draft EIS provides no credible analysis of gully growth. See comments 174-182 below.
 92. In §29 (page C9) of Appendix C, DOE stated that "The capture of Franks Creek by Buttermilk Creek is currently being evaluated as part of the study of stream downcutting and gully head migration rates. The role that the aforementioned lacustrine or overbank deposits might play in the capture of Franks Creek is also being evaluated." There is no indication in the Draft EIS that this work has been done. Stream capture, if and when it occurs, will cause a dramatic increase in erosion of the site. By not evaluating stream capture, the Draft EIS is underestimating the severity of erosion. The lacustrine or overbank deposits may contribute to stream capture and must be evaluated as well.

92A. DOE's failure to respond to my comment 92 illustrates a wider lack-of-response problem that applies to various comments made on the 1996 Draft EIS. See comments 187-188 below with respect to stream capture or stream piracy.

93. In §33 (page C11) of Appendix C, DOE said that the lithology of the stream banks was being evaluated. We see no evidence that this work has been done. DOE also said that the need for additional field work on soil stability was being evaluated. We see no indication of any decision. In general, we see very little resolution of the various soil stability issues that we brought to DOE's attention. In §35 (page C11) of Appendix C, DOE acknowledges the importance of soil stability to long-term site performance. However, DOE seems unable or unwilling to integrate soil stability into realistic assessments of site performance.

94. My above comments cover a relatively small number of DOE's responses in Appendix C. There are additional DOE responses in Appendix C which I disagree with but do not have time to comment on here.

Geomorphology, soil stability, and seismology

95. The Draft EIS provides a realistic model of the growth of the existing ravines of Quarry Creek, Erdman Brook, and Franks Creek. However, such ravine growth is only one of several geomorphic processes that will erode and shape the site over time. The Draft EIS fails to provide a realistic overall model of erosion because it fails to integrate ravine enlargement with A) gully growth, B) geomorphology of the Buttermilk Creek watershed as a whole, C) stream capture, D) exceptionally high stream flow rates, and E) earthquakes. All of these processes act in combination with one another in the real world. By not including and integrating them, the Draft EIS substantially underestimates the severity of erosion.

96. Some of the processes listed in comment 95 are low-probability, high-consequences events. Stream capture, exceptionally high stream flow rates, and earthquakes fall into this category. The

110-30 DOE agrees with the commentor's observation that data are sparse in the vicinity of the area in question, but disagrees that a single seismic line would necessarily provide definitive answers. A seismic line here may or may not provide answers to such important questions. The glacial till prevalent in this vicinity might be a factor, limiting the data acquisition and affecting quality. If data were acquired, they may not provide the resolution necessary to detect a fault here. Permission may not be granted in all areas necessary to shoot such a line. What is the primary horizon of interest, and can the acquisition parameters succeed in obtaining data of sufficient quality over this horizon? What geologic implications for the site will be derived from faulting, even if interpreted in certain horizons? DOE must consider all of these questions.

The commentor's assumption regarding the cost to run the seismic line may be only looking at part of the picture. Undoubtedly, one line here would not be enough data for various reasons such as an anomaly near the end of the line, or the need for an additional line to establish a trend, or bad data making another line necessary. A seismic line shows only a small section of the subsurface for a considerable expense. Before a line would be proposed, DOE must responsibly determine exactly which questions are to be answered and the best possible way to proceed.

110-31 The mapping done for Gill 2005 was performed across a large study area on what is considered to be a semiregional basis, with a contour interval of about 6.1 meters (20 feet). It ties into data to the west, just outside the limits of Gill's study area. It is true that the contours could have been dashed across this area or omitted entirely, but if dashed, they still would not indicate the presence of faulting.

On the Packer Shell and the Tully horizons, faulting in well logs is very rarely seen. The commentor's reference to drawing "unfaulted structure contours on his Packer Shell map" across this area suggests that faulted contours on this horizon would be normal and unfaulted contours the exception. The opposite is true.

The Packer Shell has been widely used as a mapping horizon across many areas of Western New York, with folding seen at this horizon. These folds can propagate associated fracturing, and they are often shown as a "nosing" on the contour maps. While these contoured folds might reflect very high-angle, small displacement, normal faults, direct evidence for this occurrence is rare in well logs. Structure at this level can be a reflection of deeper events, and mapping this horizon can be useful as an exploration tool for fracture porosity in the Medina strata. Evidence for reverse or normal faults at the Tully horizon is also rare outside of the Bass Island Trend.

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EIS must evaluate them by developing a realistic estimate of whether (or how many times) they occur during the 10,000-year performance-assessment period. Will Franks Creek be captured by Buttermilk Creek within 10,000 years? Yes, probably in a much shorter time than 10,000 years. Earthquakes and probable maximum flood conditions should be evaluated in terms of recurrence intervals. The performance-assessment period (presumably 10,000 years) will be dictated by the duration of the radiological hazard. Since the West Valley site contains relatively large quantities of long-lived radionuclides such as Tc-99, I-129, and Pu-239, the radiological hazard will continue for at least 10,000 years.

97. All of the processes listed in comment 95 must be integrated with the growth of the Quarry Creek, Erdman Brook, and Franks Creek ravines in order to develop a realistic picture of the geomorphology of the site. This will not be an easy task, but it is an essential part of predicting long-term site performance. In the context of 10 CFR Part 61, it is part of what 10 CFR 61.50(a)(2) requires: "The disposal site shall be capable of being characterized, modeled, analyzed and monitored."

98. The Draft EIS (page 4-33) states that initiation and growth of gullies "appears to be the quickest mechanism for eroding into the north or south plateau and ultimately disturbing the site facilities." However, the Draft EIS does not use this information in any meaningful way. At the bottom of page L-5, the Draft EIS states that "Methods for predicting the long-term erosion rates of gullies are not available; therefore, gully advance for the 1,000-yr period was not predicted." Thus, as already noted, the Draft EIS bases its erosion models on ravine widening alone; it fails to integrate gully initiation and growth into these models. This omission is unacceptable, especially since the gully processes appear to be the quickest mechanism for eroding into the north and south plateaus and disturbing waste facilities.

99. It is clearly a difficult challenge to develop a defensible quantitative model of erosion that integrates the processes of gully initiation and growth with the processes of stream downcutting and ravine widening. If the West Valley site is too geologically complex for a credible model to be developed, then the EIS should provide a clear statement that the site is not capable of being characterized, modeled, and analyzed.

100. Monte Carlo methods provide one way of developing an erosion model that integrates gully processes with ravine widening. See Appendix D for a computer program that I wrote in February and showed to DOE, NYSERDA, and SAIC staff in April. The program models erosion at the West Valley site in a way that integrates gully processes with ravine widening. Gully initiation occurs randomly in the program at a mean rate that can be controlled by the user of the program. Thus, each time the program is run, the gullies form and develop in a different pattern. This program is rudimentary but could be made more sophisticated and realistic by including other features such as adjustable weighting factors that would vary the probability of gully initiation at different locations along the existing ravine edge. In any case, the program shows the general feasibility of Monte Carlo modeling, i.e., of running the program hundreds or thousands of times and summing the results to obtain a quantitative erosion risk for each point on

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<i>cont'd</i></p> <p>110-53</p> <p>110-54</p> <p>110-55</p> <p>110-56</p> | <p>At present, projecting unfaulted contours on this horizon across areas of sparse data is not unrealistic, considering the general absence of documented faults at this horizon.</p> <p>110-32 As evidenced by the clearly unfaulted log sections and resulting contours directly to the northeast of the Spooner Creek watershed area, as mapped in Gill 2005, the Packer Shell is typically unaffected by the faulting responsible for the Bass Island Trend.</p> <p>The name "Bass Island" is a misnomer for this complex fault system, as the majority of the faults are productive from the Onondaga Limestone. While oil and gas production can occur anywhere in the section from just above the Onondaga to the upper Salina Group, production is most often realized from the Akron, Bois Blanc, and Onondaga. The name "Bass Island" is simply the Canadian terminology for the Akron Dolostone, the geologic formation in which the first highly publicized blowout occurred.</p> <p>The Bass Island faulting exists because of the "pinching out" of the lower-most salt member of the Salina Group (the B-Salt). The numerous salt members present to the southeast of the trend act as a "glide plane," absorbing energy and prohibiting the overlying strata from overthrusting. As the salt thins to the north and west coming out of the basin, individual salt zones pinch out. The B-Salt is the last zone to pinch out across central Chautauqua, northern Cattaraugus, and southern Erie Counties. In these areas, the lack of salt to the northwest provides the resistance necessary for overthrusting. The Bass Island fault system is comprised of numerous imbricate, subparallel, reverse faults with predominately low-angle, southeastern dips. The limits of the Bass Island Trend are very well defined, with the southeastern-most limit located more than 8 kilometers (5 miles) away from the central portion of WNYNSC and WVDP.</p> <p>The decollement occurs within the salt zone; therefore, beds below this horizon, such as the Packer Shell, are relatively unaffected by this structure. As stated in the response to Comment no. 110-31, the Packer Shell is generally unfaulted. Evidence in the well logs for faulting at this horizon is generally lacking across Western New York.</p> <p>110-33 See the response to Comment no. 110-18 regarding the methodology employed by Gill (2005) for performing subsurface mapping and evidence standards for making conclusions about faulted geologic strata.</p> |
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the north and south plateaus. (Regarding the program in Appendix D, note that it needs to run in conjunction with two additional files: a one-line random-number-seed file and a file of xy data points defining the existing ravine edge, with x and y expressed in feet and the coordinate origin centered on the plant building. These files are available upon request.)

101. In order to cover all failure modes, a fully integrated erosion model must combine the type of Monte Carlo modeling suggested above in comment 100 with the type of probabilistic/recurrence interval modeling outlined in comment 96. Other methods that produce the same results may also be available.

102. The Draft EIS does not adequately cover the long-term geomorphic effects of exceptionally high stream flow rates. Page 4-18 indicates that the probable maximum precipitation event would cause the reservoir dams to fail. Such an event would also severely erode existing stream channels, gullies, and ravines. Such erosion should be analyzed in the EIS and integrated into an overall erosion model, not only for the probable maximum flood but also for intermediate-probability, intermediate-intensity precipitation events. For perspective, see page 4-21 for a comparison between the probable maximum flood flow rate and the peak flow rate observed between 1990 and 1991. The PMF flow rate is 40 times greater than the peak stream flow observed in 1990-1991. The PMF erosion effects would be more than 40 times greater than the 1990-1991 erosion, given the sensitivity of erosion to peak flow rates.

103. On page 4-18, the Draft EIS indicates that a design basis earthquake would cause failure of the reservoir dams. On page 4-28 (Table 4-4), the Draft EIS indicates that 3 out of 8 slopes on the north and south plateaus would be unstable in a strong earthquake. On page 4-17, the Draft EIS describes liquefaction potentials ranging from 1% to 30% for certain areas of the north plateau in an earthquake of MMI VII-VIII, and also states that "There is an increased potential for liquefaction with stronger earthquakes." These isolated pieces of information need to be fully quantified and integrated into an overall 10,000-year erosion model for the site.

104. On page 4-17, the Draft EIS states that the areas with the greatest seismic liquefaction potential "do not contain facilities with large inventories of radioactive material." This may be true, but it misses the point that seismic events will accelerate the overall loss of site integrity by causing large-scale landsliding, slumping, and mass wasting. Such seismically-induced geomorphic processes must be integrated into the overall model.

105. One possible indication of soil instability and mass movement near the southeast corner of the West Valley site can be found in a 1950-vintage blueprint atlas of Buffalo, Rochester & Pittsburgh Railroad maps that is in the possession of a member of the Western New York Railway Historical Society. Since the atlas is not easy to photocopy, I have sketched a copy of the relevant map and am submitting it as Figure 4 with these comments. Arrangements to look at the original atlas can be made upon request. Figure 4 and the atlas itself show places throughout the Buttermilk Creek valley where the track location (as of the year 1950) deviated from the location originally surveyed when the line was built ca 1880. Most of the deviations are small (a fraction

110-34 The Dzara #1 well was in fact drilled to the Medina, but was originally planned as a Bass Island prospect. It was logged on June 13, 1996. Data from the Dzara logs and completion report have been incorporated into the most recent geologic mapping performed for Gill 2005.

This well is a Bass Island discovery well, with a reverse fault in the uphole carbonate sequence; however, there is nothing at all unusual about the section below the salt. The entire interval from the Lockport down through the Queenston Shale is entirely normal, with no evidence on the logs of faulting whatsoever. Since the time that this well was drilled, two more wells have been drilled: the Wittmeyer #1 and #2 wells. One of these wells also is a Bass Island discovery, with reverse faulting in the strategic carbonate interval. No evidence of faulting exists below the salt on these well logs.

The structure contour maps on the Tully and Onondaga horizons reflect the disturbance caused by the underlying Bass Island faulting in the carbonate section and overlying shales. However, no faulting is evident on the geophysical well logs at the Packer Shell horizon or throughout the Packer Shell to the B-Salt interval on any wells in this immediate vicinity.

Again, the updated structural mapping results reported in Gill 2005 have been augmented in this EIS by a number of other studies that have been considered and are cited in Chapter 3, Section 3.3.1.2, (URS 2002, URS 2004). Both of these reports incorporate and reference the seismic reflection survey results from the 2001 report cited by the commentator.

110-35 DOE notes the commentator's suggestion. While it is true that Geodata (and others) have commercial seismic data available in the vicinity of Spooner Creek, such data may or may not resolve the question of whether or not faulting is present below the salt in this area.

While faults may be seen on this data, the resolution may not be sufficient to identify such faults with minimal displacement.

110-36 The commentator is correct in asserting that Gill, in preparing the Packer Shell contour map as revised in support of Gill 2005, drew unfaulted structure contours in the area cited by the commentator. Gill assumed that no major faults exist at this horizon because of both the lack of faulting seen elsewhere within the study area at the Packer Shell horizon and the general absence of evidence for faulting in the Packer Shell horizon in well logs. DOE disagrees with the commentator's

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of a foot), but the atlas shows an apparent northward shift of 12 feet over a long, straight section of track between mileposts 36 and 37. The track in question runs generally parallel to Fox Valley Road and is located a short distance south and east of the Fox Valley Road crossing. It is difficult to see how a long, straight section of railroad track can have shifted sideways 12 feet unless the ground underneath has undergone a slow mass movement. The section of track between mileposts 36 and 37 should be resurveyed and compared to the original survey on file at the Cattaraugus County offices in Little Valley to see if any discrepancy exists. Any discrepancy in excess of 12 feet should be considered likely evidence of mass movement. (If a 12-foot discrepancy was noted between about 1880 and 1950, the discrepancy should have increased since 1950 if due to mass movement.) The possibility of a survey error cannot be ruled out here, but the implications of a real discrepancy due to mass movement are sufficient to warrant careful investigation.

105A. See also comment 203 below.

North Plateau groundwater hydrology

106. In evaluating any alternative that leaves the HLW tanks in place, the assumption must be made that groundwater will have free access to the residual contents of the tanks within a few decades. The various barriers to groundwater ingress and egress will eventually fail when erosion reaches them. In a much shorter time, the steel and concrete barriers of the tank, pan, and vault can be expected to fail. The outer barrier consists of backfilled till which cannot be considered a reliable barrier.

107. The Draft RFI for the HLW Storage and Processing Area, WVDP-RFI-024, page 30, states that "the HLW tank excavation is isolated, or nearly isolated, from the 'sand and gravel' stratum by secondarily emplaced compacted clay-silt till backfill." The phrase "nearly isolated" should be noted. The backfilled till cannot be considered a reliable barrier.

108. The Damas & Moore report entitled Geotechnical Investigation, High Level Waste Transfer System, West Valley Demonstration Project, August 24, 1992, page C-4, describes "two soft zones" encountered when boring through the backfilled till. The backfilled till cannot be considered a reliable barrier.

109. The plume of Sr-90-contaminated groundwater migrating under the north plateau should be arrested by removing the high activity groundwater and soil that feed the plume. This is the first necessary step. Contaminated material along the plume, like other facilities and areas of contamination on the site, must be removed as part of the overall site closure plan.

109A. Regardless of whether this comment has been ignored in a response-to-comments sense, it has received no substantive response in the thirteen years since I made it. Thirteen years of agency inaction in dealing with the plume, and in dealing with the high activity groundwater and soil that feed the plume, have allowed radiological contamination

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implication that faulting should be assumed even when such a conclusion is unsupported by the available data.

Dashed or omitted contours could have been used across the area, but when mapping on a regional or semiregional basis such as this, where it is important to get a feel for the larger picture (including regional dip), projecting contours across areas of little data is often done. Examples of this can be seen in various New York State geological publications, where regional mapping is done on very few data points across the state or in large study areas within the state. If the contours were dashed or omitted where data were not available, there would be more area left unicontoured than there would be mapped area. The reason contouring is sometimes drawn across these "open" areas is to provide a picture of what a logical geological interpretation would produce based on knowledge of the area and certain assumptions. Also, geological contouring methods dictate that faulting is one of the last assumptions to be made, and only in conjunction with evidence as discussed in response to Comment no. 110-18. Contours across the area in question do not "show" that faults do or do not exist, but they do reflect a reasonable geological assumption that can then be modified as data become available. This is the approach that was taken. This differs from the "circular logic and worthless conclusions" asserted by the commentor.

110-37 As observed by the commentor, the Schweickert-Scharf #1 well (also Schwerkert-Scharf in the NYSDEC database) appears to be anomalously high on several horizons, as noted in Gill 2005. Because of the lack of drilling around this well, it is a one-well anomaly and was treated as such. Accordingly, in the original mapping, a dome-like anomalous high was drawn around this data point to indicate that this well is, in fact, high. In the latest version of computer-generated mapping, it is not drawn as a closed contour, but rather a one-well "high" causing the contours to swing down-dip. They recover both north and south of this well in the absence of additional datapoints.

There are certainly questions regarding this high, but there are only data in this immediate vicinity for this one well. It lies in an area with very little drilling information for several kilometers. The Cambro-Ordovician section has been reviewed in this vicinity, but not as part of a detailed geologic evaluation. The deep section in the Schweickert-Scharf #1 well appears to be normal in thickness; however, it was not drilled as deep as some of the other wells in the area—for example, the Hebdon #1 well. A more detailed study of the deep horizons would be necessary to determine whether or not this well exhibits a high in the deep section.

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to spread into previously uncontaminated soil and fill, especially in and near the construction and demolition debris landfill. This unnecessary contamination has substantially increased the volume of material that will require disposal as radioactive waste. The problem is not technical (the source of the plume could have been addressed by directional drilling and/or drilling through the floor of the process building) but is a result of inadequate NRC oversight of a site whose license was put into abeyance based on NRC's assurance that its sister agency, DOE, had the necessary expertise to manage the site properly.

Source-term uncertainties

110. There are many unresolved differences among different records and sources regarding the quantities of radioactive materials at the West Valley site, especially those in the SDA and NDA. The EIS should be conservative and should accept the highest of the credible values when discrepancies exist. This approach is needed to support decisionmaking in a way that protects health and safety.

110A. See comment 112A below.

111. One of the greatest source-term discrepancies is the quantity of Pu-239 buried in the NDA. Before the Draft EIS was issued, the most thorough analysis of the plutonium source term in the NDA was by Nicholson & Hurt, Information on the Confinement Capability of the Facility Disposal Area at West Valley, NY, NUREG-1164, September 1985, esp. pages 14-17. Nicholson & Hurt conclude that "a conservative estimate of total long-lived plutonium inventory [i.e., total Pu-239, Pu-240, and Pu-242 in the NDA] would be about 5.5 kg, with an uncertainty of about 2.0-2.5 kg." See their page 17 for further information. The Draft EIS indicates that the NDA contains a much greater inventory of Pu-239. On page C-42 (Table C-9), the Draft EIS indicates that the NDA contains 2600 curies of Pu-239, mostly on filters buried in the NDA. If the figure of 2600 curies is correct, it means that the quantity of Pu-239 buried in the NDA is 42 kilograms, or more than seven times the quantity estimated by Nicholson & Hurt. This is an incredibly large discrepancy for a material as dangerous, as fissionable, and as closely controlled as Pu-239. In April of this year [i.e., April 1996] I talked to several senior DOE and SAIC staff people about this discrepancy, but all of them tended to attribute it to poor record-keeping in the NFS era. None of them considered it an unusual or resolvable problem. I see it as a major barrier to any type of informed decisionmaking. The difference between 5.5 and 42 kilograms of buried Pu-239 is of great importance when deciding whether to exhume the NDA or "stabilize" it in place. It certainly affects the long-term impacts.

111A. DOE's failure to respond to my comment 111 illustrates a wider lack-of-response problem that applies to various comments made on the 1996 Draft EIS. More importantly, however, it illustrates an incredibly lax attitude toward the quantity of onsite plutonium-239 and associated questions of public health, environmental protection, NEPA compliance, and nuclear security. Experts in various fields would consider either a 42-kg

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110-38 See the response to Comment no. 110-37 answering the question of whether the observed bedrock high is an anticline that extends for several kilometers (miles) or the upthrown side of a fault is not possible with the existing geophysical well log information. The evidence doesn't favor any particular interpretation, but in the absence of additional control, the existing data supports the interpretation of a localized high. It is quite possibly much larger than depicted, but without seismic or additional drilling, the current interpretation is valid.

Given the information that is known about the deep horizons across Cattaraugus and Wyoming Counties, a large, deep-seated structural high could very well underlie the Schweickert-Scharf well. There are numerous basement faults across these counties, some of which are quite large, with considerable areal extent. The feature could be an anticline that extends for several kilometers or the upthrown side of a fault, but to draw the contours to reflect one of these scenarios based on data from only one well would be presumptuous. Depicting the feature as a bedrock high on the Packer Shell contour map for Gill 2005 is appropriate and serves to bring it to the attention of the reviewer and prompt further consideration.

110-39 The Mitchell Oil Co. seismic line cited by the commentator was unable to be located as part of the preparation of Gill 2005, if it was run at all. Mitchell Energy in Houston, Texas, is not known to have run such a line in the area cited. Both Mitchell Oil Company and Michell Producing and Drilling Company are located and only operate in the state of Illinois, and neither of these companies is known to have run lines in New York. Neither Geodata nor Evans Geophysical has a record of such a line.

110-40 See the response to Comment no. 110-39 regarding the seismic line referenced by the commentator. In addition, it is correct that any faults to the northeast of the site are more difficult to identify using the limited subsurface well data in that direction. Seismic data in this vicinity will most likely help to delineate any existing deep structures to the east and northeast of the site. Nevertheless, the results of additional studies related to the bedrock geology of the region and to the Attica Splay in particular have been included in Chapter 3, Section 3.3.1.2, of this EIS. This includes the study cited as URS 2002.

110-41 As further described in the response to Comment no. 110-18, Gill 2005 is but one of the reference documents used by DOE to enhance the geologic and seismologic characterization of WNYNSC as reflected in this EIS. Nevertheless, the research, review, and mapping performed by Gill (2005) were done in a manner consistent

Commentor No. 110 (cont'd): Raymond C. Vaughan, Ph.D.

quantity of Pu-239, or an inability to account for 36.5 kg of Pu-239, to be a significant concern. The 2008 Draft EIS sheds no light on this discrepancy but simply substitutes its own new estimate of 579 curies (roughly 9 kg) of Pu-239 in the NDA. This new estimate, presented in Table C-10 on page C-31 of the 2008 Draft EIS, neither acknowledges nor refutes the 2600 curies (42 kg) estimated in the 1996 Draft EIS. It thereby creates a new discrepancy of about 33 kilograms of plutonium-239 in the NDA. Does the NDA contain 42 kg of Pu-239, as indicated by DOE's best estimate in 1996, or does it contain 9 kg, as indicated by DOE's best estimate in 2008? The lack of any explanation or justification for the change, combined with my April 1996 conversation described above, suggests that either value is a "guesstimate" whose error bounds are poorly constrained. Granted, a public document such as a Draft EIS is not the best forum for debating quantities of plutonium at a nuclear waste site, yet a poorly constrained estimate is detrimental to public policy and nuclear security alike. The difference between 9 and 42 kilograms of buried Pu-239 is of great importance in deciding whether to exhume the NDA or "stabilize" it in place.

112. My educated guess is that the 2600-curie figure for Pu-239 is an error. If so, it casts a lot of doubt on the credibility of other numerical data in the Draft EIS. If it is not an error, its implications need to be discussed in the EIS. The most troubling aspect of this 2600-curie value is that no Draft EIS author or internal reviewer noticed that this was an unusual number that needed to be checked and/or discussed.

112A. My educated guess notwithstanding, the quantity of Pu-239 in the NDA needs better resolution. This problem of poorly constrained estimates and lack of candor – or lack of informative discussion – about error bounds is not unique to Pu-239 in the NDA but also applies to other radionuclides and other waste management areas at the West Valley site. Both the NDA and the SDA, for example, have been subject to several separate studies that have attempted to estimate the quantities of buried waste in each disposal area. Results of these studies tend to be "all over the map" (meaning that the results for either disposal area may vary by a factor of four or more), and new studies typically produce new "guesstimates" without any consultation of prior studies as a means of assessing error bounds. My use of the word "guesstimate" is not meant to be unduly pejorative but reflects the large (and largely unexplained) study-to-study variation and the lack of any clear superiority of new study methods over old study methods. For the NDA, see J.L. Ryan, NDA Inventory, PNL, 1992, p. 42; also the NDA Waste Characterization Report, Rev. 1, WVDP-EIS-021, WVNS, ca. 1996, p. 24; also the 1996 Draft EIS, pages C-41 and C-42; also the NDA Waste Characterization Report, URS/Dames & Moore, August 2000, page ii. For the SDA, see Stiles et al., Profiles for characterization of SDA, PNL, October 1994, page 3.5; also the SDA Waste Characterization Report, Rev. 2, WVDP-EIS-022, WVNS, ca. 1996; also the 1996 Draft EIS, page C-55; also the SDA Radiological Characterization Report, URS, September 2002.

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with generally accepted industry standards. In response to the various points made in this comment, it should be noted that the purpose of the Gill 2005 work was not to answer the question of whether or not faults exist in areas around or under the site. It was to determine whether or not evidence for faulting is present in well log information and, if so, to generate subsurface mapping that would interpret the faults appropriately. Given the density of subsurface data in portions of this study area, it is difficult to determine whether or not faults exist in certain areas. DOE cannot support preconceived conclusions about faulting, as an interpretation of faulting should be based on concrete evidence such as repeated or missing log sections or multiple data points working in concert to support a faulted interpretation; not projecting a fault based on a single well anomaly.

In reviewing the subsurface mapping performed for Gill 2005, it is essential to understand the scope of the project and the limitations inherent with sparse well data.

- 110-42** DOE notes the commentor's concerns and observations regarding the degree of bedrock fracturing beneath WNYNSC. Chapter 3, Section 3.3.1.2, of this EIS presents a revised description of the bedrock geology and structure of WNYNSC from that presented in 1996.
- 110-43** DOE and NYSERDA note the commentor's observations.
- 110-44** DOE and NYSERDA have reviewed the report "Structural Evidence for Deep Northwest-Trending Fractures under the Western New York Nuclear Service Center" by Vaughan & McGoldrick. The report was considered in DOE-generated site characterization studies and reports. The more useful information for this EIS has been the more recent geologic characterization information on bedrock and till fractures and seismic characterization, including Jacobi and Fountain 2002; Gill 2005; Ouassaa and Forsyth 2002; Tuttle, Dyer-Williams, and Barstow 2002; USGS 2002; USGS 2008; URS 2002; URS 2004; and Fakundiny and Pomeroy 2002. These references are listed in Chapter 7 of this EIS.
- 110-45** DOE notes the commentor's concerns regarding the Attica Splay and the Clarendon-Linden fault zone. The results of additional studies related to the bedrock geology of the region and to the Attica Splay and Clarendon-Linden fault zone in particular have been included in Chapter 3, Sections 3.3.1.2 and 3.5.2, respectively, of this EIS. These studies include, but are not limited to, the studies cited as URS 2002 and Young and Jacobi (1998).

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Uncertainties and omissions in dose assessments

113. Transportation impacts in the Draft EIS are calculated much more conservatively than radiological impacts from non-transportation activities and actions. This difference in conservatism, even though it is standard DOE procedure, is improper. Radiation doses during transportation are estimated by assuming that a standard amount of radiation "shines" through the side of the vehicle, with little or no regard to the activity of the waste being shipped and little or no regard to ALARA requirements for shielding. The Draft EIS must use equally conservative methods for transportation and non-transportation impacts.

114. The Draft EIS does not provide enough information on radiation doses resulting from the Erosional Collapse Scenario. Under Alternative III, erosional collapse is a virtual certainty during the radiological hazard period of the wastes. Impacts resulting from erosional collapse therefore need to be presented openly and fully for Alternative III.

115. The Primary Impact Area in the Draft EIS is inappropriately configured for the Erosional Collapse Scenario. Erosional collapse will affect residents downstream along Buttermilk Creek, Cattaraugus Creek, Lake Erie, etc. The near-certainty and the severity of impacts resulting from erosional collapse (see, for example, pages D-40 and D-41 of Draft EIS) require full evaluation of this scenario. All affected residents should be considered to be within the Primary Impact Area.

116. The Erosional Collapse Scenario does not appear to be considered in the Environmental Justice Assessment on pages 5-132 to 5-137 of the Draft EIS. This appears to be a deliberate attempt to evade the intent of Executive Order 12898. Residents of the Seneca Nation will receive high doses from erosional collapse; the doses need to be calculated and included in the EIS. A rough estimate of the peak erosional collapse dose to a Seneca Nation resident can be obtained by scaling the doses given on page D-25 for other scenarios ($0.32/1.1 = 0.29$ and $0.64/2.8 = 0.23$) to the peak erosional collapse doses shown on pages D-40 and D-41 for a Buttermilk Creek resident. The result, albeit approximate, indicates that a Seneca Nation resident would receive a peak dose of about 18,000 mrem/year from erosional collapse resulting from failure of the global erosion control strategy, or about 78,000 mrem/year from erosional collapse resulting from failure of the local erosion control strategy. I calculate these numbers in an approximate fashion because the Draft EIS does not provide them. The Final EIS must provide erosional collapse doses for all affected residents who live on and/or drink water from Cattaraugus Creek, Lake Erie, the Niagara River, etc.

116A. Erosional collapse doses provided in the EIS must also be reasonably accurate, i.e., calculated in a defensible manner. Doses calculated in the 2008 Draft EIS do not appear to meet this criterion due to severe miscalibration of the erosion model used there.

117. The Draft EIS gives no doses resulting from erosional collapse for those who drink City of Buffalo water, nor for those who drink Erie County Water Authority water from the Sturgeon

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| <p>110-67</p> | <p>110-46 While earlier seismic hazard studies, such as Dames and Moore (1992) which relied on data and methodology from the Electric Power Research Institute/Seismicity Owners Group, continue to be cited, this EIS also incorporates new (post-1996) data relative to the seismic hazard to the site. Most notably, as described in Chapter 3, Section 3.5.3, of this EIS, URS Corporation performed a comprehensive site-specific probabilistic seismic hazard analysis for the site (URS 2004). As historical seismicity is the best guide to overall seismic hazard for locations in the Eastern United States, additional information has been included in Section 3.5.1 from the U.S. Geological Survey and other sources regarding the location, frequency, and intensity of previous seismic events to affect the West Valley region.</p> |
| <p>110-68</p> | <p>110-47 The comment is not on the Revised Draft EIS, but on older correspondence between the commentor and DOE. This EIS uses the site-calibrated CHILD model for analysis of the consequences of erosion, one component of which is mass wasting. This analysis is consistent with methods generally accepted by the scientific community involved in long-term geomorphological analysis.</p> |
| <p>110-69</p> | <p>There would be no consequences following a seismic event for the Sitewide Removal Alternative. Prompt radiological consequences are not considered to be reasonably foreseeable for the Sitewide Close-In-Place Alternative, given the mound-like nature of the closed-in-place structures. It is estimated that any seismic-induced damage to the closed-in-place structures could be repaired without significant environmental consequences. The analysis of the consequences of seismic events is considered to be consistent with the requirements and spirit of NEPA.</p> |
| <p>110-70</p> | <p>110-48 The approach to erosion analysis and gully modeling has made major advances since the mid 1990s. A site-calibrated landscape evolution model (CHILD) was used for the analysis described in this EIS. The top-scoring site-specific calibrations of CHILD show good agreement between observed and predicted topography, both visually and in terms of quantitative measurement of landscape and drainage networks, including the effect of gully development and advancement. The fastest predicted gully propagation rates are comparable to those observed at the site. Overall, the modeling results support the view that gully erosion represents the greatest threat to areas containing waste. The nature of the erosion analysis is fully consistent with the requirements and spirit of NEPA. Please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.</p> |

Commentor No. 110 (cont'd): Raymond C. Vaughan, Ph.D.

Point pumping station, nor for the various communities that take drinking water from the Niagara River, nor for the various communities that take drinking water from Lake Ontario or the St. Lawrence River. Erosional collapse will put detectable quantities of radionuclides into all these bodies of water; the impacts must be assessed for each affected group. Population doses as well as individual doses must be calculated, and Canadian municipalities must be included.

118. The degree of mixing of Cattaraugus Creek water with Lake Erie water is hard to model (but see, for example, the 1982 West Valley Final EIS for HLW, DOE/EIS-0081, pages 3-15 to 3-17, which indicates that near-surface flow tends to hug the south shore of the lake as it moves eastward). For Erie County Water Authority water pumped at Sturgeon Point, the degree of mixing and dilution will be smaller than at the City of Buffalo intake. Unless City of Buffalo water engineers indicate otherwise, full mixing with the Niagara River flow should not be assumed at the Buffalo intake (but full mixing may be a valid assumption further downriver). In any case, the Draft EIS must fully evaluate doses to Erie County residents (and others in the Great Lakes basin) whose drinking water will be affected by erosional collapse at West Valley.

118A. See also A. Napoleon et al., *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Site*, 2008, esp. pp. 71-73.

119. On page S-12 of the Executive Summary, the Draft EIS claims that that [sic] dose estimates have "conservative biases." We find this claim to be without substance, especially in view of the exposed populations omitted from analysis (e.g., those who drink Erie County Water Authority water), the unrealistic assumptions made about the design life of the Global Erosion Control strategy, and various other unconservative biases.

General

120. We disagree with the DOE position expressed on page 1-21 of the Draft EIS: "... DOE does not consider this immersion test applicable to the RTS drum cell because it is specifically designed to prevent the accumulation of water which could immerse the waste." DOE must adhere to the terms of the Stipulation of Compromise Settlement with regard to the 200 to 300 drums that fail the immersed sample compression strength test. DOE cannot unilaterally decide to reinterpret the terms of the Stipulation. Furthermore, we see no evidence that disposal in the RTS drum cell would prevent immersion of drums.

120A. This comment is no longer relevant; the RTS drum cell waste has been removed.

121. Some of my substantive scoping comments are not addressed in the Draft EIS. These must be addressed in the Final EIS.

122. As stated in my letters to DOE dated November 5, 1995, and April 3, 1996, false population

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- 110-49** The potential for Buttermilk Creek capture of Franks Creek is analyzed using the site-calibrated erosion model. The results of this analysis are presented in Appendix F, Section F.3.1.6.12, of this EIS. Please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.
- 110-50** The comment is not on the Revised Draft EIS, but on older correspondence between the commentator and DOE. This EIS uses the site-calibrated CHILD model for analysis of the consequences of steam bank stability, which is consistent with methods generally accepted by the scientific community involved in long-term geomorphological analysis. The method is also considered to be consistent with the requirements and spirit of NEPA.
- 110-51** It has been demonstrated that landscape evolution models such as CHILD are capable of capturing the effect of multiple individual erosion processes. The calibration effort demonstrates CHILD's ability to reproduce the major features associated with the geomorphology of Buttermilk Creek. While CHILD does not specifically handle the effects of earthquakes, the calibration approach captures the effect of previous earthquakes on site erosion over the calibration timeframe (approximately 17,000 years). The calibrated model is considered to be the appropriate tool for assessing long-term unmitigated erosion, including the effects of more severe storms on local erosion and the potential for stream capture. Please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue.
- 110-52** The basic requirement for this EIS is to develop estimates of the environmental consequences of the alternatives presented in the EIS. This EIS develops such estimates using methods that are generally accepted by the appropriate scientific communities. There are no requirements for the specific type of information listed in the comment, and the development of such specific estimates would require extensive speculation without improving the quality of the assessment of environmental consequences.
- 110-53** As stated in the response to the referenced comment, a well-calibrated landscape evolution model such as CHILD is capable of capturing the effect of multiple individual erosion processes.
- The regulation cited in the comment applies to the selection of a new low-level radioactive waste disposal site. This EIS does not include the selection of a

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figures are being used for the Primary Impact Area in the Draft EIS. We do not think the Primary Impact Area is properly configured (see comment 115 above), but DOE should at least use a reasonably correct population figure for the area it chooses. Both the Erie County and the Cattaraugus County populations within the chosen area are wrong. The error is apparently due to a misunderstanding of political subdivisions in New York State. It must be corrected in the Final EIS.

123. On page 4-52 of the Draft EIS, the phrase "reserved for the Tuscarora Indians" is incorrect if it is intended to refer to the Tonawanda Reservation.

124. On page 4-52, the Draft EIS improperly calls the reservations "federal land."

125. On pages 5-130 and 5-131 (Figures 5-12 and 5-13), the Draft EIS points to the wrong location for the Oil Springs Reservation.

NEW COMMENTS ON 2008 DRAFT EIS (DOE/EIS-0226-D (Revised))**Legal sufficiency of the 2008 Draft EIS**

126. The 2008 Draft EIS does not meet the requirements of applicable law.

127. Applicable law includes the National Environmental Policy Act (NEPA) and associated NEPA regulations which have the force of law, including the Council on Environmental Quality (CEQ) regulations at 40 CFR 1500 et seq. and DOE implementing regulations at 10 CFR 1021.

128. The main problem involves the manner in which DOE has replaced the 1996 Draft EIS with the 2008 Draft EIS. NEPA regulations allow for the possibility that an earlier Draft EIS may need to be supplemented or replaced, and they set forth a process for doing so. The general presumption, however, is that the earlier draft EIS is an official document which cannot just be swept under the rug; it serves as the point of departure for any supplement or replacement.

129. The NEPA regulations set forth processes by which a draft EIS can be either revised or supplemented. DOE, in issuing the 2008 Draft EIS, does not appear to have followed either process. Failure to follow the prescribed process may invalidate the document.

130. The NEPA process for a "revised" draft EIS is governed by 40 CFR 1502.9(a): "If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion." In replacing the 1996 Draft EIS with the 2008 Draft EIS, DOE has not adhered to this process in two respects. First, DOE has never claimed or presented evidence that the 1996 Draft EIS "is so inadequate as to preclude meaningful analysis." As discussed below, it would be difficult for DOE to make such a case. Second, the type of revision allowed by 40 CFR 1502.9(a) is "a revised draft of the appropriate portion" (emphasis added). An agency should not presume to undertake a wholesale revision of a

low-level radioactive waste disposal site. The decommissioning requirements for WNYNSC are guided by the License Termination Rule.

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cont'd | 110-54 This comment, made on the 1996 <i>Cleanup and Closure Draft EIS</i> , does not apply to this EIS. The models used in the erosion analysis for this EIS, described in Appendix F, do predict the initiation and growth of gullies. These predictions are used in the environmental analysis. |
| 110-76 | 110-55 This EIS develops unmitigated erosion predictions using analytical methods that are generally accepted by the scientific community involved in long-term erosion modeling. These models provide estimates of future gully initiation and growth and the results are used in the environmental analysis. |
| 110-77 | 110-56 The code used for this EIS develops predictions of gully formation and growth for the unmitigated erosion scenario. These predictions are described in Appendix F and are used in the environmental analysis. |
| | 110-57 The unmitigated erosion analysis was conducted using methods that are generally acceptable to the scientific community involved with long-term erosion modeling. The analysis in this EIS is based on predictions from an erosion model that was calibrated using Monte Carlo methods. Appendix F has been revised. |
| | 110-58 The erosion analysis considers the effects of more intense storms that would result in higher stream flows and higher erosion rates. Please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue. |
| | 110-59 The calibration method used for the CHILD model implicitly includes the effects of seismic events that occurred during the calibration period. The effect is therefore captured in the erosion projections developed for and used in the <i>Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center (Decommissioning and/or Long-Term Stewardship EIS)</i> . |
| | 110-60 DOE and NYSERDA acknowledge the comment. The long-term data used to calibrate the CHILD model is considered more useful for purposes of developing a scientifically defensible model that can be used to predict unmitigated erosion in the region of the North and South Plateaus. |
| | 110-61 The long-term analysis for the Waste Tank Farm does not take any credit for the steel of the tank or pan for the analysis where institutional controls are assumed |

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draft EIS without good evidence that the entire document had been "so inadequate as to preclude meaningful analysis" – which was certainly not the case with the 1996 Draft EIS.

131. If DOE had intended to show that the 1996 Draft EIS was "so inadequate as to preclude meaningful analysis," it should have said so promptly and clearly. One obvious place to look would be DOE's *Federal Register* notices on the West Valley EIS process between 1996 and 2008, but these do not reveal any DOE claim that the 1996 Draft EIS was "so inadequate as to preclude meaningful analysis." On the contrary, in 66 *Federal Register* 56090 at 56092 (November 6, 2001), DOE indicates that it had "developed or modified a variety of analytical tools" specifically for the 1996 Draft EIS and that it "has continued to refine many of these analytical tools" and "intends to apply these improved analytical tools to the preparation of the Decommissioning and/or Long-Term Stewardship EIS." It would be difficult to interpret these words as a wholesale rejection of the 1996 Draft EIS or its analytical tools, or as a conclusion that either of these was "so inadequate as to preclude meaningful analysis." No such conclusion can be found, either in this *Federal Register* notice or in the later notice published on March 13, 2003. Both notices show DOE's rethinking of the 1996 Draft EIS as an evolutionary process, not as a rejection of its contents as "so inadequate as to preclude meaningful analysis."

132. The NEPA process for a "supplemental" draft EIS is governed generally by 40 CFR 1502.9(c) and specifically by 10 CFR 1021.314. As set forth in 10 CFR 1021.314:

(a) DOE shall prepare a supplemental EIS if there are substantial changes to the proposal or significant new circumstances or information relevant to environmental concerns, as discussed in 40 CFR 1502.9(c)(1).

(b) DOE may supplement a draft EIS or final EIS at any time, to further the purposes of NEPA, in accordance with 40 CFR 1502.9(c)(2).

(c) When it is unclear whether or not an EIS supplement is required, DOE shall prepare a Supplement Analysis.

(1) The Supplement Analysis shall discuss the circumstances that are pertinent to deciding whether to prepare a supplemental EIS, pursuant to 40 CFR 1502.9(c).

(2) The Supplement Analysis shall contain sufficient information for DOE to determine whether:

- (i) An existing EIS should be supplemented;
- (ii) A new EIS should be prepared; or
- (iii) No further NEPA documentation is required.

(3) DOE shall make the determination and the related Supplement Analysis available to the public for information. Copies of the determination and Supplement Analysis shall be provided upon written request. DOE shall make copies available for inspection in the appropriate DOE public reading room(s) or other appropriate location(s) for a reasonable time.

(d) DOE shall prepare, circulate, and file a supplement to a draft or final EIS in the same manner as any other draft and final EISs, except that scoping is optional for a supplement. If DOE decides to take action on a proposal covered by a supplemental EIS, DOE shall

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to fail after 100 years. The analysis assumes degraded properties for the concrete vault and the barrier wall. See Appendix H, Section H.2.2.1, of this EIS for a discussion of the degraded engineered barriers assumptions used in the long-term analysis.

110-62 Information on the condition of the backfill in the region of the Waste Tank Farm was obtained from the Draft Remedial Feasibility Investigation (RFI) and other sources and used in the long-term analysis. This analysis recognizes the degraded hydraulic properties of the backfill.

110-63 Information on the condition of the backfill in the region of the Waste Treatment Facility was used in the long-term analysis. This analysis recognizes the degraded hydraulic properties of the backfill.

110-64 The removal of the plume source area is one of the activities that would be undertaken as part of Phase 1 of the Phased Decisionmaking Alternative, the Preferred Alternative in this EIS, as well as the Sitewide Removal Alternative. Increased isolation of the plume source would occur under the Sitewide Close-In-Place Alternative.

110-65 The uncertainty regarding the NDA and SDA inventory estimates is recognized. Conservatism about inventory is one of the many elements of conservatism used in the environmental consequence analysis.

110-66 The inventory of the NDA was revised in 2000 (URS 2000), and this is considered the best reasonably conservative estimate for the NDA inventory. The uncertainty in this and other inventory estimates is acknowledged in this EIS.

110-67 A description of the conservatism associated with the transportation analysis is presented in Chapter 4, Section 4.3.2, and Appendix J, Section J.11, of this EIS. Conservatism is built into the analysis to account for uncertainties. Assumptions for the transportation analysis are applied to all alternatives so that a meaningful comparison among alternatives can be made.

Assumptions made for a particular type of analysis depend on the input data available and the parameters for that analysis. Where possible, assumptions are consistent among the different types of analyses. For example, both the transportation analysis and the human health and safety analysis for decommissioning activities assume no radiological decay.

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- prepare a ROD in accordance with the provisions of § 1021.315 of this part.
- (c) When applicable, DOE will incorporate an EIS supplement, or the determination and supporting Supplement Analysis made under paragraph (c) of this section, into any related formal administrative record on the action that is the subject of the EIS supplement or determination (40 CFR 1502.9(c)(3)).
133. The 2008 Draft EIS does not meet the requirements of 40 CFR 1502.9(c) and 10 CFR 1021.314 with respect to labeling or identification. If the 2008 Draft EIS is a supplemental draft EIS, it should be identified as such. It should not be labeled a "Revised" draft EIS. As described above, it does not qualify as a revised draft EIS.
134. The 2008 Draft EIS does not appear to meet the requirements of 40 CFR 1502.9(c) and 10 CFR 1021.314 with respect to procedure. The question involves the choice presented in §1021.314(c)(2) about whether an existing EIS should be supplemented or a new EIS should be prepared. Preparation of a new EIS is the more radical option and should presumably require justification beyond the fact that an agency didn't like the old EIS and wants to prepare a new one. In accordance with 10 CFR 1021.314(c), the justification would normally be found in a Supplement Analysis which would contain sufficient information for DOE to determine whether an existing EIS should be supplemented or a new EIS should be prepared – but DOE failed to prepare a Supplement Analysis in this case. Indeed, neither 40 CFR 1502.9(c) nor 10 CFR 1021.314 provides for preparation of a new EIS except within the Supplement Analysis procedures set forth in 10 CFR 1021.314(c). In this case, DOE has not provided either a Supplement Analysis or any other justification for wholesale replacement (as opposed to a supplement) of the 1996 Draft EIS.
135. In the event that DOE considers the 2008 Draft EIS to be properly issued as either a "revised" or "supplemental" Draft EIS, I request that DOE ask the Council on Environmental Quality to review the questions raised here and provide written confirmation that the 2008 Draft EIS is properly issued in accordance with the NEPA requirements for either a "revised" or "supplemental" Draft EIS.
136. In the event that DOE and CEQ agree that the NEPA requirements are sufficiently flexible to allow the 2008 Draft EIS to be properly issued at the present time as either a "revised" or "supplemental" Draft EIS, I ask both entities to confirm that DOE could, at the present time, make a binding commitment to provide formal NEPA procedures (Draft EIS, public comment period, etc.) for future Phase II decisionmaking without making that commitment contingent on a future Supplement Analysis.
137. An additional concern about the legal sufficiency of the 2008 Draft EIS and its preferred alternative of "phased decisionmaking" is the question of whether a *decision to defer major decisionmaking for a few decades* constitutes an action and/or a decision in the context of NEPA and its implementing regulations. This has important implications for the availability and timing of various steps that normally provide public participation within the NEPA process.

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- For the transportation analysis, each type of radioactive waste assumed to be shipped is assigned an external dose rate based on its radiological characteristics, as described in Appendix J, Section J.5.1. All assumed dose rates are smaller than those allowed under existing transportation regulations and are considered appropriately conservative.
- 110-68** Please see the response to Comment no. 110-4 regarding comments on the 1996 *Cleanup and Closure Draft EIS*. This EIS presents information on the geohydrologic analyses (Appendix E of this EIS) and erosion studies (Appendix F) that are used in evaluating the long-term human health impacts in Appendix H. The scenarios in Appendix H include loss of institutional control and unmitigated erosion of the WNYNSC site.
- 110-69** This EIS includes analysis of dose to a postulated Seneca Nation of Indians receptor for the unmitigated erosion scenario. This information is part of the basis for the Environmental Justice analysis presented in this EIS. The doses calculated for the unmitigated erosion scenario are considered to be conservative. Major conservative factors also include the use of higher erosion rates, the assumption that all the released material is soluble, the assumption that no radionuclides are deposited in surface streams, the assumption that there is no water treatment, and the assumption that of any fish consumed by the receptor was raised in the same water used for drinking and irrigation. An expanded discussion of the basis for the belief that the long-term dose analyses are conservative is presented in Appendix H, Section H.2.2.1, of this EIS.
- 110-70** The comment addresses the 1996 *Cleanup and Closure Draft EIS*. Both the Revised Draft EIS and this Final EIS present doses to Lake Erie and Niagara River water users for the unmitigated erosion (erosional collapse) scenario. This Final EIS presents both individual and population doses; long-term dose impacts are summarized in Chapter 4, Table 4-23.
- 110-71** This EIS calculates the water consumption dose to 951,000 users from water treatment plants located downstream of Cattaraugus Creek at Sturgeon Point on Lake Erie and on the Niagara River. The analysis of the Sturgeon Point water users takes no credit for Lake Erie dilution of Cattaraugus Creek. Niagara River flow is used in dilution of the water intakes on the Niagara River. The dose analyses are considered to be conservative, as discussed in Appendix H, Section H.2.2.1, of this EIS.

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138. An additional question about the legal sufficiency of the 2008 Draft EIS and its preferred alternative of “phased decisionmaking” involves the adequacy of notice. The Notice of Intent for the 2008 Draft EIS (68 *Federal Register* 12044, March 13, 2003) lists five alternatives, none of which corresponds to or provides any hint of the “phased decisionmaking” which is now the preferred alternative in the 2008 Draft EIS. According to 40 CFR 1508.22(a) and 10 CFR 1021.311(a), the Notice of Intent must describe “the proposed action” and possible alternatives. The notice requirements do not appear to be met with any reasonable degree of specificity.

Geomorphology and erosion modeling

Documentation issues and overview of geomorphology/erosion issues

139. Human radiological exposures under loss-of-institutional-control conditions are *drastically different* in the 1996 Draft EIS and 2008 Draft EIS. In the absence of a Supplement Analysis prepared in accordance with 10 CFR 1021.314(c), and in the absence of any comparative presentation or discussion within the 2008 Draft EIS, most readers and reviewers of the 2008 Draft EIS have no basis for understanding the changes in procedures and assumptions that have drastically lowered the predicted doses. For example, for exposures from the high-level waste tank farm under the close-in-place alternative, the 1996 Draft EIS shows a future intruder dose of 89,000,000 mrem/yr, while the 2008 Draft EIS shows a future intruder/resident/farmer dose of only 556 mrem/yr. See 1996 Draft EIS, Table D-11, page D-36; 2008 Draft EIS, Table 4-33, page 4-76. As other examples involving exposures to a Buttermilk Creek resident from burial-ground wastes released by erosion under the close-in-place alternative, the 1996 Draft EIS shows a future dose of 47,000 mrem/yr from the NDA and 280,000 mrem/yr from the SDA; the 2008 Draft EIS shows a future dose of only 342 mrem/yr from the NDA and only 87 mrem/yr from the SDA. See 1996 Draft EIS, Table D-14, page D-39; 2008 Draft EIS, Table 4-40, page 4-85.

140. These major differences in predicted dose illustrate why it would have been important for DOE to provide either a Supplement Analysis in accordance with 10 CFR 1021.314(c) or some level of comparative presentation and discussion in the 2008 Draft EIS. Without these, readers cannot readily determine whether the changes were justified, or whether the preparing agency just didn't like the old EIS and wanted to replace it with a new one. Readers can obtain some insight from NYSERDA's strong objections to certain aspects of the 2008 Draft EIS (see 2008 Draft EIS, pp. v-xxiii, including pp. viii-x on soil erosion issues, pp. xiv-xv on long-term performance assessment, and pp. xix-xx on waste tank farm issues).

141. With respect to both the predicted radiation doses and the underlying erosion prediction methods, the 2008 Draft EIS provides no meaningful presentation or discussion of the major differences between the 1996 Draft EIS and the 2008 Draft EIS. Although the issue is mentioned in one paragraph of the 2008 Draft EIS (bottom of page F-10), this paragraph misrepresents or misses the main point at issue, thereby precluding any meaningful comparison of the 1996 and 2008 approaches. The main point at issue is the predicted rate of erosion and its effect on the West Valley site, as depicted in Figure L-2 (page L-12) of the 1996 Draft EIS and Figure F-20b

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| 110-80 | <p>110-72 The comment was submitted for the 1996 <i>Cleanup and Closure Draft EIS</i>. The analyses in this EIS have been extensively revised. Appendix H, Section H.2.2.1, discusses the basis for the selection of the parameters used in the impact analysis. Chapter 4, Section 4.3.5, presents a summary of the impacts of incomplete and unavailable information on the calculation of human health impacts resulting from long-term release and transport, as well as a discussion of the basis for considering that the calculation of impacts is conservative.</p> <p>110-73 Comment noted; as stated, the drum cell waste has been removed from the site.</p> <p>110-74 Chapter 1, Section 1.7.3, of the 2008 Revised Draft EIS presents a summary of the issues raised during the 2003 scoping process and how they were addressed in the development of this EIS.</p> <p>110-75 The population sizes presented in the socioeconomic analysis are taken from the most up-to-date estimates for Cattaraugus and Erie Counties that were available from the Census Bureau at the time of publication. Potentially impacted populations presented in the environmental justice analysis and used as inputs to analyze the human health impacts due to radiological air emissions are calculated using data from the 2000 Decennial Census. The Decennial Census is the only data set produced by the Census Bureau that provides spatial resolution at the Block Group level, which is the smallest geography in which low-income data is disseminated, and is therefore the only data set that can be used to accurately calculate the distribution of the population within 80 kilometers (50 miles).</p> |
| 110-81 | <p>110-76 Comment noted; incorrect references to the status and location of Indian Reservations and Tribal names have been remedied in this EIS.</p> |
| 110-82 | <p>110-77 This comment questions the validity of the 2008 Revised Draft EIS on the grounds that the Council on Environmental Quality's NEPA regulations and DOE's NEPA Implementing Guidelines were not followed, specifically because the 2008 document is titled a Revised Draft rather than a Supplemental Draft, or that a Supplement Analysis was not prepared prior to preparing the 2008 Revised Draft EIS. DOE believes that this EIS satisfies the statute, regulations, and guidelines and fully informs both the public and decisionmakers.</p> <p>The commentator cites regulatory language as support for his opinion that the 2008 Revised Draft EIS has circumvented the NEPA process. DOE disagrees and believes that the 2008 document was properly issued as a revised draft under the circumstances that occurred subsequent to the publication of the document and is</p> |

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(page F-55) of the 2008 Draft EIS. The erosion projection in Figure L-2 of the 1996 Draft EIS is explicitly based on analysis of the return intervals of storms of various magnitudes (see pages L-8 through L-12, including Tables L-1 and L-2), yet the 2008 Draft EIS makes the false or misleading claim that the surveyed-stream-profile method used in the 1996 Draft EIS "does not take into account the wider range of precipitation values that are likely to occur over the long term and thus, it is not considered to be representative of long-term conditions." (Pages F-10 to F-12.) As noted, this statement in the 2008 Draft EIS is false or misleading, and it effectively blocks any meaningful comparison of the 1996 and 2008 approaches.

142. Part of the aforementioned problem is the segmented treatment of the 1996 Draft EIS in the 2008 Draft EIS. The latter document fails or refuses to take seriously the logic of the 1996 Draft EIS; instead, it recites the various parts of the 1996 Draft EIS in isolation from one another. The reference in the 1996 Draft EIS to a downcutting rate of 0.6 meters per 10 years (which is criticized in the 2008 Draft EIS for failing to take into account the wider range of precipitation values likely to occur over the long term) is followed directly in the 1996 Draft EIS by the allegedly missing range-of-precipitation analysis. The 1996 Draft EIS provides this information in context (pages L-3 through L-12) while the 2008 Draft EIS takes it out of context (see separate portions on pages F-10 to F-12 and pages F-26 to F-28), thereby preventing any meaningful comparison of the 1996 and 2008 approaches.

143. The 2008 Draft EIS recognizes the importance of erosion issues at the site and points out, in general terms, how these issues must be addressed – but the EIS then fails to follow its own advice on how to address erosion issues. For example, the following statements from the 2008 Draft EIS show DOE's recognition of the issue and the important questions that need to be addressed and resolved:

The three small stream channels (Erdman Brook, Quarry Creek, and Franks Creek) that drain the Project Premises and the SDA are being eroded by the stream channel downcutting and valley rim-widening processes. The streams appear to be incising rapidly, as suggested by convex-upward longitudinal profiles, steep V-shaped valley-side profiles, and the paucity of floodplains over a major portion of their length. The streams within the plateau areas flow over glacial till material that is highly erodible. As channel downcutting progresses, two specific mechanisms contribute to stream rim-widening. Streambanks are undercut, causing localized slope failures (i.e., slumps and landslides). This process commonly occurs at the outside of the meander loops and produces a widening of the stream valley rim. Even in locations where there is no bank undercutting, downcutting of the stream will produce a steeper creek bank that is subject to slumping. This second mechanism also produces widening of the floodplain.

Gully advance is the third type of erosion process that results from local runoff and reflects soil characteristics... (Page F-4.)

Glacial recession from the Lake Eric basin appears to be the ultimate cause of stream incision within the Cattaraugus valley and its tributaries. For purposes of erosion

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completely within the regulatory framework and intent of NEPA. The commentor also takes exception to the fact the 1996 *Cleanup and Closure Draft EIS* was never issued as a final EIS. The procedural history after the 1996 *Cleanup and Closure Draft EIS* is well documented, including the reasons for revising the 1996 *Cleanup and Closure Draft EIS*. There is no requirement that the 1996 *Cleanup and Closure Draft EIS* be completed, only that an EIS be completed and a Record of Decision be issued before a major Federal action significantly affecting the environment is implemented. The requirements of 40 CFR 1502.9(c) and 10 CFR 1021.314 that an EIS that is "so inadequate as to preclude meaningful analysis" must be reissued as a revised draft do not preclude issuing a revised draft for other reasons. Likewise, a Supplement Analysis is not required prior to preparing a new or supplemental EIS. Rather, Supplement Analyses are used to assist in determining whether or not additional NEPA analysis is required when the need for a new document is in question, i.e., when it is possible that there is sufficient existing NEPA documentation for the action under consideration.

The purpose of an EIS under NEPA and its implementing regulations is to ensure that (1) Federal agencies consider the potential environmental impacts of proposed actions in their decisionmaking processes, (2) the potentially affected public has the opportunity to review and comment on those actions, and (3) the opinions of the public are also considered in preparing the EIS, and thus, by the decisionmakers. DOE has more than met its obligations under NEPA in both the letter and spirit of the law. DOE has been transparent in meeting its NEPA responsibilities for activities at WNYNSC, including ensuring timely notification of proposed NEPA documents and opportunities for public participation. In addition, an 18-member Citizen Task Force sponsored by both DOE and NYSERDA was formed in 1997 and has met regularly since 1998 to discuss issues regarding facility closure and long-term management, including future site use, long-term stewardship, and regulatory issues. Further, DOE holds quarterly public meetings to discuss activities at WNYNSC and progress on decommissioning of the site, including the NEPA process to further those activities.

Regardless of any disagreement over the title of the 2008 Revised Draft EIS, DOE has conducted the same level of analysis and provided the same opportunities for public involvement as would have been done if this EIS had been titled as a supplemental EIS. Chapter 1, Section 1.2, of this EIS describes the history of the its development, explaining how alternatives, analyses, regulations, and this EIS evolved over time and how the alternatives and analyses in the 1996 *Cleanup and Closure Draft EIS* were overtaken by these changing factors.

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evaluation, however, the key boundary condition is the elevation history in the reach of Cattaraugus Creek, for it provides the base level for the Buttermilk Creek catchment. To estimate this base-level history, it was necessary to answer the following questions: When did incision begin here? How fast did Cattaraugus Creek incise here? Has this rate varied through time, and if so, how? (Page F-32.)

...future climate may differ substantially from the present one. Climate has a direct or indirect control on all of the landscape-forming processes at the West Valley Site. Rainfall frequency and magnitude directly impact erosion and sediment transport by running water, and indirectly influence the nature of the vegetation.... Assessment of the potential impact of future climate change on erosion patterns would require the construction and analysis of scenarios with varying climate states. (Page F-59.)

[An important factor in calibrating erosion models based on postglacial landscape development is that]...climate in this portion of North America is known to have varied to some extent over the post-glacial period. (Pages F-59 to F-60.)

Unfortunately, the erosion models used in the 2008 Draft EIS either fail to address the above questions or address them in a substandard manner. Whether the computer models themselves are adequate remains to be determined; however, as discussed below in more detail, many of the assumptions used for calibrating and running the models are flawed. This is a classic case of "garbage in, garbage out" in computer-generated results.

144. Some of the main difficulties in the 2008 Draft EIS's treatment of erosion are: A) The question of whether any model or method is sufficiently reliable to predict future erosion during the next several centuries or millennia, such that a well-informed and protective decision could be made about future site integrity; B) the lack of any substantial or defensible analysis of the formation and headward advance of gullies, despite clear recognition that evolving gullies may breach waste containment; and C) miscalibration of the erosion model used in the 2008 Draft EIS and underlying calibration problems such as questionable logic and naive assumptions.

Miscalibration of the erosion model and underlying model calibration problems

145. The 1996 Draft EIS and 2008 Draft EIS employ substantially different modeling methods to predict future erosion. Despite this major difference, both documents *could* have used similar logic and similar data sets for model calibration – but this was not the case. Erosion modeling in the 1996 Draft EIS was primarily calibrated against recent longitudinal profile surveys of Franks Creek. This calibration had the advantage of direct measurement but the disadvantage of a short time period (10 years). Such a short time period might be a risky basis for extrapolating centuries or millennia into the future. Erosion modeling in the 2008 Draft EIS is based on a much longer time period (several thousand years of postglacial downcutting in the Buttermilk Creek watershed) but, unfortunately, it relies primarily on assumptions rather than data. As described below, many of these assumptions are naive or otherwise questionable. Where data is used in the calibration of the 2008 Draft EIS erosion model, its interpretation and application tend to be

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110-78 Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until final decisions are made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate Phase 2 decisions for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

110-79 DOE and NYSERDA believe that the Phased Decisionmaking Alternative meets the requirements of NEPA and SEQR. DOE and NYSERDA have prepared this single, comprehensive EIS for the decommissioning and long-term stewardship of WNYNSC. This EIS adequately analyzes the totality of environmental impacts, including costs, of a broad spectrum of reasonable alternatives that meet the respective purposes and needs of DOE and NYSERDA (Sitewide Close-In-Place, Phased Decisionmaking, and Sitewide Removal), as well as the No Action Alternative. While the Phased Decisionmaking Alternative would temporarily defer a final decision on the disposition of the Waste Tank Farm, the NDA, and the Construction and Demolition Debris Landfill, DOE believes that the impacts of this deferred decision are adequately analyzed within the current EIS.

See the response to Comment no. 110-3 for DOE's and NYSERDA's response about public participation during Phase 1 implementation.

The Notice of Intent for the 2008 Revised Draft EIS described the proposed action and the alternatives that were under consideration at that time. The alternatives did change after the issuance of the Notice of Intent. Chapter 1, Section 1.2, of this EIS describes the development of the alternatives analyzed in this EIS. A Core Team composed of the co-lead and cooperating agencies was established to address various technical issues with the analyses and the alternatives to be addressed. The 2008 Revised Draft EIS reflects the results of discussions with the Core Team

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highly dependent on the questionable assumptions discussed below.

146. Both the 1996 and 2008 methods of model calibration are logical and potentially useful, at least in theory. Indeed, if carried out properly, the two calibration methods should agree with each other within some margin of error, and the error bounds of each method should be reasonably comprehensible, perhaps even predictable. Additional studies conducted between Phase I and Phase II of phased decisionmaking should include a *defensible demonstration that the two calibration methods yield compatible results*, and these results should then be presented in supplemental NEPA documentation (e.g., Draft EIS) for future Phase II decisionmaking.

147. If it cannot be shown that the two calibration methods yield compatible results, then DOE should conclude that no model or method is sufficiently reliable to predict future erosion during the next several centuries or millennia, and that no well-informed or protective decision could be made about future site integrity based on currently available modeling methods.

148. With respect to the aforementioned disadvantage of the erosion-modeling calibration method of the 1996 Draft EIS (its short 10-year time period), it should be noted that this disadvantage is gradually being reduced as time goes on. The 10-year time period involved a comparison of longitudinal profile surveys of Franks Creek done in 1980 and 1990. An additional longitudinal profile survey done this year would extend the time period to 29 years. If such a survey were done in 2015 to support supplemental NEPA documentation for future Phase II decisionmaking, then this calibration method would have the benefit of a 35-year comparison. A period of 35 years, while still short relative to future centuries and millennia, is better than 10 years for the aforementioned purposes of demonstrating/determining that different calibration methods yield compatible results.

149. DOE and NYSERDA need to guard against loss or destruction of the 1980 and 1990 longitudinal profile survey data for Franks Creek and associated erosion-rate and sediment-loading data. Such data is needed to perform a longer-term, more robust longitudinal profile comparison such as the 35-year comparison outlined above. I am concerned, based on an inspection of that data at a meeting that I and others arranged and attended on July 11, 2005, that DOE and NYSERDA may be at risk of losing that data through neglect. At that meeting, we asked to see the data and also inquired about the monuments to which the 1980 and 1990 surveys are tied. Such monuments must be preserved for future reference, but we were unable to learn anything about monuments for the 1990 survey, nor could we determine whether a field log book was kept for that survey. Data and reference points for the 1980 survey appear to be somewhat better documented; they were published by Boothroyd, Timson, and Dunn in NUREG/CR-2862, *Geomorphic Processes and Evolution of Butternilk Valley and Selected Tributaries, West Valley, New York*, 1982. For the 1990 data, we inspected about 5 pages of elevation readings for "Franks Creek, West Valley, 8-2-90," taken at survey points numbered 1305 through 6096, and we also looked at a box (#8019) of Isco 2310 flow-recorder strip-chart rolls from 1990-1993 that apparently showed flow plotted against suspended sediment. This and any other data and monuments associated with the 1980 and 1990 surveys need to be preserved. While DOE appears to be the primary custodian of the data and may also control some or all of the survey

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<i>cont'd</i> | 110-81 There are multiple reasons for differences in the long-term dose estimates. The major changes are improved inventory estimates, improved hydrologic and erosion models, and changes in the closure designs. |
| 110-88 | 110-82 See the response to Comment no. 110-81. Changes made between the Draft and Final EIS in response to new information or comments, including those related to NYSERDA's View, are summarized in Chapter 1, Section 1.8, of this EIS. |
| 110-89 | 110-83 The purpose of this EIS is to present estimates of environmental consequences of the alternatives based on currently available information and analytical models. The information at the bottom of page F-10 of the 2008 Revised Draft EIS was not intended to refer to the 1996 <i>Cleanup and Closure Draft EIS</i> analysis. The particular section was presenting information on historical site-specific studies. The fact that this information was used in the 1996 <i>Cleanup and Closure Draft EIS</i> erosion analysis is coincidental. |
| 110-90 | The major difference between the 1996 <i>Cleanup and Closure Draft EIS</i> erosion analysis and the erosion analysis presented in this EIS is the erosion model. The 1996 erosion analysis used a constant channel downcutting rate and a constant channel slope. The 1996 analysis did not include the effects of gully formation and growth, but the approach was considered to give a conservative estimate of erosion consequences. The erosion analysis presented in this EIS uses a landscape evolution model that does predict the formation and growth of gullies. |
| 110-91 | The commentator appears to have misread the discussion in the Revised Draft EIS, Appendix F, pages F-10 through F-12. The text says that the profile measurements taken in 1980 and again in 1990 do not reflect a rate that would apply over a longer period of time. The text was not making any statement about the erosion analysis in the 1996 <i>Cleanup and Closure Draft EIS</i> . |
| 110-84 | 110-84 The discussion of erosion analysis in this EIS refers to some of the same data used in the 1996 <i>Cleanup and Closure Draft EIS</i> , but is not referring to the 1996 erosion analysis. |
| 110-85 | 110-85 The model used for the erosion analysis is capable of capturing the combined effects of multiple individual erosion processes. The calibration of the model used the best available long-term data. Overall, the approach to long-term erosion analysis, |

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monuments to which the longitudinal profiles are referenced, NYSERDA needs to share the responsibility for the preservation of this important baseline data. The data is crucial to any assessment of long-term site integrity.

150. As an alternative to the short-term calibration method used in the 1996 Draft EIS (based on longitudinal profile surveys of Franks Creek), the 2008 Draft EIS uses a Water Erosion Prediction Project (WEPP) method to predict sediment yield and associated downcutting rates at the West Valley site. WEPP is generally recognized as a versatile, physically based, distributed-parameter, continuous-simulation erosion model that can be applied to both hillslopes and channels. As presented in the 2008 Draft EIS (pages F-20 through F-26), the WEPP modeling shows a relatively small average elevation change of 408 mm per 1000 years associated with its predicted annual soil loss and sediment yield (6.1 MT/hectare, as shown in Table F-13). However, since soil loss and sediment yield at the West Valley site are concentrated mainly in the stream channels, the elevation change within channels is much greater than the average site-wide elevation change. Consistent with this general truth, the 2008 Draft EIS reported (page F-23) that "WEPP predicts that the average annual sediment yield of the watershed through creek channels is approximately 22,317 metric tons (24,600 tons) per year, equivalent to an average downcutting rate of 98,000 millimeters (320 feet) per 1,000 years." This average downcutting rate of 320 feet per 1000 years is orders of magnitude greater than the rate predicted by the CHILD erosion model on which DOE relies in the 2008 Draft EIS, implying a severe mutual miscalibration between WEPP and CHILD. Despite the generally good reputation of WEPP as a modeling tool, the 2008 Draft EIS rejects the WEPP downcutting rate of 320 feet per 1000 years and favors the minimally erosive results of the CHILD model. The 2008 Draft EIS neither addresses nor resolves this major discrepancy between the model predictions; it simply dismisses short-term models such as WEPP by stating that "they are not generally used for long-term projections."

151. While I recognize the risk of extrapolating short-term model results for purposes of long-term projections, I also recognize the need for long-term models to be properly and defensibly calibrated. A long-term erosion model such as CHILD cannot be considered properly calibrated unless it can be run for relatively short periods (e.g., 10 years or 35 years) and can generate results compatible with either short-term downcutting of the type and magnitude observed in the Franks Creek longitudinal profile surveys or short-term modeling results such as WEPP's prediction of 320 feet average channel downcutting per 1000 years. No credibility can be given to a long-term erosion model that dismisses any link to reality.

Questionable assumptions on which erosion model calibration is based

152. The calibration of DOE's erosion model is based on questionable assumptions in at least three areas: Reliance on optically stimulated luminescence (OSL) for dating sediment samples, failure to address and resolve the base-level history of the Buttermilk Creek watershed (particularly in relation to the incision of the Zoar Valley gorge), and failure to address and resolve issues of climate variability and associated erosional power of runoff and creek flow during both the postglacial period (last several thousand years) and the period covered by erosion modeling (next several thousand years).

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including the calibration of the selected model, is consistent with methods generally accepted by the scientific community involved in long-term erosion analysis. Please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue.

110-86 The erosion model uses an approach that is generally acceptable to the scientific community involved with long-term erosion analysis, as required by NEPA and SEQR.

The analytical method, including the refined analysis presented in this Final EIS, predicts gully advance. The long-term analysis predicts a gully advance rate that is consistent with measurements made at the site.

The site-specific calibration of the CHILD model uses available long-term data while recognizing the uncertainty in the data. Please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue.

110-87 The commentor is correct in observing that the 1996 *Cleanup and Closure Draft EIS* erosion analysis and the erosion analysis in this EIS utilize substantially different methods. The 2008 analysis utilized long-term data (optically stimulated luminescence [OSL] measurements) that were not available for the 1996 analysis.

110-88 The 1996 *Cleanup and Closure Draft EIS* erosion analysis and the current erosion analysis are very different, use fundamentally different mathematical concepts, and take very different approaches to model calibration. The nature of the predictions is so fundamentally different (the 1996 model was incapable of predicting gully formation and growth, while the current landscape evolution models have this capability) that comparisons are not meaningful.

110-89 The two different erosion models are fundamentally different. There is no reason to conclude that the two models do not yield comparable results, so no model is adequate for this analysis.

110-90 A calibration based on topography changes over a few decades (regardless of whether or not it involves changes over 10 years or 30 years) is clearly weaker than a calibration based on topography changes over thousands of years.

110-91 DOE and NYSERDA note the commentor's suggestion.

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153. DOE creates a calibration error of unknown magnitude by using OSL dating instead of radiocarbon dating (radiocarbon dating is also called carbon-14 or C-14 dating), and by conducting OSL dating without adequately controlling for factors that affect the dose rate D_R . Such factors include the moisture content of soil/sediment during the past several thousand years and, more recently, possible gamma-ray contributions associated with the West Valley site, attributable to such sources as airborne contamination, waterborne contamination, and skyshine from onsite sources. Under these circumstances, the assumed dose rate D_R may be in error, and OSL dating cannot be assumed to be reliable. The accuracy and reliability of OSL dating for West-Valley-area samples need to be treated as unknown until verified.

154. The OSL methods used at the West Valley site, as described in Appendix F of the 2008 Draft EIS, do not address and resolve important uncertainties and limitations associated with OSL dating. For general background and guidance on OSL dating, see the U.S. Geological Survey (USGS) website, http://crustal.usgs.gov/laboratories/luminescence_dating/.

155. OSL is a test performed on mineral grains collected from sediment; its purpose is to infer the length of time since the sediments were deposited and/or exposed to direct sunlight. OSL works on the same general principle as the thermoluminescent dosimeters (TLDs) worn by nuclear workers to measure radiation dose. The principle, in either case, is the time-dependent accumulation of radiation damage in minerals. In TLD applications, the radiation dose is generally not constant as a worker moves between low-exposure and higher-exposure tasks; the TLD simply accumulates the dose. However, in OSL applications, it is usually necessary to assume that a mineral grain in sediment is exposed to a dose rate D_R which remains constant over time. This assumption may not be valid here, as discussed below.

156. The dose rate D_R is one of two variables needed in the OSL dating equation to determine the age of a sample collected from sediment:

$$\text{Age (Ka)} = D_L \cdot (\text{Gy}) / D_R \cdot (\text{Gy/Ka})$$

In this equation, age means the length of time since the sediments were deposited and/or exposed to direct sunlight, and D_L is obtained in the lab by stimulating the sample and measuring the resulting luminescence. D_R , or least the gamma component of D_R , is best measured in the field. As recommended by USGS, "It is most desirable to measure the gamma dose-rate on-site. This is so that if there is any doubt about uniformity of radioactivity within the 30-cm sphere of influence of the surrounding sample, the readings will show such variations..." For a typical mineral grain in sediment, the dose rate D_R is assumed to be from a combination of two essentially constant sources: cosmic rays and naturally occurring radiation emitted from rock fragments in the sediment (e.g., fragments of potassium-bearing or uranium-bearing rock). This crucial assumption omits the additional contribution of gamma radiation that may be encountered at or near a nuclear site. Such gamma radiation (emitted by airborne contamination or waterborne contamination, for example, or scattered earthward as skyshine from onsite sources) will be attenuated but not eliminated by intervening sediments and soil moisture. At or near the West Valley site, the magnitude of such gamma radiation has varied greatly and may be hard to

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- 110-92** While Appendix F of this EIS does report previous Water Erosion Prediction Project studies, these are not used for the calibration of the landscape erosion models in the 2008 Revised Daft EIS. The revised Appendix F presents a more sophisticated erosion model calibration and analysis. Available measurements or studies that are helpful in judging the reasonableness of the CHILD predictions are now presented in Appendix F, Section F.3.2.
- 110-93** Appendix F, which presents a refined model calibration and erosion analysis, has been revised in this Final EIS to present a clearer comparison of erosion prediction to short-term measurements and short-term predictions developed by other methods. Please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue.
- 110-94** The OSL data is the best information available for model calibration of a site-specific long-term erosion model. It is important that the calibrated model reproduces Buttermilk Creek erosion history to the extent it is understood, but it is not necessary to address incision of Zoar Valley gorge because that is outside the study area. The variability of climate change is clearly acknowledged as a potential source of uncertainty. Overall, the approach to long-term erosion analysis, including the calibration of the selected model, is consistent with methods generally accepted by the scientific community involved in long-term erosion analysis.
- 110-95** It is recognized that there is uncertainty in the calibration of the CHILD model due to limited information about long-term storm patterns and the history of the Buttermilk Creek topography. This uncertainty is acknowledged in Appendix F, Section 3.1.3. The uncertainty would be greater if the single carbon-14 measurement was used for calibration. All dating methods have advantages and disadvantages. The OSL data are considered to be the best data available to support the calibration effort. Two advantages of the OSL method over radiocarbon are that (1) it directly dates the sediment, rather than possibly reworked material contained within it, and (2) sample material is normally far more abundant. These issues are now briefly discussed in this Final EIS, where it is also noted that a number of studies have shown good agreement between OSL and other dating methods. Overall, the approach to long-term erosion analysis, including the calibration of the selected model, is consistent with methods generally accepted by the scientific community involved in long-term erosion analysis.

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reconstruct, especially since the levels of airborne contamination and waterborne contamination – and presumably skyshine as well – were much higher during the reprocessing campaigns of 1966-1972 than now. As an additional issue, the dose rate D_g is known to be affected by soil/sediment moisture during the intended dating period (e.g., the past several thousand years at the West Valley site). As noted by USGS, soil/sediment moisture “more or less attenuates the D_g and can significantly change the radiation a sample may have absorbed.” The USGS guidance also suggests that, “A reasonable estimate is made of the moisture content through geologic time with the understanding that this estimate carries a large uncertainty.”

157. Part of the uncertainty in estimating soil/sediment moisture at the West Valley site during the past several thousand years involves the likely fluctuations in climate during that period, as discussed below in comments 166-168.

158. DOE creates a calibration error of unknown magnitude by using OSL dating instead of C-14 dating, and by assuming that the OSL dates represent dates of sediment deposition. In fact, due to the well-known problem of bleaching or “resetting the luminescence clock,” OSL dates may have little or no relationship to sediment deposition – and may therefore be useless for calibrating the erosion model based on stream downcutting rates. This problem is described, for example, by S.A. Mahan, “Informal Memo from USGS Luminescence Dating lab, March 15, 2007; Report to Sandi Doty and Greg Tucker on Buttermilk Creek watershed, West Valley, NY (DOE waste disposal site).” As stated in Appendix A of Mahan’s memo:

If the mineral grains were transported at night, in turbid fluvial conditions or in those deposits generally considered to be deposited in massive, sudden discharge events (i.e. debris flows, colluvium, etc.) however, luminescence dating may produce depositional ages that are too old because the luminescence clock was not reset to “zero” just prior to burial....

The accuracy of OSL ages is primarily dependent on the intensity and duration of the sediment grains’ exposure to sunlight during transport, often referred to as “resetting” or “bleaching”. Traditionally, sediments deposited from fluvial systems have been among the most challenging to date using OSL methods because the grains were not fully bleached prior to burial. Bleaching problems arise from the light filtering effects of water, particularly water turbid with high suspended-sediment concentrations, and from transport at night....

Indeed, Mahan’s own memo raises the possibility that the OSL dates for the samples she analyzed from the Buttermilk Creek watershed may have been unrelated to stream downcutting (and may instead represent some earlier event?). In her memo, Mahan noted that the sample dates show a “remarkably limited age range” between about 15,000 and 17,000 years (with one outlier at 21,000 years), and she specifically wondered whether “the sample ages seem[ed] too old in the context of your sampling program...”

159. Given all these complications, it is questionable whether OSL dating has any useful role in

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110-96 Please see the responses to Comment nos. 110-101 and 110-102.

110-97 Please see the response to Comment no. 110-95 above. The potential for partial bleaching is discussed in this Final EIS and accounted for in the calibration procedure.

110-97

110-98 Please see the response to Comment no. 110-95 above. Additional sampling is not planned at this time. The commentor seems to be unaware of a fundamental limitation of the radiocarbon method: only sediment layers that happen to contain appropriate carbon-bearing material can be dated.

110-98

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erosion analyses and modeling at the West Valley site. In the event that OSL dating is pursued, its validity and accuracy need to be demonstrated. C-14 dating (corrected by standard methods) should be the reference method against which any OSL dating is proven. Specifically, a primary set of onsite samples would need to be collected as split samples, one set of which would undergo C-14 dating while the other set underwent OSL dating. The results would show the calibration of OSL dates relative to corrected C-14 dates and would also provide a variance or standard deviation or other measure of correlation.

160. The presence of a nearby nuclear site may potentially affect both OSL dating and C-14 dating; however, there are important differences in the causal mechanisms. For a sample that will undergo C-14 dating, a potential concern is that a sample collected near a nuclear site may be contaminated by carbon isotopes that leaked from the site by air or water pathways. In general, there are independent methods (e.g., testing adjacent soil) to assess whether carbon isotope contamination is an issue in the vicinity of the sample. Furthermore, there may be ways to judge whether such contamination was physically able to penetrate a sample collected for C-14 dating. However, for a sample that will undergo OSL dating, the concern is different. For OSL dating, the concern is that a sample collected near a nuclear site may have been exposed to gamma radiation emitted by radionuclides that were released from the stack or leaked from the site (by either air or water pathways), or exposed to backscattered gamma radiation from onsite sources. Such exposure will affect OSL readings, but there is generally no independent or equally sensitive way to reconstruct the past gamma exposure from leaks, releases, and skyshine at any given sample-collection location. Thus, C-14 dating (corrected by standard methods) remains the accepted procedure against which West-Valley-area OSL dating needs to be correlated.

161. DOE creates a calibration error of unknown magnitude (perhaps a factor of four or five?) by not adequately addressing the base-level history of the Buttermilk Creek watershed. The essential question is *when the Zoar Valley gorge was opened* as a channel through which water could flow westward toward Gowanda from the mouth of Buttermilk Creek. At some point in geologic time, this gorge was cut to a depth of up to 400' through predominantly shale bedrock by flowing water – but when, and how long did it take? The Niagara gorge between Niagara Falls and Lewiston provides a good analogy; it is roughly the same length (about six miles) as the Zoar Valley gorge between Zoar Bridge and Point Peter. Both are steep-sided gorges whose sharply defined upper edges imply either a postglacial origin or some type of protection from glacial plucking and rounding. Both gorges are roughly the same depth and same width (the Niagara gorge, roughly 1000' across, is slightly wider). The volume of rock removed from each of these gorges could be determined more accurately by applying cut-and-fill algorithms from readily available contouring or engineering software to digital elevation models (DEMs) of both gorges – but the main point is that roughly similar volumes of rock were removed from both gorges. Most of the volume, in both cases, was shale. There are some differences between the two gorges in terms of durability of caprock and some of the lower beds, yet the erosive effort needed to carve out these two gorges should be considered roughly equal unless engineering calculations show otherwise. To date, much interest and attention have been given to the incision of the Niagara gorge, but little attention has been given to the formation and timing of the Zoar Valley gorge. This lack of attention to the Zoar Valley gorge needs to be remedied in order to understand the base-level

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The uncertainty associated with the base-level history of the Buttermilk Creek watershed is acknowledged in the 2008 Revised Draft EIS. In this Final EIS, this issue is addressed using a probabilistic approach to model calibration and forward projections with a wide range of possible incision start dates (15,240 to 18,300 years), as well as a wide range of dates for the channel incision to reach an intermediate terrace elevation (7,050 to 17,040 years) to account for lack of understanding of perturbations in the incision history. This EIS also explains that the critical base level for Buttermilk Creek is not Zoar Valley Gorge, but rather, the outlet of Buttermilk Creek itself. The base-level history of this location is constrained by terrace dating.

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history of the Buttermilk Creek watershed.

162. The crucial issue of needing to understand the base-level history of the Buttermilk Creek watershed in relation to the Zoar Valley gorge was outlined in my January 15, 2008, memo entitled *Issues the Core Team Needs to Address* (attached to these comments as Appendix E; available online at www.westvalleyctf.org/2008_Materials/2008-01-Materials/Core_Team_Issues-Vaughan_with_Appendices.pdf). In that memo, see especially the discussion that begins with the sentence, "Even without the added complication of differential uplift, the sequence of postglacial base levels for the drainage areas that we now identify as Cattaraugus, Buttermilk, and Franks Creeks is complex." As discussed there, the basic issue is that today's Buttermilk Creek watershed was submerged under the glacial meltwater of "Lake Cattaraugus" for some period of time (but how long?) after glacial retreat began, and, even while "Lake Cattaraugus" was lowered in episodic stages as various ice-dammed escape routes opened up, its level could not fall below about 1200' elevation as long as it was rock-dammed by the "Zoar Valley" bedrock into which the modern gorge had not yet been cut. Under these conditions, most of today's Buttermilk Creek watershed would be upland areas that drained into "Lake Cattaraugus," but the lake's 1200' elevation would remain the base level for Buttermilk Creek for some period of time (but how long?) until the lake level fell due to drainage through the evolving Zoar Valley gorge.

163. The convex-upward longitudinal profile of Franks Creek, and the inability of DOE's erosion model to match this profile (see 2008 Draft EIS, Figure F-16 on page F-50 of Appendix F), may potentially be related to a prolonged Zoar Valley incision process. In the event that the 1200' elevation of "Lake Cattaraugus" remained the base level for Buttermilk Creek for a substantial portion of the postglacial period, then fell relatively slowly and recently due to drainage through the evolving Zoar Valley gorge, this would tend to produce a convex-upward profile of the type observed in Franks Creek. In such an event, the convex-upward "bulge" could be viewed both as a remnant of an earlier concave-upward profile achieved in response to a 1200' base level and as a "knickpoint" which is slowly migrating upstream in response to the now-lowered base level. Such a hypothesis may not be workable with respect to the erosive power needed for downcutting, and in any case cannot simply be assumed, but it points to the need for a definitive answer to the base-level history question.

164. As outlined above and in my memo dated January 15, 2008, the questions of when the Zoar Valley gorge was incised, and how long it took, are crucial to the sequence of assumed base levels and resulting stream gradients, erosive power, and downcutting history of Buttermilk Creek and its tributaries. Despite its importance, this issue has not been given any meaningful consideration in the 2008 Draft EIS. The 2008 Draft EIS assumes, without any serious attention to proof or geologic plausibility, that the incision of Zoar Valley was a postglacial process (see Appendix F, page F-5: "It is hypothesized that incision of the Zoar Valley and the valley fills upstream of it was triggered by baselevel lowering as the ice margin retreated north from the Gowanda area."). The portion of Appendix F entitled "Boundary Conditions: Base-Level History" (pages F-32 through F-34) discusses the issue almost entirely in terms of OSL dating and identifies an additional unconfirmed assumption beyond those described in these comments. The most relevant part of DOE's "Boundary Conditions: Base-Level History" discussion in Appendix F is its last

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110-100 The OSL dates on fluvial terraces provide the best available evidence for the incision and base-level history of Buttermilk Creek and its tributaries. These data indicate that incision began in the post-glacial period.

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paragraph on page F-34: "Uncertainty in the derived base level history reflects uncertainty in the dating. Reducing this uncertainty would require additional identification and dating of strath terraces in the vicinity of the Buttermilk-Cattaraugus confluence. This would produce a larger sample size, yield a greater likelihood of identifying well-bleached (and therefore more reliable) samples, and (if additional terrace levels could be identified) increase the time resolution in the base-level reconstruction." Except for its reliance on OSL dating (as indicated by the reference to "well-bleached" samples), this paragraph describes an obvious direction for further study. Identification and C-14 dating of terraces are needed not only in the vicinity of the Buttermilk-Cattaraugus confluence but downstream along Cattaraugus Creek as far as Point Peter. The scientific/technical effort needed for such additional study is justified by the magnitude of the decision at hand (whether nuclear wastes can be left safely at the erosion-prone West Valley site or whether they must be removed). An ill-informed decision will put Western New York and the Great Lakes at risk of substantial radioactive contamination.

165. Part of the difficulty in explaining the incision of the Zoar Valley gorge through shale bedrock is the relatively small flow of water available to cut the gorge. The current flow rate through the Zoar Valley gorge is the flow rate of Cattaraugus Creek, which is about 200 times smaller than the flow of the Niagara River through the Niagara gorge. This difference is easily explained – it reflects the fact that the upper Cattaraugus Creek drainage basin above Zoar Valley is much smaller than the upper Great Lakes drainage basin above the Niagara gorge – but it helps illustrate the difficulty of incising the Zoar Valley gorge during the same postglacial time period in which the Niagara gorge was incised. More important than the modern flow rate is the much larger flow rate of glacial meltwater thousands of years ago, but here again it appears difficult for flow through the evolving Zoar Valley gorge to match the flow through the evolving Niagara channel. Based on current understanding, the differences in the meltwater-drainage areas for the two different gorges imply a much larger flow through the Niagara. Yet despite the difficulty of carving the Zoar Valley gorge, the end result is evident. We know that at some point in geologic time, the gorge was cut to a depth of up to 400' through predominantly shale bedrock by flowing water – but when, and how long did it take? These questions must be answered by further study. The possibility that the gorge was incised prior to the most recent glaciation cannot be ruled out but cannot simply be assumed; it would need to be demonstrated by compelling evidence, including clear indications of how the sharply defined upper gorge walls survived plucking and rounding by the most recent glaciation.

166. DOE creates a calibration error of unknown magnitude by assuming essentially uniform paleoclimate conditions (see Appendix F of 2008 Draft EIS, bottom of page F-59), resulting in an assumption of essentially uniform erosional power of runoff and creek flow from century to century, during the past several thousand postglacial years. In the immediate postglacial period and/or the transitional period from the last glacial retreat into postglacial conditions, enormous flows of glacial meltwater may have been needed, as discussed above, to incise the Zoar Valley gorge through shale bedrock and/or to clear older glacial deposits from a preexisting gorge. The new point at issue is what happened next, from the end of major meltwater flow until now. During the past several thousand years, were rates of water flow in the Buttermilk and Cattaraugus watersheds essentially uniform from one century to the next – or, alternatively, were

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110-101 The uncertainty associated with assuming uniform paleoclimate conditions was acknowledged in the Revised Draft EIS and is discussed in Appendix F, Section F.3.1.3, of this Final EIS. To address this concern, a "wet" scenario was specifically designed to represent conditions in which the future climate could become wetter by increasing the mean precipitation intensity to twice the modern value (2.9 millimeter per hour) while reducing the soil infiltration capacity to the minimum value in the calibration parameter range (0.436 millimeter per hour) to simulate increased runoff. This "wet" scenario is used to address uncertainties in both past climate (in particular, the possibility that the past climate was less erosive than the present) and future climate. The results of this scenario are presented in Appendix F.

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there substantial long-term climate variations that caused major variations in water flow and erosion? DOE's method of calibrating the West Valley erosion model assumes essentially uniform flows, but much evidence shows otherwise. As discussed below in more detail, the evidence implies that the valleys and ravines seen today in the Buttermilk Creek watershed were eroded in a substantially shorter time than DOE assumes (in other words, the model is miscalibrated). The evidence implies that water flows were too low, and the erosive power of the flowing water was too small, to accomplish any substantial erosion during much of the past several thousand years. Thus, as noted, the erosion needed to produce today's valleys and ravines must have been compressed into a much shorter time span than DOE assumes.

167. DOE creates a calibration error of unknown magnitude by assuming that paleoclimate conditions were the same as today's climate. (See Appendix F of 2008 Draft EIS, pages F-59 to F-60.) This assumption is contradicted by many available sources, including those identified in my January 15, 2008, memo entitled *Issues the Core Team Needs to Address* (attached to these comments as Appendix E). The two sources cited in my memo were A.J. Noren et al., "Millennial-scale Storminess Variability in the Northeastern United States during the Holocene Epoch," *Nature* **419**, 821-824 (2002) and T.L. Holcombe et al., "Revised Lake Erie Postglacial Lake Level History Based on New Detailed Bathymetry," *Journal of Great Lakes Research* **29**, 681-704 (2003). Based on sediments deposited in lakes in Vermont and eastern New York, Noren et al. identified four periods of intense storminess that occurred about 11,900, 9,100, 5,800, and 2,600 years ago. Interspersed between the second and third of these storm periods was the middle Holocene climatic optimum (9,000 to 6,000 years ago), during which "warmer temperatures and greater aridity" characterized the climate of the Lake Erie region, according to Holcombe et al.

168. In addition to the sources cited in my January 2008 memo, there are *many other* relevant sources that need to be consulted by the authors of the 2008 Draft EIS with respect to regional and local paleoclimate and its effect on erosion model calibration. Three examples are T. Curtin et al., "Holocene and 'Anthropocene' Climate and Environmental Change in the Finger Lakes, NY," 19th Annual Keck Symposium, 2006 (<http://keck.wooster.edu/publications>); C.F.M. Lewis et al., "Water Levels in the Great Lakes: A Cross-border Problem" (http://sst.mrcan.gc.ca/ercc-rrec/theme1/9_e.php); and H.T. Mullins, "Holocene lake level and climate change inferred from marl stratigraphy of the Cayuga Lake basin," *Journal of Sedimentary Research* **68**, 569-578 (1998). According to Mullins' abstract:

A series of 12 radiocarbon-dated sediment cores (up to 15 m long) were used to define the Holocene stratigraphy beneath the Cayuga Lake basin in central New York State in order to evaluate the stability of Holocene climate in the northeastern United States. These cores contain an abundance of thick lacustrine marls (> 30% CaCO₃) that were used to reconstruct century-to-millennium-scale changes in lake levels and, thus, paleoclimates. The oldest sediments recovered (> 11.2 ka) consist of pink, proglacial clays that were deposited in Glacial Lake Iroquois between approximately 12.5 and 11.3 ka. Lacustrine sediment (non-marl) of Killarney-Younger Dryas age (11.2-10.3 ka) was recovered both north and south of modern Cayuga Lake, indicating relatively high lake levels during this

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110-102 Please see the response to Comment no. 110-101 above. In brief, the lack of an established, reliable method for deriving quantitative hydrologic parameters from paleoclimate proxy information means that estimating such parameters from paleoclimate proxies would not reduce analytical uncertainty, while it would have the disadvantage of increasing analytical complexity. The "wet" scenario described in the above response was analyzed to address this concern.

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well-known cold-climate phase. Following a brief (< 500 years) warm period immediately following the Younger Dryas, a relatively cool and dry climate persisted in the Finger Lakes region between < 9.8 and 8.5 ka correlative with global meltwater pulse 1B. The Holocene Hypsithermal period (approximately 9.4 ka) in the Cayuga Lake basin was characterized by widespread deposition of marl that locally contains as much as 90% CaCO₃. These marls document a broad, first-order warming-cooling trend throughout the Hypsithermal, with the climatic optimum at approximately 7 ka. This long-term trend is consistent with insolation data as well as ice-core records from Greenland, and likely was a response to Milankovitch orbital forcing. Lake levels throughout the Finger Lakes region were relatively high during the Holocene Hypsithermal, implying an overall warm and wet climate in contrast to the traditional view of mid-Holocene drought. However, Hypsithermal climate and lake levels in the Finger Lakes region were not stable; rather they were characterized by significant century-to-millennium-scale variability, implying short-term climate changes. Marl deposition in the Cayuga Lake basin ceased at approximately 3.4 ka when lake levels dropped as global cooling set in at the end of the Hypsithermal. However, there was a brief return to a warm and wet climate at approximately 1 ka, during the Medieval Warm Period prior to the onset of anthropogenic effects.

In calibrating their erosion models "through a forward modeling exercise, which starts with a postglacial (pre-incision) valley topography and attempts to reconstruct the modern topography" (as stated on page F-31), the authors of the 2008 Draft EIS cannot treat the climate of the past several thousand years as a blank slate. Much is already known, as indicated by the above work by Noren et al., Holcombe et al., Curtin et al., Lewis et al., Mullins, and many others. The authors of the 2008 Draft EIS are not unaware of the problem (they acknowledge on pages F-59 to F-60 that "climate in this portion of North America is known to have varied to some extent over the post-glacial period"), yet they give it no further consideration aside from a comment about "some uncertainty in model forecasts." This is not an acceptable response. The authors of the 2008 Draft EIS need to engage in the necessary scholarship to find, interpret, and properly incorporate the paleoclimate work which is currently missing from their calibration efforts. Their "forward modeling exercise" is not an idle schoolboy exercise that tolerates guesses and omissions; it is part of a complex decision which, if done badly, will put Western New York and the Great Lakes at risk of substantial radioactive contamination.

169. DOE also creates a calibration error or model-input error of unknown magnitude by assuming essentially uniform *future* climate conditions that match today's climate (see Appendix F of 2008 Draft EIS, page F-59), resulting in an assumption of essentially uniform erosional power of runoff and creek flow from century to century. In view of the known phenomenon of climate change and the associated increase in extreme weather events (including greater frequency and/or intensity of storms), this assumption of essentially uniform future climate conditions is a serious error that underestimates erosion.

170. It is widely recognized that the rainfall-erosion relationship is nonlinear, such that a single intense rainstorm produces more erosion than the equivalent amount of precipitation received as

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rainfall over a more extended period. (For example, see T.J. Toy et al., *Soil erosion*, 3rd edition, Wiley, 2002.) Given this relationship, and given the predicted increase in extreme weather events as a consequence of climate change, erosional effects will become progressively more severe at the West Valley site. Current erosional modeling in the 2008 Draft EIS does not take these effects into account and thus underestimates future erosion at the site. This problem must be remedied.

171. Information on the predicted increase in extreme weather events as a consequence of climate change can be found in a recent U.S. federal government report. This report, entitled *Weather and Climate Extremes in a Changing Climate*, edited by T.R. Karl et al., U.S. Climate Change Science Program, Synthesis and Assessment Product 3.3, June 2008, is available online at www.climatescience.gov/Library/sap/sap3-3/final-report/sap3-3-final-all.pdf. In part, the report reviews the expected increase in heavy precipitation events associated with climate change (as might be expected, since warmer air masses can carry more water vapor). See esp. Fig. 3.5 (page 100) and its caption, which indicates that "Daily total precipitation events that occur on average every 20 years in the present climate would, for example, occur once every 4-6 years [in the last decade of this century] for Northeast North America. These results are based on a multimodel ensemble of global climate models." As indicated on p. 102, "precipitation intensity (i.e., precipitation amount per event) is projected to increase over most regions...and the increase of precipitation extremes is greater than changes in mean precipitation..." See also Fig. 3.6 (p. 102), which shows projected changes in the intensity of precipitation, and its caption, which notes that "the lightest precipitation is projected to decrease, while the heaviest will increase..." For more detailed discussion, see p. 102 ff. of the report. This trend toward more frequent heavy precipitation events has clear implications for erosion of the West Valley site and cannot be omitted from DOE's erosional analyses.

172. It is not clear from the 2008 Draft EIS whether its assumptions about *current* climate, especially its assumed intensity-frequency relationship and assumed probable maximum precipitation (PMP) for storms, are reasonable. Given the 2008 EIS's reliance on current climate as the basis for both future climate and paleoclimate, the assumed current climate is a distinct and important issue. As the basis for precipitation used in the West Valley erosion model, the 2008 Draft EIS relies on an MIT M.S. thesis by Hawk (1992). See Appendix F of 2008 Draft EIS, pages F-42 and F-43. This thesis, entitled "Climatology of station storm rainfall in the continental United States: Parameters of the Bartlett-Lewis and Poisson rectangular pulses models," was published in 1992 by Hawk and Eagleton under the same title as an MIT/NASA report (available at http://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/19930015334_1993115334.pdf). Hawk's general method is recognized in the scientific community as a stochastic technique for generating artificial rainfall records for such purposes as evaluating probable maximum precipitation (PMP) events and design floods. The question here is whether DOE's CHILD erosion model (and the Buffalo, NY, data fed to it from Hawk's thesis) produce a rainfall intensity-frequency relationship and a PMP that are reasonable for the present climate of the West Valley site.

173. The rainfall intensity-frequency relationship and the PMP used in DOE's erosion model need to be reasonably consistent with Figure 1 of *Estimating Bounds on Extreme Precipitation Events*:

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110-103 The revised analysis in this Final EIS derives precipitation statistics from 5-minute precipitation data at the site, rather than using the Hawk (1992) Buffalo, New York, parameters.

110-104 The statistical precipitation model applied to the erosion analysis uses a probabilistic approach that is fundamentally distinct from the probable maximum precipitation (PMP) concept. The probabilistic model of precipitation allows for very high precipitation rates, but with the probability that such rates would decline exponentially as the rate increases. Unlike the PMP, this approach to precipitation modeling does not impose an arbitrary upper limit on precipitation intensity or depth.

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A Brief Assessment (Washington, DC: National Academy Press, 1994) and with the 2-, 5-, 10-, 20-, and 100-year and PMP storms that are assumed in the 1999 Draft EIS and mentioned (but not actually used) in the 2008 Draft EIS. The values used in the 1999 Draft EIS and listed in the 2008 Draft EIS, page F-19, including a PMP of 24.9", are taken from the U.S. Department of Agriculture (USDA). Figure 1 of *Estimating Bounds on Extreme Precipitation Events: A Brief Assessment* is said to involve a "very conservative version" of the PMP. As stated on page 11 of the National Academy Press book:

A very conservative version of PMP could be created through the use of Figure 1. For every point on the Earth's surface, we could assume that in any given amount of time the greatest precipitation would be bounded by the greatest precipitation accumulation observed anywhere in the world for that duration. However, designing all structures to survive such conditions would be prohibitively expensive.

At the West Valley site, the assumptions fed to an erosion model should not be censored or biased by concerns about a "prohibitively expensive" result. Any debate about cost should arise at a later stage, not at the point of data input to a model. Any assumptions fed to an erosion model should be those that are reasonable and reasonably conservative. As it happens, neither the 24.9" PMP from USDA nor Figure 1 of *Estimating Bounds on Extreme Precipitation Events: A Brief Assessment* is excessively conservative for the West Valley site. Both depend substantially on a PMP rainfall of 34.5" (thirty-four and one-half inches) that fell during a 24-hour period at Smethport, PA, on July 17, 1942. Smethport is relatively close to the West Valley site (about 40 miles), and both are in generally similar topographic settings on the Allegheny Plateau. A storm of the intensity of the Smethport event would unquestionably cause severe erosion. "Hillsides in the Smethport area were reported stripped of vegetation to the bedrock," according to C.C. Burt and M. Stroud, *Extreme Weather: A Guide & Record Book*, W.W. Norton, 2007, page 119 (and see also p. 117). Nor is Smethport the only example of heavy rainfall in nearby areas. Portions of Erie, PA, suffered a 20" one-day deluge in July 1947, according to the Pennsylvania State Climatologist website (http://pasc.met.psu.edu/PA_Climatologist/10d/paxc.html). In summary, any rainfall intensity-frequency relationship generated by DOE's erosion model must be reasonable for the West Valley site and must generate a relatively high PMP storm under current climate conditions, and this relationship must be progressively modified to reflect the predicted increase in extreme weather events due to climate change.

Evolution and advancement of gullies

174. The 2008 Draft EIS provides no defensible analysis of gully growth, even though gully growth is one of the most likely and imminent threats to waste containment at the West Valley site.

175. On page L-5, the 1996 Draft EIS stated that, "based on the gully head advancement rates that were estimated for the SDA, NP3, and 006 gullies, the existing gullies in the Project Premises are considered a threat to the integrity of the existing facilities over the next 1,000-yr period..." Although the 2008 Draft EIS omits the phrase about "a threat to the integrity of the existing

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110-105 The process of gully growth is simulated by the SIBERIA and CHILD landscape evolution models. To increase the likelihood that small gully features would be resolved, the grid spacing in the vicinity of the North and South Plateaus was reduced to 2.8 meters for all CHILD forward simulations reported in the Final EIS. The results in both the Draft and Final *Decommissioning and/or Long-Term Stewardship EIS* show the propagation of gullies into the plateaus. Please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue.

110-106 As stated in the above response, the process of gully growth is simulated by the SIBERIA and CHILD landscape evolution models. To increase the likelihood that small gully features would be resolved, the grid spacing in the vicinity of the North and South Plateaus was reduced to 2.8 meters for all CHILD forward simulations reported in the Final EIS. The results show the propagations of gullies into the plateaus. These features and their behavior over time are thoroughly discussed in Appendix F of this Final EIS.

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facilities over the next 1,000-yr period," it recognizes the general severity of the gully advance problem and provides the same underlying information as the earlier Draft EIS:

More than 20 major and moderate-sized gullies have been identified... Some of these gullies have formed from natural gully advancement processes and others are the result of site activities.... Several of the gullies are active and migrating into the edge of the North and South Plateaus. (Page 3-36)

Major erosion processes affecting WNYNSC include...gully advance... (Page F-3)

Gully advance is the third type of erosion process that results from local runoff and reflects soil characteristics. Gullies are most likely to form in areas along streambanks where slumps and deep fractures are present, seeps are flowing, and the toe of the slope intersects the outside of the meander loop. Gully growth is not a steady-state process; it occurs in response to episodic events, such as during thaws and after thunderstorms in areas where a concentrated stream of water flows over the side of a plateau, as well as in areas where groundwater pore pressure is high enough for seepage to promote grain-by-grain entrainment and removal of soil particles from the base of the gully scarp (a process sometimes known as "sapping"). Sapping causes small tunnels (or "pipes") to form in the soil at the gully base, which contributes to gully growth by undermining and weakening the scarp until it collapses. Surface water runoff into the gully also contributes to gully growth by removing fallen debris at the scarp base, undercutting side walls, and scouring the base of a head scarp. Although human-induced changes to the surface water drainage pattern can control the growth of some gullies, other natural processes that induce gully formation, such as the development of animal trails or tree falls, cannot be readily controlled. (Page F-4)

176. On pages F-14 and F-15 (esp. Table F-6), the 2008 Draft EIS lists *the same gully head advancement rates cited in the 1996 Draft EIS* (page L-5) for the SDA, NP3, and 006 gullies but offers no explanation why these rates would not constitute "a threat to the integrity of the existing facilities over the next 1,000-yr period..." as identified in the 1996 Draft EIS. The 2008 Draft EIS notes that remedial work has slowed the advance of the SDA gully, but it neither lists the slowed rate of advance nor discusses whether the slowed rate would revert to the original rate of 0.4 meters/year in the absence of long-term remedial measures.

177. Appendix H of the 2008 Draft EIS improperly dismisses gully head advancement as a serious threat to site integrity. The approach taken in Appendix H is flawed because it is based on two unreliable procedures or assumptions. First, the 2008 Draft EIS constructs and conducts modeling that "considers only erosion of the Low-Level Waste Treatment Facility on the North Plateau and of the SDA and NDA on the South Plateau" (page H-65), thereby eliminating from consideration any possible threat to the Main Plant Process Building, Vitrification Facility, and Waste Tank Farm. These important facilities were eliminated from consideration based on the landscape evolution model used for the 2008 Draft EIS, which predicted very little erosion in those areas. However, as discussed elsewhere in these comments, the landscape evolution model

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110-107 The Final EIS modeling results show the propagations of gullies into the plateaus. In some cases, the SDA gully advances significantly over the 10,000-year period. Also, in some simulations, the fastest-growing gullies are propagating at a rate that is similar to the measured rates presented in Appendix F, Table F-7, of the 2008 Revised Draft EIS. Although none of the modeled scenarios result in a gully propagating directly into the plant facilities or burial areas, this Final EIS recognizes exhumation of waste by gullies as a threat; therefore, the dose calculations assume that a large gully directly breaches one or more of the containment areas.

110-108 The 2008 Revised Draft EIS, as well as the refined Final EIS erosion analyses do not predict gully advancement from Quarry Creek or Franks Creek into the areas of the Main Plant Process Building, Vitrification Facility, or Waste Tank Farm within the 10,000-year period of analysis. These projections were developed using theoretical approaches that are generally accepted by the scientific community involved with long-term erosion analysis. The approach to calibration has been updated to apply probabilistic techniques in forward modeling from post-glacial conditions to match the current conditions of the Buttermilk Creek watershed.

The Final EIS erosion dose analysis uses the most aggressive gully advance rate predicted by the CHILD model calibrated to site conditions. This predicted gully advance rate decreases with time, but does not rely on data or discussions of the Nachtergaele publication.

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is badly miscalibrated and cannot be used as a basis for ruling out erosion impacts to facilities such as the Main Plant Process Building, Vitrification Facility, and Waste Tank Farm. Second, section H.3.4 of the 2008 Draft EIS imposes an unsupported assumption that gully behavior consists of "an initial period of rapid growth followed by decrease in rate of growth, attainment of a maximum length" which can be expressed by a negative exponential relation termed Graf's Law (page H-73). The 2008 Draft EIS cites only a single reference (Nachtergaele et al., "Medium-term evolution of a gully developed in a loess-derived soil," *Geomorphology* **46**, 223 (2002)) for this overly simplistic idea which greatly limits, at least on paper, the ability of gullies to reach critical parts of the site. Even after introducing this simplistic idea, Table H-70 on page H-74 shows relatively high modeled doses from the NDA (either 170 mrem/yr or 45 mrem/yr) due to gully impacts, yet these doses would likely be much higher if DOE had not relied inappropriately on the Nachtergaele study. Quite simply, the Nachtergaele study and its finding of "an initial period of rapid growth followed by decrease in rate of growth, attainment of a maximum length" have little or no relevance to the West Valley site. The Nachtergaele study involved only a *single gully* that was monitored for 13 years (certainly not a robust basis for understanding the long-term behavior of gullies at the West Valley site!), and the Nachtergaele study area is a poor match for the West Valley site in terms of both the unconsolidated material being cut by gullies (loess vs. till/sand/gravel) and the topographic relief of the site. These factors are discussed below in more detail.

178. As noted, the Nachtergaele study area is a poor match for the West Valley site in terms of the unconsolidated material being cut by gullies. However, assuming for the sake of argument that gullying of loess soils provides information relevant to gullying of glacial tills, there are studies that contradict the Nachtergaele study and its finding of "an initial period of rapid growth followed by decrease in rate of growth, attainment of a maximum length." See, for example, studies of gullying in western Iowa as reported by Bradford and Piest ("Gully Wall Stability in Loess-Derived Alluvium," *Soil Science Society of America Journal* **41**, 115 (1977)) and by Bettis in the following article entitled "Gully Erosion," taken from the Iowa Department of Natural Resources/Geological Survey website at www.igsb.uiowa.edu/Browse/gullyero/gullyero.htm. The Bettis article, quoted below in its entirety, is based on work done jointly by Bettis and Dean Thompson (Natural Resources Conservation Service) and is adapted from *Iowa Geology* 1983, No. 8, published by the Iowa Department of Natural Resources:

Western Iowa, a 10,811 square mile area encompassing all of thirteen and portions of nine other counties, has a national reputation for high sediment loads in streams and severe gully erosion problems. Estimates indicate that 5,000 to 10,000 acres of potential cropland are lost or removed from production annually as a result of gully growth in this region. Large amounts of time and money are spent on maintaining drainage ditches and stream channels which become choked with sediment eroded from gullies. Bridge failures resulting from gully widening are also a common and costly problem for counties in western Iowa. Numerous other problems directly or indirectly associated with the growth of gullies plague residents of this region.

A gully is a relatively deep, vertical-walled channel, recently formed within a valley where no well-defined channel previously existed. Western Iowa gullies range from five to over 80 feet in depth and from three to 100 feet in width. Some gullies are several miles long while others are as

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110-109 The Final EIS erosion analysis has been updated and is based on the use of a site-specific calibration of the CHILD model using a theoretical approach that is generally accepted by the scientific community involved with long-term erosion analysis. The Final EIS erosion dose analysis uses the most aggressive gully advance rate predicted by the calibrated CHILD model. The revised analysis does not rely on data or discussions of the Nachtergaele study and citation to that work has been deleted from the revised Appendix F.

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short as 100 feet. All have nearly vertical walls and contain streams which have extreme variations in discharge throughout the year. Gullies in large valleys such as Keg Creek and Silver Creek contain streams which usually flow year round, but streams in most gullies are dry during portions of the year.

Gullies develop because of a decrease in the erosional resistance of the land surface or an increase in the erosional forces acting on the land surface. What causes gullies to form, when and where they do is poorly understood. Field and laboratory studies indicate that certain reaches of a valley are more prone to gully development than others. However the timing of the initial downcutting and which of the "most probable" reaches develops into a gully cannot be predicted with certainty.

Once a gully has formed, the processes whereby it lengthens and widens are much better understood. The upper end of a gully is marked by a headwall, a vertical scarp, separating the ungulled portion of the valley floor from the gully below. Water flows over the headwall during runoff and falls into a plunge pool at the base of the headwall. The water then erodes the base and sides of the pool, undercutting the headwall. When undercutting reaches an advanced stage the headwall fails and topples into the gully, thereby lengthening the trench. This process is repeated many times as a gully advances up the drainageway.

When first formed, most gullies are quite narrow and have vertical sidewalls. Increased pore pressure from groundwater moving toward the gully, coupled with some undercutting of the sidewalls causes deep rotational slumps along the sidewalls. If enough water is flowing through the gully to carry away the slumped material, additional slumping can occur. This causes the gully to widen. Widening also occurs when upper portions of gully walls separate and topple into the gully. This phenomena is most common following heavy spring rains and during freeze-thaw cycles in the late winter and early spring. If water intermittently flowing through the gully continues to clean out debris derived from the headwall and sidewalls, the gully continues to grow. When more debris accumulates than is transported away, the gully stabilizes and begins to fill.

Numerous researchers have pointed the finger at agriculture as the cause of western Iowa's gully problems. Specifically, they cite the increases in runoff that result from land clearing, overgrazing, cultivation, and stream channelization. Numerous federal, state, and county agencies spend millions of dollars annually to control existing gullies and promote land management practices which reduce runoff in an attempt to alleviate the gully problem.

Many of today's gullies are cut into alluvium, the sediment transported and deposited by flowing water in streams. In most of western Iowa, the source of the alluvium is the silty loess found on valley slopes. Vertical gully walls, such as those shown in the accompanying photograph [see www.igsb.uiowa.edu/Browse/gullyero/gullyero.htm], often expose several distinct layers of alluvium. Layers of similar sediments can be traced within a single valley and also can be recognized from one valley to the next, a process called correlation. Six distinct layers, or alluvial fills, can be recognized in small valleys throughout western Iowa. Extensive core drilling in these valleys and interpretation of exposures formed along gully walls prove that these alluvial fills accumulated in old gullies.

Occasionally, buried tree stumps, logs, or charcoal are found enclosed in these old alluvial fills where they are exposed along modern gully walls. These organic remains have been

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radiocarbon-dated and a chronology of gully cutting and filling constructed. More than 100 such radiocarbon dates indicate that the six major alluvial fills recognized in western Iowa valleys represent regionally synchronous episodes of gully cutting and filling during the last 12,000 years. Four of these episodes occurred during the last 4,000 years, and the deposits associated with them are rather well preserved and understood.

About 3,500 to 4,000 years ago, deep gullies much larger than today's dominated the landscape in small western lowa valleys. In many cases these gullies occupied the entire valley floor. Beginning shortly after 3,500 and continuing until about 2,000 years ago, gully growth stopped and alluvium accumulated in the gullies. By 2,000 years ago the gullied areas were completely filled with silty sediment washed from the adjacent valley slopes, and marshy areas occupied the central portion of the former gullied areas.

Sometime during the 200-year period between 2,000 and 1,800 years ago another gully cycle began. Gullies extended up all moderate-sized valleys and some of their lateral tributaries. Gullying did not extend into small drainages at the upper end of the drainage network as it had during the previous cycle. In extent, depth, and width of gullying, this cycle is analogous to modern gullying in the area. Shortly after 1,800 years ago alluvium again began to accumulate in the gullies, eventually filling them by about 1,000 years ago.

The third gullying cycle began about 800 years ago. In this cycle, gullying was restricted to moderate-sized and larger valleys and did not extend as far up valleys or into smaller valleys as it had during either of the previous episodes. These new gullies were restricted to central portions of the area gullied during the previous cycle. Further, these gullies were not as deep or as wide as earlier gullies had been. Shortly after the gullies developed they began to fill with alluvium. Sediment accumulated until the gullies were completely filled and portions of the surfaces bordering the gullies were buried a few feet. Counts of growth rings in trees growing on alluvium filling these gullies indicate that sedimentation may have continued until about 100 years ago.

The most recent western Iowa gully cycle began around 100 years ago. Numerous accounts in local histories, original land surveys and early reports of the Iowa Geological Survey indicate that until about 1860 gullies were not widespread in the area. By 1900 reports of problems arising from gully growth, such as the need for bridges at crossings, became common and indicated that the historic period of gully growth was in full swing. In some valleys, gullies have formed and been filled several times during this historic cycle, a process which also occurred during the prehistoric episodes but is too obscure to be interpreted from the geologic alluvial-fill record.

The geologic record contained in western Iowa valleys shows that major gullying is not new to the area. Several episodes, some more widespread than that which affects the area today, occurred prior to Euroamerican settlement and the spread of modern agriculture. Gullying is part of the natural process of landscape evolution in western Iowa. The modern gullying which causes so much concern is also part of this natural process. No doubt, landuse changes accompanying the spread of agriculture and urbanization have aggravated and possibly accelerated the growth and extension of gullies in western Iowa. However, the geologic record suggests that the area was "due" for an episode of gullying prior to the 1850s. Gullies grew and filled several times in the past when humans were not significantly influencing runoff or vegetation patterns. This indicates that human activity affects gullies in this area but does not cause them.

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Recognition of the fact that gullies are "native" to western Iowa is important because it indicates that gullies are not a unique phenomena resulting entirely from human modification of the landscape. Through recognition of gully-prone valley sections and the promotion of landuse aimed at preventing or lessening the factors causing gullies in those areas, we can avoid gully growth or lessen its impacts. During the last 12,000 years, gullies and the erosion resulting from their growth have molded the western Iowa landscape into that which we see today. This process is active and will continue to be so far into the future. Currently our knowledge of the factors contributing to gully initiation is very incomplete. Somewhat better understood are the processes and factors involved in gully growth and degradation. These are areas of urgent research needs. Through a better understanding of the processes affecting gully growth and filling, we can lessen the impact our activities have in promoting the gully problem and plan around those portions of the gully network which are too costly or not likely to be controlled.

179. Despite the differences between the unconsolidated material found in western Iowa (loess) and at the West Valley site (tilt with intervening beds of recessional sands and gravels), the above-quoted article by Bettis offers important lessons for the understanding of gully advancement at the West Valley site. First, the Bettis article underscores the importance of field work, radiocarbon dating, etc. Gross oversimplifications such as "an initial period of rapid growth followed by decrease in rate of growth, attainment of a maximum length" are no substitute for careful field work. Second, the Bettis article shows that gullies in western Iowa have *not* undergone a continual progressive advance during the post-glacial period of the past 12,000 years. Advancement has been cyclical, interspersed with periods of non-advance and infilling with sediment, on time scales measured in centuries. These long-term cycles in which gully advancement waxed and waned, probably in response to climate variation on a regional or continental scale, may likewise have occurred at the West Valley site. The question needs to be addressed at the West Valley site, partly as a check on the realism and calibration of any erosion model that simulates gully advancement. Third, the Bettis article emphasizes the wide variety of observed gully sizes ("Some gullies are several miles long while others are as short as 100 feet") and indicates that gully size is partly correlated with the aforementioned long-term cycles ("About 3,500 to 4,000 years ago, deep gullies much larger than today's dominated the landscape in small western Iowa valleys"). This observation raises the question of whether "deep gullies much larger than today's" will form in the future at the West Valley site in response to climate conditions similar to those that formed the deep Iowa gullies about 3,500 to 4,000 years ago. This question needs to be addressed. Without a dependable answer, there's no reasonable way to assess the effects of gully advancement on site integrity.

180. The Nachtergael study area is also a poor match for the West Valley site in terms of topographic relief. The Nachtergael study area – a field under cultivation in Belgium – had relatively low relief which did not change substantially during the 13-year study period. In contrast, the West Valley site underwent a dramatic increase in vertical relief during the multi-thousand-year postglacial period, starting from an essentially unincised topography (for example, see Figure F-10 of 2008 Draft EIS) which evolved into the incised landscape we see today (where Franks Creek is incised about 80' at its confluence with Erdman, Buttermilk is incised about 160' at the slump area east of the SDA, and the base level at the Buttermilk-Cataractus confluence is about 300' below the site's North and South Plateaus). Thus, the erosive factors needed for gully

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110-110 The behavior of the model used in the study is generally consistent with Bettis' picture of gully dynamics in the sense that the model predicts cycles of gully incision and aggradation, as noted in this Final EIS, Appendix F, Section F.3.2.1. However, one must be very cautious in drawing parallels between sites with such substantial differences in climate, vegetation, and soils. The question of the degree to which climate variations may influence gully development is addressed in this Final EIS using the "wet" scenario described in the response to Comment no. 110-101. When the results from the "wet" scenario are compared to the other probabilistically-derived simulations, they show an increase in gully size and length associated with the increase in the precipitation intensity parameter and a reduction in the infiltration capacity parameter.

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growth (height of headwall scarp, kinetic energy of water falling into plunge pool) were largely unavailable at the West Valley site during the early part of the postglacial period but became increasingly available as incision proceeded and relief became greater. This self-accelerating evolution of the vertical relief needed for gully formation was, and still is, a crucial factor at the West Valley site but was essentially absent in the Nachtergael study area.

181. As an example of “exceptionally deep post-glacial gullies incised in glacial till” in Wales, see Fig. 86 on p. 164 of *Natural Landscapes of Britain from the Air* by N. Stephens (Cambridge University Press, 1990). Regardless of whether such gullies would eventually show a “decrease in rate of growth [and] attainment of a maximum length,” they have already progressed far beyond the length that would be needed to breach containment of waste facilities at the West Valley site. As stated in the accompanying text on p. 164, “Slumping is evident along all the main gullies. These slump features, which can themselves develop tributary gullies, play a twin role in current sediment supply to the rivers. The slumps and landslips supply large calibre material to form the coarse bedload of the rivers. The unvegetated landslip scars subsequently act as major suspended sediment sources, via the processes of rainsplash erosion, ice-needle growth and other frost processes, and lateral corrosion by the river itself.” Similar processes operate at the West Valley site.

182. As shown above by various lines of reasoning, the Nachtergael study and its finding of “an initial period of rapid growth followed by decrease in rate of growth, attainment of a maximum length” have little or no relevance to the West Valley site. A similar conclusion can be reached by simple, commonsense logic, some of which can be found in the 2008 Draft EIS, where DOE acknowledges that gully growth varies in both space and time. The variation in gully growth is attributed there to localized details such as seeps and fractures, time-dependent variables such as weather, and quasi-random variables such as animal trails and tree falls. As already quoted above from the 2008 Draft EIS:

Gullies are most likely to form in areas along streambanks where slumps and deep fractures are present, seeps are flowing, and the toe of the slope intersects the outside of the meander loop. Gully growth is not a steady-state process; it occurs in response to episodic events, such as during thaws and after thunderstorms in areas where a concentrated stream of water flows over the side of a plateau, as well as in areas where groundwater pore pressure is high enough for seepage to promote grain-by-grain entrainment and removal of soil particles from the base of the gully scarp (a process sometimes known as “sapping”). Sapping causes small tunnels (or “pipes”) to form in the soil at the gully base, which contributes to gully growth by undermining and weakening the scarp until it collapses. Surface water runoff into the gully also contributes to gully growth by removing fallen debris at the scarp base, undercutting side walls, and scouring the base of a head scarp. Although human-induced changes to the surface water drainage pattern can control the growth of some gullies, other natural processes that induce gully formation, such as the development of animal trails or tree falls, cannot be readily controlled. (Page F-4)

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110-111 The revised Final EIS erosion analysis is based on the use of a site-specific calibration of the CHILD model using a theoretical approach that is generally accepted by the scientific community involved with long-term erosion analysis. This results in erosion rates that are comparable to measurements at the site. This approach is considered theoretically sound for making long-term erosion predictions for WNYNSC.

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Other erosion-model issues

183. It is unclear from descriptions in the 2008 Draft EIS whether certain algorithms in the CHILD erosion model are reasonable or not. First, as stated on page F-44, CHILD's standard water erosion algorithm computes bed lowering as the lesser of (1) bedrock detachment capacity and (2) excess sediment transport capacity per unit surface area. Without further information, it cannot be determined whether either condition is unduly limiting. Second, a transport formula for bed load is given on page F-45. Whether this formula and the chosen parameters are realistic has not been determined. Third, the CHILD model "has no way to address suspended or wash load;" it treats clay particles as sediment of a specified size, as noted on page F-45. Again, the effect of this approximation has not been determined. In any case, it is not sufficient to judge the correctness of each of these algorithms separately; the model as a whole must be demonstrably well-calibrated against observed current rates of downcutting.

184. A concern expressed on page F-53 of the 2008 Draft EIS is that the current best-fit CHILD modeling run overpredicts the degree of landscape dissection. This may be related to a questionable step in the construction of the initial model topography, consisting of "the addition of the modern stream channel pattern, which was etched into the valley-surface DEM at a depth of 1 meter," as indicated on page F-32. The logic of requiring the model to adhere to an entrenched stream network from the outset of the postglacial period is unclear. It would appear to "jump-start" the dissection process in an unrealistic way.

Unstable slopes greater than 21 degrees

185. It is unclear whether and how the CHILD erosion model in the 2008 Draft EIS treats the ongoing evolution and/or adjustment of unstable hillslopes steeper than 21 degrees. This angle is widely recognized as a threshold beyond which slopes at the West Valley site are unstable or "potentially unstable." For example, see 2008 Draft EIS, page F-13; also A. Napoleon et al., *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Site*, 2008, pp. 101-102. It appears that the CHILD erosion model assigns a value of 30 degrees to the threshold slope gradient parameter S_c (see 2008 Draft EIS, page F-46), where S_c is said to be equivalent to the parameter S_{max} , which represents a "maximum stable slope angle" in the SIBERIA model (see page F-42). In the event that S_c represents a "maximum stable slope angle" beyond which no soil creep or landsliding occurs in the CHILD erosion model, the assignment of a 30-degree value to S_c is patently wrong and must be corrected.

186. Figure 6.7 on page 102 of A. Napoleon et al., *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Site*, shows the predictable evolution (i.e., westward migration) of the actively slumping west bank of Buttermilk Creek toward the incised confluence of Franks Creek and Erdman Brook and toward the nuclear-waste facilities that lie beyond the confluence. This westward migration of the top of the west bank of Buttermilk can be predicted from slope stability criteria alone; it requires neither downcutting nor sidecutting of the actual channel of Buttermilk Creek (and thus would be additive with any effects of further downcutting and sidecutting of that channel). The erosion

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110-112 In this Final EIS, the calibration of the CHILD model uses six model data-comparison metrics to demonstrate that the model as a whole is well-calibrated against current observations. These selected metrics are widely accepted by the scientific community as means to demonstrate the correctness of the model calibration. The model algorithms are consistent with the current state of the science. Numerous applications of the model have been published in the peer-reviewed scientific literature; examples of these are cited in Appendix F of this Final EIS.

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110-113 This concern (overprediction of the degree of landscape dissection) is no longer an issue due to the revised erosion modeling analyses presented in this Final EIS.

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110-114 This issue has been addressed in the Final EIS revised erosion modeling analyses. The CHILD model uses the 21 degrees as the threshold beyond which slopes at WNYNSC are unstable.

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110-115 The soil creep/landsliding process is included in the SIBERIA and CHILD models. This process results in rim-widening of the Buttermilk Creek stream channels, including the westward migration of the west bank of Buttermilk Creek. Several of the CHILD modeling cases presented in the results section of this Final EIS clearly show rim-widening of the west bank of Buttermilk Creek.

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model used in the 2008 Draft EIS *must be able to demonstrate* the above-described evolution (i.e., westward migration) of the west bank of Buttermilk Creek over some reasonable period of time. If the model cannot predict such westward migration of the actively slumping west bank of Buttermilk Creek, its inability to do so would be a clear indication that the model is either defective or operating with incorrect parameters. This is one of several crucial tests that the model must pass.

Stream piracy or stream capture

187. As indicated above in comments 92, 95, and 96, the phenomenon of stream capture or stream piracy is a serious issue at the site. Over some period of time, the capture or piracy of Franks Creek by Buttermilk Creek is likely to occur somewhere near the current confluence of Franks and Erdman. The question is *when*. A likely contributing factor in this piracy/capture process is the relatively permeable layer of Kent recessional/lacustrine/overbank deposits that lies beneath the Lavery Till. This layer can act as an essentially horizontal conduit for groundwater transmission (e.g., see 2008 Draft EIS, page E-15). The importance of such a groundwater pathway (and the reason for the emphasis given to it in comment 92) is illustrated by D.T. Pederson, "Stream Piracy Revisited: A Groundwater-Sapping Solution," *GSA Today*, September 2001, page 7 and esp. Fig. 3. As Pederson explains, "The principal fact favoring stream piracy by groundwater sapping is that the groundwater divide does not correspond to the surface-water divide when there is a difference in elevation of streams in the adjacent drainages..." As he shows, the higher-elevation stream (in this case, Franks Creek) tends to provide some of the groundwater flow needed to sustain gully growth toward the drainage divide from the lower-elevation stream (in this case, Buttermilk Creek). Such a process eventually breaches the surface-water divide, causing the so-called piracy which gives the higher-elevation stream (Franks) a comparatively steep, short channel into the lower-elevation stream (Buttermilk). Such a result would be disastrous at the West Valley site, since the already-steep gradient of Franks Creek would suddenly become much steeper in the immediate vicinity of the North and South Plateaus, thereby accelerating further downcutting. Given the importance of this process, it should be incorporated into any erosion model or erosion-prediction method for the West Valley site. The erosion model used in the 2008 Draft EIS does not appear to incorporate or address stream piracy or capture – but it must do so. An erosion model that fails to include this process cannot be considered realistic.

188. Two important factors in stream piracy or capture are the length and permeability of the groundwater pathway between the higher and lower streams. Permeability will be enhanced, promoting greater groundwater flow, as Franks Creek downcuts into and thereby increases its communication with the Kent recessional/lacustrine/overbank deposits beneath the Lavery Till. The length of the groundwater pathway will be reduced, again favoring greater flow, as the actively slumping west bank of Buttermilk Creek migrates westward in response to slope instability, as outlined above in comment 186. Separately or in combination, both of these ongoing processes will tend to hasten the process of stream piracy or capture.

**I10-I15
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I10-I16

I10-I16 The revised Final EIS erosion analysis is based on the use of a site-specific calibration of the CHILD model using a theoretical approach that is generally accepted by the scientific community involved with long-term erosion analysis. Predicted erosion rates are comparable to measurements at the site. The revised Appendix F of this EIS includes an evaluation of the likelihood of stream capture (see Section F.3.1.6.12) and reports that simulations covering a range of environmental conditions did not predict that stream capture would occur. In addition, there is no obvious evidence for stream capture events elsewhere in the Buttermilk Creek valley.

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Other issues in addition to erosion

189. On page F-1 of Appendix F of the 2008 Draft EIS, the statement that Buttermilk Creek flows northwesterly at an elevation approximately 100 feet below the North and South Plateaus is incorrect. The elevation difference is greater than 100 feet.

190. As described on page 3-9 of the 2008 Draft EIS:

The WNYNSC has its own reservoir and water treatment system to service the site. The system provides potable and facility service water for operating systems and fire protection. The reservoir system was created by constructing dams on Buttermilk Creek tributaries south of the Project Site. The reservoirs provide the raw water source for the non-community, nontransient water supply operated on site.... Specifically, the two interconnected reservoirs (North and South Reservoirs) cover about 10 hectares (25 acres) of land and contain approximately 2.1 billion liters (560 million gallons) of water.... A pump house located adjacent to the North Reservoir with dual 1,500-liters-per-minute (400-gallons-per-minute) rated pumps supplies water to the Project Premises through a 20-centimeter (8-inch) pipeline....

The dams and reservoirs are assumed to be removed under the Sitewide Removal Alternative (page 2-34). They are assumed to be removed from service, with the dams partially removed, under the Sitewide Close-in-Place Alternative (page 2-39). Both of these alternatives should consider leaving the dams and reservoirs in service, either as a community water supply or as a water source for future uses (e.g., industrial park) of the site.

Socioeconomic and loss-of-expertise impacts of the employment gap

191. Phased decisionmaking, considered the preferred alternative in the 2008 Draft EIS, will have a socioeconomic impact due to the "employment gap" that it causes between Phase I work and Phase II work. This "employment gap" impact, associated with the phased decisionmaking alternative but not with the other alternatives, must be assessed in the EIS. Specifically, phased decisionmaking would ramp up employment at the West Valley site for Phase I work, then within about 10 years would substantially cut employment as Phase I work was completed, and then would increase employment again for Phase II work. The gap between Phase I and Phase II work would be least several years, and a subsequent rebuilding of employment levels for Phase II work is expected to occur regardless of which decommissioning alternative is eventually chosen for Phase II. The socioeconomic impact of such a projected fluctuation of employment by a large employer in a rural area needs to be addressed for the phased decisionmaking alternative.

192. The aforementioned "employment gap," associated with phased decisionmaking but not with the other alternatives, would cause a loss of professional expertise and a loss of "institutional memory" in addition to its predicted socioeconomic impacts. Decisionmakers, planners, and other employees need to acquire much site-specific expertise in order to work safely and effectively at a complex site such as the West Valley site. Much of this site-specific expertise

110-117

110-117 This statement has been revised in this Final EIS to indicate that the elevation of Buttermilk Creek is approximately 200 feet below the North Plateau.

110-118

110-118 DOE and NYSERDA note the commentor's opinion. The alternatives evaluated in this EIS were selected by DOE and NYSERDA after consulting with the cooperating agencies and considering public comments received on the 1996 *Cleanup and Closure Draft EIS* and in public meetings.

110-119

110-119 Please see the Issue Summary, "Modified Phased Decisionmaking Alternative" in Section 2 of this CRD and DOE's and NYSERDA's response. With the change in the timing of a Phase 2 decision if the Phased Decisionmaking Alternative is selected, the suggested "employment gap" would not be an issue.

110-120

110-120 See the response to Comment no. 110-119. It is anticipated that the personnel with site knowledge and experience would be available to address implementation of any of the alternatives as presented in the Final EIS.

110-119

110-120

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would be lost due to workforce reductions between Phase I and Phase II yet would be needed again for Phase II work. The impact of losing such expertise and "institutional memory," including not only the effort of reacquiring it but the risk that some will be lost, needs to be addressed for the phased decisionmaking alternative.

Occupational injury and fatality issues

193. Part of NRC's decommissioning requirements in both 10 CFR 20.1402 and 10 CFR 20.1403 involves residual radioactivity levels that are "as low as reasonably achievable" (ALARA). The ALARA principle, generally intended to be protective of public health, can be susceptible to misinterpretation and abuse in certain circumstances. For example, a crucial application of the ALARA principle is stated as follows in 10 CFR 20.1403(a):

A site will be considered acceptable for license termination under restricted conditions if...The licensee can demonstrate that further reductions in residual radioactivity necessary to comply with the provisions of § 20.1402 would result in net public or environmental harm or were not being made because the residual levels associated with restricted conditions are ALARA. Determination of the levels which are ALARA must take into account consideration of any detriments, such as traffic accidents, expected to potentially result from decontamination and waste disposal...

DOE tends to exploit the above provision of 10 CFR 20.1403(a) by compiling evidence that traffic accidents outweigh any radiological impacts at contaminated sites. Such "evidence" is used to justify in-place closure of wastes and contamination, the argument being that further cleanup would result in net harm from traffic accidents. The defect in this argument is that it typically relies on traffic accidents and other transportation-related accidents, without taking into account other detriments and other factors needed to assess net harm. Transportation accidents are only part of the necessary analysis.

194. A careful reading of 10 CFR 20.1403(a) shows that further reductions in residual radioactivity will not be required A) if further reductions in residual radioactivity would result in net harm, or B) if the residual levels are as low as reasonably achievable when considered in combination with any detriments *such as* traffic accidents associated with decontamination and waste disposal.

195. A. Napoleon et al., *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Site*, pp. 97-104 and 136-137, show certain costs that will be incurred in maintaining erosion-control structures needed to protect the West Valley site. As shown there, erosion-control structures will need to be continually rebuilt or replaced on either a 25-year or 50-year replacement cycle. The estimated labor costs of doing so are listed in Table 8.1 on page 137, but Napoleon et al. *do not provide the associated occupational injury and fatality rates* for continual replacement of erosion-protection structures at the West Valley site. (Occupational injuries and fatalities are not fully monetized in labor costs.) Omission of this information on occupational injuries and fatalities is a major lapse in the report by A. Napoleon et

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110-121

110-121 The purpose of this EIS is to analyze the reasonably foreseeable environment consequences of the alternatives presented in this EIS. No close-in-place decision has been made and close-in-place is not included in the preferred alternative to the extent it has been defined.

If a close-in-place decision is made by DOE, it would have to be justified in terms of NRC's as low as is reasonably achievable (ALARA) guidance in a Phase 2 Decommissioning Plan consistent with the criteria cited in the comment. The ALARA analysis would be reviewed by NRC and available for public review.

110-122

110-122 The occupational injury and fatality information presented in Chapter 4, Table 4-19, of this EIS includes the contribution of periodic replacement and maintenance of erosion control structures for the Sitewide Close-In-Place and No Action Alternatives over 60 years. For the Sitewide Close-In-Place and Phased Decisionmaking Alternatives, occupational injuries and fatalities associated with periodic replacement of erosion control structures and fatalities represent less than 1 percent of the total impacts listed in Table 4-19.

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al. Since occupational injuries and fatalities are a foreseeable *impact* of the Sitewide Close-in-Place Alternative, DOE needs to supply and assess this information in the course of the current EIS process. Specifically, in any Final EIS issued in the near future and also in any Draft EIS issued for Phase II, DOE needs to address the impact of the occupational injuries and fatalities attributable to ongoing replacement of erosion control structures under the Sitewide Close-in-Place Alternative.

196. Calculation of the occupational injuries and fatalities attributable to ongoing replacement of erosion control structures under the Sitewide Close-in-Place Alternative is a straightforward procedure based on the number of man-hours needed for such ongoing replacement and based on standard rates of occupational injury and death. The number of man-hours needed for ongoing replacement of erosion control structures under the Sitewide Close-in-Place Alternative is implicit in Table 8.1 of Napoleon et al. (see p. 136: "We gathered the costs of erosion controls from industrial sources at a cost per unit component..."), but the number of man-hours is not given explicitly. DOE either needs to derive the number of man-hours in consultation with Napoleon et al or needs to make its own calculation of the number of man-hours (while ensuring that its own calculation is reasonably consistent with Napoleon et al.). Once the number of man-hours is obtained, it can be multiplied by a standard injury rate or standard fatality rate for an industry such as Heavy and civil engineering construction (NAICS code 237) to obtain the occupational injuries and fatalities attributable to ongoing replacement of erosion control structures under the Sitewide Close-in-Place Alternative. Examples of standard injury and fatality rates, compiled by the U.S. Bureau of Labor Statistics (BLS) for the years 2006 and 2007, are shown below:

From www.bls.gov/iif/oshwc/osh/os/ostb1757.pdf:

TABLE SHRS. Incidence rate and number of nonfatal occupational injuries by industry, private industry, 2006:				
Industry	NAICS code	2006 Annual avg. employment (thousands)	Incidence rate per 100 full time workers	Number of cases (thousands)
Heavy and civil engineering construction...	237	966.3	5.1	48.8
Rail transportation.....	482	-	2.2	5.3
Truck transportation.....	484	1,415.4	5.7	84.0

From www.bls.gov/iif/oshwc/osh/os/ostb1909.pdf:

TABLE SHRS. Incidence rate and number of nonfatal occupational injuries by industry, private industry, 2007:				
Industry	NAICS code	2007 Annual avg. employment (thousands)	Incidence rate per 100 full time workers	Number of cases (thousands)
Heavy and civil engineering construction...	237	1,003.0	4.7	46.2
Rail transportation.....	482	-	2.2	5.4
Truck transportation.....	484	1,456.6	5.5	83.8

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From <http://stats.bls.gov/lnf/oshwc/cfoi/cfb0214.pdf>:

Industry	NAICS code	Total fatalities (number)	Event or exposure			
			Transp. incidents	Assaults, violent acts	Contact with objects and equipment	Other categories
Heavy and Civil Engineering Construction...	237	224	123	3	47	21 24 6
Rail Transportation.....	482	19	15		3	
Truck Transportation.....	484	533	448	14	46	15 23 6

From <http://stats.bls.gov/lnf/oshwc/cfoi/cfb0223.pdf>:

Industry	NAICS code	Total fatalities (number)	Event or exposure			
			Transp. incidents	Assaults, violent acts	Contact with objects and equipment	Other categories
Heavy and Civil Engineering Construction...	237	219	99		58	31 28 3
Rail Transportation.....	482	16	11			
Truck Transportation.....	484	583	465	21	42	24 25 5

197. Occupational injuries and fatalities attributable to ongoing replacement of erosion control structures, calculated as outlined above, need to be added to the worker injuries and fatalities for the Sitewide Close-in-Place Alternative that are currently listed in Table 4-19 (page 4-56) of the 2008 Draft EIS.

Transportation issue impacts

198. The 2008 Draft EIS (e.g., Table J-6 on page J-22, Appendix J) erroneously shows a higher non-radiological accident risk associated with rail shipments than with truck shipments. This error, traceable in part to the unwarranted and frivolous assumption of "one rail car of waste per train" (page 4-103), must be corrected. As noted on page 4-103 of the 2008 Draft EIS:

The use of trains with higher numbers of waste rail cars would result in lower accident fatality estimates. In addition, there is no scenario where a combination of train and truck transport would be expected to result in a higher dose to the general population or the transportation crews than the truck-only options.

199. The 2008 Draft EIS (page 3-10) describes rail service provided to the West Valley site by the Buffalo & Pittsburgh (B&P) Railroad but does not mention B&P's efforts to abandon parts of its rail line. In my understanding, the site's current agreement with B&P provides for continuation of rail service to the West Valley site for only about the next 7 years. *DOE and NYSERDA need to seek and obtain a longer-term commitment for continuation of rail service to the site.* Such longer-term commitment for continuation of rail service is needed to protect the full clean-up alternative for the West Valley site, especially if phased decisionmaking extends the NEPA and decommissioning processes by a decade or more.

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- 110-123** The transportation analysis has been revised and updated in this Final EIS to change the basis of the nonradiological impact analysis from a route-specific approach to a state-by-state approach. This change eliminated the influence of state-specific accident data associated with states in the Northeastern United States that have higher accident rates. This change in approach lowered the impacts from rail transport, although nonradiological impacts from rail transport are still shown as being higher than truck transport. This, in part, is due to the use of rail statistics that are in terms of railcar-kilometers. There is no literature available that provides accident and fatality rates on a train-kilometer basis. Appendix J of this Final EIS has been revised to address the changes made in the transportation analysis and further discuss uncertainty.

110-123

As discussed in Chapter 4, Section 4.1.12.2, of this EIS, there are other options that may be considered, including shipments of waste using a combination of rail and trucks for disposal. This EIS did not calculate all potential options. The results presented using either all truck shipments or all rail shipments would provide a range of risks that would encompass all potential options.

110-124

- 110-124** The Buffalo and Pittsburgh Railroad is abandoning a 27.6-mile portion of its rail line extending from milepost 8.4 in Orchard Park, New York, to milepost 36 in Ashford, New York. Consideration is being given to converting the right of way to a bicycle trail. This action, however, is not expected to impact DOE's or NYSERDA's ability to ship construction materials to WNYNSC or waste from WNYNSC by rail transport. The rail spur from the site connects to the existing rail line in Ashford Junction, south of milepost 36. Chapter 3, Section 3.2.5, of this Final EIS has been updated to reflect this information.

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Probabilistic risk assessment

200. The 2008 Draft EIS, as a consequence of its use of deterministic risk assessment methods, does not accurately portray or allow meaningful comparison of the risks of its various alternatives. This problem should be remedied in the EIS by the use of probabilistic risk assessment (PRA) rather than deterministic risk assessment.

201. DOE has claimed in the past that its use of deterministic risk assessment, coupled with appropriate sensitivity analyses, provides a reasonable substitute which is as robust as PRA. This claim by DOE tends to be untrue and – in some cases – difficult to assess and verify without actually resorting to PRA, especially at a complex site such as the West Valley site. Problems include DOE's use of various assumptions that are claimed to be "conservative" but are actually not conservative, and DOE's tendency to perform sensitivity analyses that fall far short of a reasonable range of variation. For example, see section H.3 of Appendix H (page H-71 ff.) of the 2008 Draft EIS, where DOE purports to do sensitivity analyses: "In this section," explains DOE, "deterministic sensitivity analysis is used to provide insight into the potential range of uncertainty in estimates of health impacts." The deterministic sensitivity analyses undertaken in section H.3 show how ineffective such analysis can be. In section H.3.4 (pages H-73 to H-74), DOE purportedly looks at the "sensitivity of estimates of health impacts to the gully growth model" – but the variations that DOE makes to its gully growth model in this analysis are so trivial that the analysis is meaningless. Numerous other examples can be found throughout the 2008 Draft EIS. The only reasonable resolution of this pervasive problem is the adoption of rigorous PRA methods in this EIS.

202. See also my comments on PRA in my January 15, 2008, memo entitled *Issues the Core Team Needs to Address* (attached hereto as Appendix E). Those comments can be paraphrased and adapted as follows:

Probabilistic risk assessment, used by various industries and regulators, allows analysts to quantify risk and identify what has the greatest effect on safety. It looks systematically at how the pieces of a complex system work together to ensure safety. A complex system might consist of a space shuttle, all of whose components must function properly to ensure a productive mission and safe return to Earth, or it might consist of a nuclear waste disposal system, all of whose components must likewise work properly to protect public health and the environment. DOE needs to apply PRA to complex waste disposal analyses at the West Valley site. In general, PRA is a good way to analyze complex results, especially where there is uncertainty in the results and in the values that must be assumed to calculate results. PRA results do not take the form of a single number. Instead, PRA uses a spectrum of possible outcomes. It generates a distribution of values based on the frequency with which each of these outcomes is expected. PRA results can often be summarized by a single representative value or point estimate, but PRA's main advantage is that it helps decisionmakers understand how much larger or smaller the actual risks might be. At other sites, especially nuclear power plants, the Nuclear Regulatory Commission has used PRA for many years. NRC has said it expects the use of PRA to

110-125

110-125 Preparation of a probabilistic risk assessment is not practical given the number of parameters considered in the analysis and the lack of scientific basis for estimating the probability of many of the parameters, particularly those that involve the nature and timing of future human actions.

110-126

110-126 While this EIS does use deterministic methods to estimate the environmental consequences of the various alternatives, it (1) discloses the uncertainty and (2) presents what are considered to be reasonable bounds for the environmental consequences for what appears to be the major uncertainty that influences future impacts (i.e., the maintenance or loss of institutional controls). Please also see the response to Comment no. 110-125 above.

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continue growing as part of a “longstanding NRC policy for increased use in all regulatory matters.” NRC says this should “result in a more predictable and timely regulatory approach throughout the agency.”

Thus, in accordance with the widespread recognition that PRA is a superior analysis method for complex sites, it should be adopted in this EIS process for the West Valley site.

Site stability with respect to detachment/distortion/creep in bedrock or glacial fill

203. The West Valley site needs to be monitored for possible but unlikely changes in its geometry. Any such change – in either the geometry of the glacial fill on which the site is located or the geometry of the underlying bedrock valley – should be regarded as a “low-probability, high-consequences” phenomenon. If such change is happening at all, it would consist of an ultra-slow distortion such as a narrowing of the bedrock valley due to regional compressive stress, or an evolving bulge or pop-ups in shales at the thalweg of the bedrock valley due to local gravitational stress, or a slow plastic deformation or sagging of the unconsolidated valley fill due to gravitationally-driven creep. Any such change of this type would need to be closely monitored and analyzed before its implications for long-term site integrity could be determined. As noted, any such change is possible but *unlikely*. Despite its low probability, it is widely recognized that both rock and glacial fill undergo distortion under certain circumstances, and there are site-specific factors that make the idea plausible here, including the fact that the ENE-oriented compressive regional stress is perpendicular to the NNW-trending bedrock valley. See also comments 83-84 above regarding the pervasive fracturing and low RQD of bedrock under the site, various comments about whether nearby faults such as the Sardinia and Cattaraugus Creek Features extend beneath the site (currently unknown), and comment 105 above regarding unlikely but possible evidence of mass movement of valley fill (more likely a map error, but needs to be checked). Given the potential implications for long-term site integrity, site geometry needs to be monitored or checked for measurable changes. Possible methods of doing so include InSAR, laser ranging, and geophysical logging/acoustic imaging of one or more of the hydrofracture test wells in WMA 11 to see if well casing has undergone any horizontal offset or kinking due to bedrock detachment.

SEPTEMBER 2, 2009, COMMENTS ON 2008 DRAFT EIS (DOE/EIS-0226-D (Revised))**August 2009 rainfall event and its implications**

204. The relatively intense rainfall event which delivered a total of approximately 5 inches of rain to the West Valley site between August 8 and August 10, 2009, has important implications for the site’s susceptibility to erosion, long-term site integrity, storm return intervals, climate-change-induced changes in storm frequency and intensity, and the need for reliable data collection.

205. Several very obvious erosion effects occurred on and near the site in short periods of time (e.g., several hours) as direct results of the rain event and associated runoff, as I observed during

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110-127 DOE and NYSERDA note the commentor’s recommendations for continued surveillance and monitoring of geomorphic and structural changes at and beneath WNYNSC.

110-128 DOE and NYSERDA note the commentor’s information on the August 2009 rainfall event and that the National Weather Service stated that Sunday evening had some of the highest short-term rainfalls ever recorded in western New York (http://www.erh.noaa.gov/buf/srvwx/web_090810_Flashflood/indexflood.html).

DOE and NYSERDA expect that the National Weather Service will review the storm data and make an official determination of the storm severity. It is expected that this effort would involve data and analysis of the type presented by the commentor.

DOE and NYSERDA do not believe that the occurrence of this storm changes the estimate of long-term impacts for the West Valley decommissioning alternatives. The long-term hydrologic transport analysis includes the investigation of the effect of wetter and drier climates as noted in Appendix H, Section H.3.1. The long-term erosion analysis includes investigation of the effect of wetter climates, as noted in Appendix F, Section F.3.1.6.4 of this EIS. See also the response to Comment no. 110-104.

DOE, NYSERDA, and the cooperating agencies are reviewing their practices and procedures for collecting data during larger storm events to identify measures that can be taken to increase the reliability of the data collection efforts.

DOE and NYSERDA acknowledge the commentor’s opinion that full site removal is the appropriate decision for this EIS. Please refer to the response to Comment no. 110-1.

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a site inspection several days later (August 19, 2009). For example, knickpoints on both Erdman Brook and Franks Creek migrated several feet upstream, with associated enlargement of their plunge pools. The Quarry Creek ravine underwent substantial scouring and sidecutting in several locations near the old Rock Springs Road bridge abutments. This caused the root systems of large trees growing on the banks to be partly undercut, caused other large trees on the banks to fall into the ravine due to more extensive undercutting and slumping, caused or enhanced the slumping of other blocks of earth on the sloping ravine banks, caused large clayey clasts ranging up to 12 or more inches in diameter (apparently rip-up clasts plucked from the ravine banks by the flowing water) to be deposited within the ravine as the peak flow receded, and apparently caused large quantities of sediment to be carried downstream beyond the ravine during the storm event, both in the form of particles carried as suspended sediment and in the form of rip-up clasts (ranging up to 12 inches and more) that were carried as bed load by the flowing water. On the high bank of Buttermilk Creek where persistent slumping has occurred for decades and has been extensively studied, a large landslide carried thousands of tons of Lavery Till and Kent recessional sediments down the slope toward (and partly into) Buttermilk Creek. The immediate cause was apparently the erosional removal of some of the relatively uncohesive Kent recessional sediments from beneath the Lavery Till, which caused blocks of the unsupported till to break off and roll downslope into jumbled piles – but it is unclear whether the initial erosional removal of Kent recessional sediments was a result of *undercutting by high water in the creek(s) below* (meaning Buttermilk Creek and flow from "Heinz" Creek which enters Buttermilk opposite the landslide face), or as a result of *groundwater emerging from the base of the Kent recessional bed*, or as a result of *surface water cascading down from the top of the bank* and impinging on the Kent recessional bed at the height of the storm. This is one of several storm-related issues that needs to be studied and resolved.

206. The August 2009 storm event was not a unique or highly unusual occurrence for the West Valley site. During the past 50 years, the five storms shown in Table 1 on the next page have delivered roughly equivalent rainfall (storm totals of roughly 5 inches in each case) and have caused roughly similar high flow in Cattaraugus Creek. The August 2009 storm is not demonstrably larger than the others listed in this table, and the rainfall it delivered to the West Valley site is not demonstrably larger than about 5 inches.

207. Information discussed here and presented in Table 1 suggests that the return interval of the August 2009 storm is *about ten years*. Climate change, to the extent that it increases the frequency and/or intensity of severe storms (e.g., see comments 169-171 above), will reduce the return interval to *less than 10 years*.

208. Table 1 shows no onsite record of rainfall at the West Valley site for the August 2009 storm. No such data is available. A rain gauge that normally operates at the site was inoperative for part of the storm due to power outages and a lack of reliable connection to the site's emergency backup generators. DOE and NYSERDA must immediately take steps to correct this type of serious failure. Power outages in severe storms are predictable, and reliable rain gauges are readily available.

**110-128
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Commentor No. 110 (cont'd): Raymond C. Vaughan, Ph.D.

Table 1

Storms of approximately similar magnitude experienced at West Valley site in past 50 years

Date of storm	Associated hurricane or tropical storm, if any	Estimated peak flow (cfs) at USGS Cattaraugus Creek gage at Gowanda	Recorded rainfall (Buffalo)	Recorded rainfall (elsewhere)
Sept. 27-28, 1967	[none]	28,800 (Sept. 28) ³	4.40" NWS ⁵	--
June 21-23, 1972	Agnes ¹	25,300 (June 23) ³	3.88" NWS ⁶	--
Sept. 14, 1979	Frederic ²	26,700 (Sept. 14) ³	4.89" NWS ⁷	--
June 26, 1998	[none]	28,000 (June 26) ³	0.30" NWS ⁸	3.25" WVDP ¹⁰ 8" Ashford ¹¹
Aug. 8-10, 2009	[none]	32,500 (Aug. 10) ⁴	2.78" NWS ⁹	3.45" Eden ¹² 7.75" Perrysburg ¹³

Notes:

1. See NWS 1972 N. Atlantic Hurricane Tracking Chart (online) for track of Agnes, which passed over central New York (not directly over WNY) as a tropical storm. See also Bailey, Patterson, and Paulhus, *Hurricane Agnes Rainfall and Floods, June-July 1972*, USGS Professional Paper 924 (Washington, DC: U.S. Geological Survey, 1975); U.S. Army Corps of Engineers, Buffalo District, *Report of Flood, Tropical Storm Agnes, June 1972*, NTIS Report AD-A100 811/9/HDM, 249 pages, August 1973.

2. See NWS 1979 N. Atlantic Hurricane Tracking Chart (online) for track of Frederic, the extratropical stage of which passed over central New York (not directly over WNY).

3. From http://nwis.waterdata.usgs.gov/ny/nwis/peak?site_no=04213500&agency_cd=USGS&format=html.

4. Real-time data retrieved August 2009, for site 04213500, USGS stream gage at Gowanda: http://nwis.waterdata.usgs.gov/ny/nwis/uv?cb_00065=on&cb_00060=on&format=html&period=30&site_no=04213500.

5. See [www.erh.noaa.gov/buf/f6/bufSep67.html](http://erh.noaa.gov/buf/f6/bufSep67.html), which shows 0.99" on Sept. 27 and 3.41" on Sept. 28, 1967.

6. See [www.erh.noaa.gov/buf/f6/bufJun72.html](http://erh.noaa.gov/buf/f6/bufJun72.html), which shows 1.75" on June 21; 1.43" on June 22; and 0.70" on June 23, 1972.

7. See [www.erh.noaa.gov/buf/f6/bufSep79.html](http://erh.noaa.gov/buf/f6/bufSep79.html), which shows 4.89" on Sept. 14, 1979.

8. See [www.erh.noaa.gov/buf/f6/bufJun98.html](http://erh.noaa.gov/buf/f6/bufJun98.html), which shows 0.30" on June 26, 1998.

9. From Preliminary Local Climatological Data (form F-6) for Buffalo NWS, retrieved August 2009 from www.weather.gov/climate/getclimate.php?wfo=buf, which shows 0.26" on August 8; 1.63" on August 9; and 0.89" on August 10, 2009.

10. West Valley site rain gauge record, as provided in 1998 by John Chamberlain.

11. Rain gauge maintained by Dr. Tim Siepel at his house in Ashford, NY, personal communication.

12. From <http://newa.nrcc.cornell.edu/newaLister/>, daily data retrieved August 2009 for Eden, NY, showing 0.08" on August 8; 1.91" on August 9; and 1.46" on August 10, 2009. Cornell's NEWA website also lists weather stations in Dunkirk, Fredonia, and Gainesville, NY – but none in Cattaraugus County.

13. NWS Cooperative Weather Observer in Perrysburg measured 0.48" from 7:00 AM on August 8 to 7:00 AM on August 9, and measured 7.27" from 7:00 AM on August 9 to 7:00 AM on August 10, 2009.

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Commentor No. 110 (cont'd): Raymond C. Vaughan, Ph.D.

209. The agencies' failure to collect onsite rainfall data during the August 2009 storm needs to be considered in the context of the phased decisionmaking favored by DOE and NYSERDA in this EIS process. Phased decisionmaking, while not a prudent choice overall, has been justified partly by the claim that additional studies could be done in the interim period (up to 30 years) between Phases I and II. The proposed purpose of such studies would be to support Phase II decisionmaking – but *such studies are useless if crucial data collection activities are neglected*. Rainfall data is a key example of information needed to assess storm return periods and associated rates of erosion; however, both DOE and NYSERDA have a broader responsibility of recognizing relevant information-collection tasks and ensuring that such information is collected reliably and defensibly. Rainfall, considered here, is one example. Radiocarbon dates, considered above, are another example – but these are merely examples.

210. In the absence of onsite data, it is necessary to reconstruct the approximate rainfall that fell on the West Valley site during the August 2009 storm event. As already noted, the best estimate appears to be about 5 inches for the storm total (August 8 through August 10, 2009). This estimate is derived as follows, based on integrated total streamflow from the USGS Cattaraugus Creek gage at Gowanda combined with a reasonable estimate of the runoff-precipitation ratio, and also combined with the NWS Buffalo NEXRAD Doppler radar estimate of storm-total rainfall as of 12:09 AM on August 10, 2009.

211. Integration of Cattaraugus Creek streamflow for the 436 mi² drainage basin above Gowanda, after subtracting an assumed base flow of 300 ft³/sec, shows that the average runoff from that part of the drainage basin (which includes the West Valley site) during the entire August 2009 storm event was about 3.07 inches. For details of the calculation based on USGS half-hourly flow estimates at the Gowanda gage, see Table 2 at the end of these comments (pp. 62-80), esp. the last column of the table which shows the cumulative runoff from the storm. This runoff value (about 3.07", averaged over the 436 mi² drainage basin above Gowanda) is accurate within the accuracy of the USGS flow estimates and the accuracy of my base-flow estimate.

212. Runoff is closely related to rainfall; the ratio of runoff to rainfall can be predicted estimated reasonably well, especially where studies have been done. See, for example, Randall, *Mean Annual Runoff, Precipitation, and Evapotranspiration in the Glaciated Northeastern United States, 1951-80*, USGS Open-File Report 96-395. Based on this and other sources, and on the 3.07" average storm runoff for the 436 mi² drainage basin above Gowanda, I find that the average storm-total rainfall for the 436 mi² drainage basin above Gowanda was approximately 5 inches. For the reasons described here, the average basinwide rainfall total for the August 2009 storm event must be close to this 5" value. It cannot be substantially different.

213. Localized variation in rainfall intensity within the 436 mi² drainage basin above Gowanda cannot be ruled out, but there is no evidence of any substantial variation. In the absence of site-specific data, the 5-inch basinwide average appears to be the best estimate of total rainfall that can be assigned to the West Valley site for this storm event. (Heavier localized rainfall fell in the lower half of the drainage basin. See www.erh.noaa.gov/buf/srvwx/web_080809_Derecho/indexderecho_1.html; www.erh.noaa.gov/buf/srvwx/web_090810_Flashflood/indexflood.html.)

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214. See also Figure 5, which shows a screen-capture image of the Buffalo NEXRAD radar estimate of storm-total precipitation as of 12:09 AM on August 10, 2009. It shows *a*) an estimated rainfall total of 4 to 5 inches in the vicinity of the site and *b*) a relatively uniform rainfall total over the entire Cattaraugus Creek drainage basin above Gowanda. This helps confirm the 5" rainfall total derived above for both the basinwide average and the West Valley site. Note that the storm event was not entirely over at 12:09 AM on August 10, 2009; however, the worst of the storm had passed, as can be inferred from the USGS Gowanda gage-height data (the crest was recorded at 6:35 AM on August 10 – see p. 65 in Table 2) and from the hourly radar images of the storm that are archived at www.wunderground.com. These can be reviewed (for August 8) at http://radblast-sf.wunderground.com/cgi-bin/radar/WUNIDS_composite_archive?centerlat=42.92906570¢erlon=-78.75081635&radius=124&newmaps=1&type=NOR&num=24&SD.epoch=12497904000&ED.epoch=1249790399&DELAY=60&delay=20&width=640&height=480 and (for August 9) at http://radblast-sf.wunderground.com/cgi-bin/radar/WUNIDS_composite_archive?centerlat=42.92906570¢erlon=-78.75081635&radius=124&newmaps=1&type=NOR&num=24&SD.epoch=1249790400&ED.epoch=1249876799&DELAY=60&delay=20&width=640&height=480 and (for August 10) at http://radblast-sf.wunderground.com/cgi-bin/radar/WUNIDS_composite_archive?centerlat=42.92906570¢erlon=-78.75081635&radius=124&newmaps=1&type=NOR&num=24&SD.epoch=1249876800&ED.epoch=1249963199&DELAY=60&delay=20&width=640&height=480.

215. Allowing for the possibility that rainfall during the last hours of the storm event (after 12:09 AM on August 10, 2009) fell disproportionately on the Buttermilk Creek subwatershed that includes the West Valley site, such that it received more than the basinwide average of 5 inches, it is conceivable that the site received up to 6 or 7 inches of rain during the August 2009 storm event. More than 6 or 7 inches seems entirely implausible, and the best estimate for total rainfall at the site remains 5 inches. Any of these rainfall totals for the August 2009 event, whether 5 or 6 or 7 inches, was demonstrably damaging to the site in terms of erosion impacts and overtopping of reservoir dams, *yet was far smaller than likely future storms and probable maximum precipitation (PMP) events*. Consider, for example, the heavy rains experienced in the vicinity of Binghamton, NY, on June 27-July 1, 2006 (up to 13-15 inches over 4 days in some locations, superimposed on moderately saturated soils, as described by Kneuefer, Geological Society of America 2007 Northeastern Section presentation); or the 19" delivered to western Schuylkill County, PA, by Agnes in 1972 (www.hpc.ncep.noaa.gov/tropical/rain/agnes1972filledrainblk.gif); or the 20" one-day deluge in Erie, PA, in July 1947 (see comment 173 above); or the 24.9" PMP storm for the West Valley site (see comment 173 above); or the 30+ inches that fell in the vicinity of Smethport, PA in July 1942 (see comment 173 above).

216. The West Valley site is obviously unprepared for storms beyond the magnitude of the August 2009 event, yet such larger storms can be expected under current climate conditions and will be predictably worse and/or more frequent as a consequence of climate change. Full cleanup of the site is needed to avoid future loss of waste containment at this site which is topographically and geologically unsuitable for waste disposal. Full site-wide removal is the appropriate choice in this EIS process.

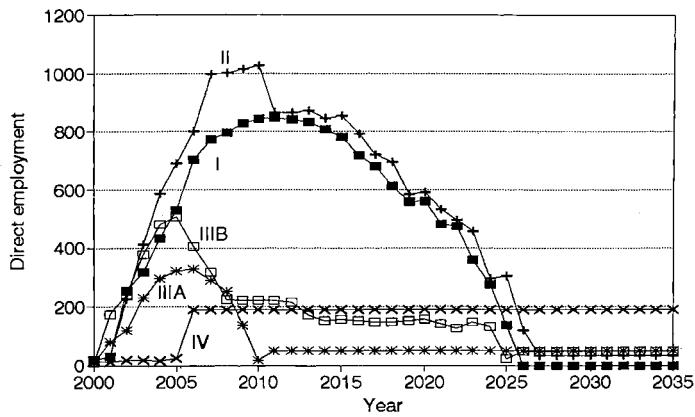
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Commentor No. 110 (cont'd): Raymond C. Vaughan, Ph.D.

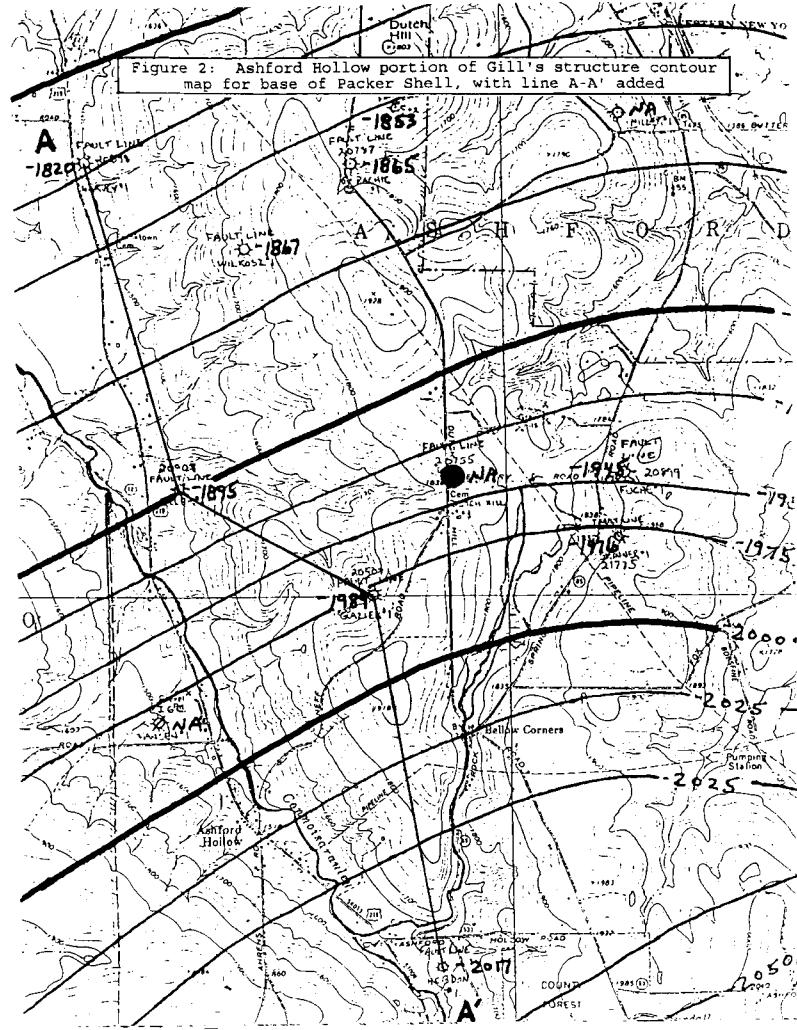
Figure 1

West Valley employment projections
For various site closure alternatives



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Commentor No. 110 (cont'd): Raymond C. Vaughan, Ph.D.



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Commentor No. 110 (cont'd): Raymond C. Vaughan, Ph.D.

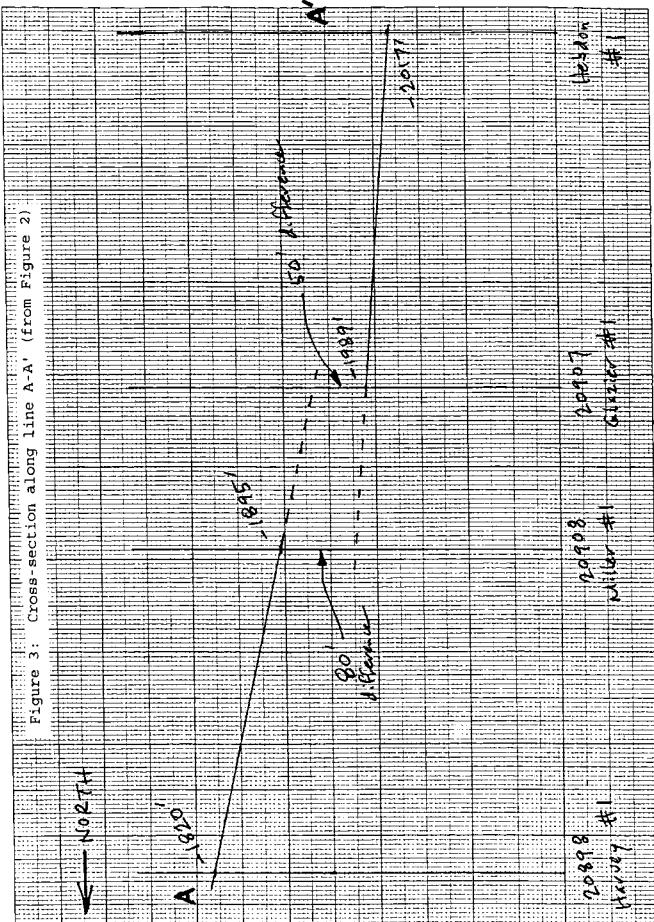
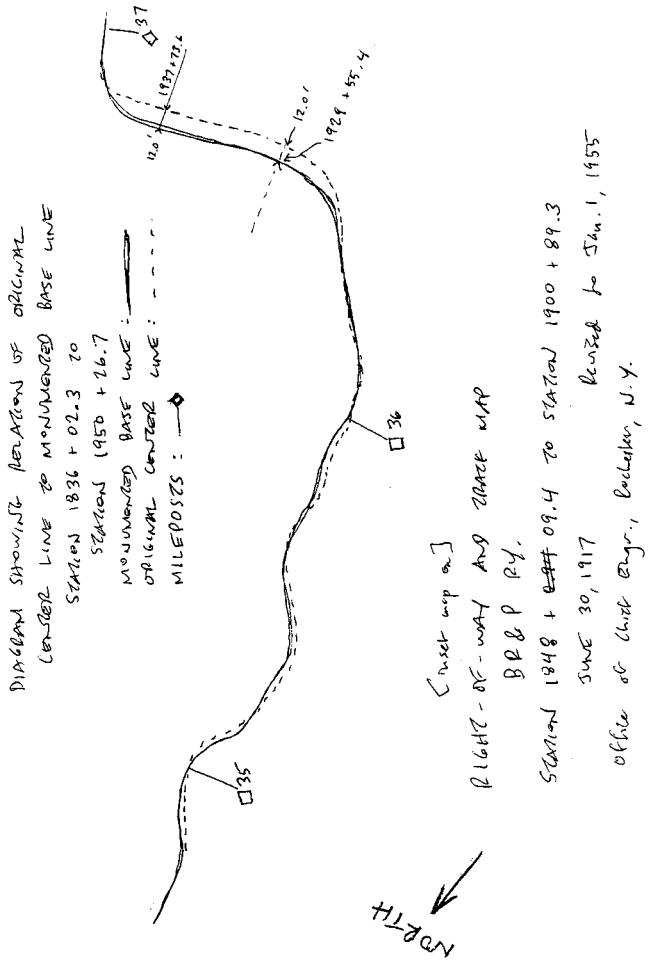


Figure 3: Cross-section along line A-A' (from Figure 2)

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Figure 4



Commentor No. 110 (cont'd): Raymond C. Vaughan, Ph.D.

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Commentor No. III: Arthur Beck, MD

June 9, 2009

Arthur Beck, M.D.

7221 Irish Hill Road

Ellicottville, NY 14731

proceed with all due speed to complet total exhumation of the west valley || **III-1**
neuclearwaste site.

111-1

DOE and NYSERDA acknowledge the commentor's request to proceed with all due speed to complete exhumation at WNYNSC. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 112: Andrew L. Raddant, Regional Environmental Officer, U.S. Department of the Interior



United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
408 Atlantic Avenue - Room 142
Boston, Massachusetts 02110-3334



June 8, 2009

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ER 08/1242

Catherine Bohan, EIS Document Manager
West Valley Demonstration Project
U.S. Department of Energy
P.O. Box 2368
Germantown, MD 20874

RE: Draft Decommissioning and/or Long-Term Stewardship EIS Comments
West Valley Demonstration Project and Western New York Nuclear Service Center
Town of Ashford, Cattaraugus County, New York

Dear Ms. Bohan:

The Department of the Interior, including input from the U.S. Geological Survey (USGS) and the U.S. Fish and Wildlife Service (Service), has reviewed and is providing comments on the November 2008 "Revised Draft Environmental Impact Statement (DEIS) for the Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center" (WVNSC). The project is located in the Town of Ashford, Cattaraugus County, New York.

The Department of Energy (DOE) and NYSERDA propose to decontaminate and decommission the tanks and other facilities where high-level radioactive waste was solidified and stored. DOE proposes to dispose of low-level radioactive waste and defense-related transuranic waste generated from decontamination and decommissioning of activities off site and store vitrified high-level radioactive waste and non-defense, transuranic waste on site until it can be shipped to a Federal repository.

GENERAL COMMENTS

The DEIS evaluated four alternatives for decommissioning the West Valley Site and for ensuring the long-term stewardship. Alternatives include the Sitewide Removal Alternative, the Sitewide Close in Place Alternative, the Phased Decisionmaking Alternative, and the No Action Alternative as required by the National Environmental Policy Act (NEPA) and the New York State Environmental Quality Review Act (SEQR). The Phased Decisionmaking Alternative is the preferred alternative.

The Sitewide Removal Alternative includes removal of all site facilities, decontamination of soils and sediments on site, and shipment of all radioactive, hazardous, and mixed low-level radioactive wastes off site when disposal sites are available.

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Commentor No. 112 (cont'd): Andrew L. Raddant, Regional Environmental Officer, U.S. Department of the Interior

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The Sitewide Close in Place Alternative includes removal of all site facilities, decontamination of the soil and water, and shipment of all waste (except for orphan waste) off site to one of the approved facilities. This alternative would require major construction of several facilities such as the Interim Storage Facility, the Waste Tank Farm Waste Processing Facility, the Soil Drying Facility, the Leachate Treatment Facility, the Container Management Facility, and installation of a subsurface barrier wall located in Waste Management Area (WMA) 1, Environmental Enclosures for a Nuclear Regulatory Commission Disposal Area (NDA), a State-Licensed Disposal Area (SDA), Lagoon 1, and the North Plateau Groundwater Plume Source Area.

The Phased Decisionmaking Alternative includes removal of major facilities of the Main Plant Process Building, Vitrification Facility, and 01-14 Building, source area of North Plateau Groundwater Plume and lagoons, the Construction and Demolition Debris Landfill, non-source area of the plume, Waste Tank Farm, NDA, and SDA. This alternative would take 8 years to complete Phase 1 and the site would be under active management for up to 30 years to allow for the collection and analysis of data and information. Additional characterization and studies would provide information to support evaluations to determine technical approaches to complete decommissioning of the Waste Tank Farm and the Construction, Demolition, and Debris Landfill. Orphan wastes would be stored on site until disposal facilities are available. Major construction would include an Interim Storage Facility and installation of barrier walls in WMAs 1 and 2.

The DOE has completed the vitrification process and some of the solidified liquid low-level radioactive waste has been shipped off site, as mandated by the West Valley Demonstration Project Act. However, there are currently no alternatives available for off-site disposal of the solidified liquid high-level radioactive waste which is stored in the Main Process Building and in a plume of radioactive groundwater located beneath the building (Their 2008).

The site is also contaminated by other radionuclides, including tritium (hydrogen-3), cesium-137, radium-226, and plutonium-238 which can cause radiation damage including DNA damage, cancers, and other health problems. Several lagoons remain on site that were used to manage wastewater discharges from several activities, including reprocessing, vitrification, and decontamination. They contain a mixture of radioactive contaminants, heavy metals, and solvents, and monitoring has shown that some of these have migrated into soil and groundwater (Their 2008).

In general, the Department would agree with the preference stated in the DEIS for the "phased decision-making alternative" that proceeds with decommissioning the site to the extent possible, but stops short of either removing or constructing permanent storage facilities for the radioactive waste at the site. At the present time, permanent storage facilities for these types of waste do not exist in the United States, and long-term storage (greater than 10,000 years) of these wastes at the West Valley site has not been proven feasible. However, we remain concerned that decommissioning and demolition activities may adversely impact terrestrial and aquatic habitat and that the plume of highly radioactive groundwater containing Strontium 90 and other contaminants will continue to migrate into the surrounding soil and groundwater, adversely affecting water quality and aquatic wildlife habitats. We recommend that an ecological risk assessment be undertaken to evaluate risks to biota that occur on the West Valley Site and other areas affected by contamination, for inclusion in the FEIS or as a supplement to the DEIS. See also comments on Chapter 4.0 Environmental Consequences.

Fish and Wildlife Resources

112-1

112-1

DOE and NYSERDA acknowledge the commentor's agreement with the preference stated in the Revised Draft EIS for the Phased Decisionmaking Alternative. This Final EIS addresses the long-term environmental impacts to biota. Please refer to Chapter 4, Section 4.1.6, under long-term impacts for the Close-In-Place and No Action Alternatives, for a description of long-term impacts on biota. A screening-level ecological risk assessment was performed that compared predicted concentrations against published DOE Biota Concentration Guides, which are concentration limits for radionuclides to protect biota.

Commentor No. 112 (cont'd): Andrew L. Raddant, Regional Environmental Officer, U.S. Department of the Interior

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These comments are pursuant to, and in accordance with, provisions of the Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*) and the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*). We may provide future comments pursuant to the Migratory Bird Treaty Act (MBTA), the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668-668d), and the Clean Water Act (33 U.S.C. 1344), as applicable.

General Comments

Cattaraugus Creek is located immediately downstream of the WVNSC and is the receiving waterbody for surface and groundwater that leaves the WVNSC. Cattaraugus Creek flows west through the Zoar Valley Multiple Use Area, a New York State Conservation Zone and Recreational Area, which is used for hiking, biking, fishing, and rafting and into Lake Erie. Zoar Valley and the watershed of Cattaraugus Creek have the highest number and concentration of rare plants in the Lake Erie Gorges region (The Nature Conservancy [TNC] Lake Erie Gorges Report).

Cattaraugus Creek is a perennial stream that supports a warmwater fishery with smallmouth bass (*Micropterus dolomieu*), walleye (*Sander vitreus*), yellow perch (*Perca flavescens*), bullhead (*Ameiurus* sp.), rock bass (*Ambloplites rupestris*), coho salmon (*Oncorhynchus kisutch*), chinook salmon (*Oncorhynchus tshawytscha*), and steelhead trout (*Oncorhynchus mykiss*). Brown trout (*Salmo trutta*) migrate from Lake Erie into the creek each fall from late August through December (September-November primarily), when salmonids ascend the streams to spawn. In addition, steelhead trout (lake-run rainbow trout) migrate into Cattaraugus Creek during the fall and between late February and April. Runs of trout and salmon occur inland as far as the Springville Dam (New York State Department of State website).

The lower Cattaraugus Creek area has supported populations of at least 5 rare fish species including the globally rare and state-threatened eastern sand darter (*Etheostoma pellucidum*), as well as nesting bald eagles. Of the 5 fish species, only the mooneye (*Hiodon tergisus*), a state-threatened species, has been recorded in recent times (TNC Lake Erie Gorges Report).

Buttermilk Creek is also a perennial stream located on the project site along with three intermittent streams – Erdman Creek, Franks Creek, and Quarry Creek. These water bodies flow directly into Cattaraugus Creek. The site consists of developed and undeveloped areas with open lands and forests that provide valuable wildlife habitat. In addition, several wetlands have been delineated on the project site and include forested, scrub shrub, and emergent wetlands that support a variety of terrestrial and aquatic species, including rare species.

Wetlands on the landscape provide functions that include filtration of pollutants and nutrients, water retention and detention, and flood flow attenuation. Services include water quality protection and wildlife habitat. Wetlands improve water quality by retaining or transforming excess nutrients and by trapping sediment and heavy metals. They also provide many wildlife habitat components such as breeding grounds, nesting sites, and other critical habitat for a variety of fish and wildlife species.

Vernal ponds also provide critical habitat for a number of amphibians and invertebrates, some of which breed only in these unique ecosystems. Although vernal ponds may only hold water for a short duration in the spring, they provide valuable habitat which should be recognized and protected.

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Commentor No. 112 (cont'd): Andrew L. Raddant, Regional Environmental Officer, U.S. Department of the Interior

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Lagoons, sediment ponds, and reservoirs located on site also provide limited habitat, especially for waterfowl (ducks and geese). These contaminated areas are an attractant to wildlife and decommissioning and long-term stewardship should consider wildlife deterrent methods to prevent wildlife from using these areas.

Terrestrial wildlife expected at the site include large and small mammals such as white-footed mouse (*Peromyscus leucopus*), red squirrel (*Tamiasciurus hudsonicus*), gray squirrel (*Sciurus carolinensis*), mink (*Mustela vison*), weasel (*Mustela* sp.), woodchuck (*Marmota monax*), eastern cottontail (*Sylvilagus floridanus*), skunk (*Mephitis mephitis*), raccoon, (*Procyon lotor*), eastern chipmunk (*Tamias striatus*), porcupine (*Erethizon dorsatum*), whitetail deer (*Odocoileus virginianus*), red fox (*Vulpes vulva*), gray fox (*Urocyon cinereoargenteus*), coyote (*Canis latrans*), and black bear (*Ursus americanus*) (New York State Department of Environmental Conservation [NYSDEC] website).

Avian wildlife habitat includes mature forested and deciduous communities that support species such as cerulean warbler (*Dendroica cerulea*), wood thrush (*Hylocichla mustelina*), Baltimore oriole (*Icterus galbula*), rose-breasted grosbeak (*Phoenicurus ludovicianus*), scarlet tanager (*Piranga olivacea*), bay-breasted warbler (*Dendroica castanea*), black-throated blue warbler (*Dendroica caerulescens*), worm-eating warbler (*Hemimixtes vermivorus*), black-billed cuckoo (*Coccyzus erythrophthalmus*), brown thrasher (*Toxostoma rufum*), northern harrier (*Circus cyaneus*), Henslow's sparrow (*Ammodramus henslowii*), upland sandpiper (*Bartramia longicauda*), and Canada warbler (*Wilsonia canadensis*). Game birds that are expected to be found in this area include wild turkey (*Meleagris gallopavo*), ring-necked pheasant (*Phasianus colchicus*), and ruffed grouse (*Bonasa umbellus*) (Robertson and Rosenberg 2003).

Species that commonly use aquatic environments include great blue heron (*Ardea herodias*), red-winged blackbird (*Agelaius phoeniceus*), and waterfowl (ducks and geese).

Specific Comments

Chapter 3.0 Affected Environment

p. 3-45, section 3.6.1 Surface Water. Streams, including permanent, intermittent, ephemeral, or even modified waterways (historically channelized or altered streams), provide important ecological, water quality, and flood control functions. Streams provide habitat for aquatic and non-aquatic organisms and are a source of organic matter and sediment for downstream reaches. The movement of water, nutrients, organic material, and organisms relies on maintenance of these systems. Consequences of stream loss or disturbance can include increased intensity and duration of downstream flooding, lower base flows, excess sedimentation, reduced habitat quality, reduction of organic material transport, and altered productivity of downstream areas (Meyer and Wallace 2001). Impacting a small section of stream interferes with nutrient/sediment transport downstream and affects flow dynamics both upstream and downstream of the impact. Changes in hydrology of the system by dam removal or installation of physical barriers can cause increased or decreased detention time of water upstream. Changes in hydrology may result in changes in sediment transport and natural scouring of the channel during storm events or spring floods (Jackson 2003).

To minimize adverse impacts to streams as a result of road crossings, a bottomless-arch culvert or bridge crossing should be used, when practicable, to reduce impacts to aquatic habitat. If a bottomless-arch culvert or bridge is not practicable for the crossing of a stream, a culvert should be installed to match the grade of the adjacent streambed upstream and downstream of the

112-2

Under all of the decommissioning alternatives, including Phase 1 of the Phased Decisionmaking Alternative, the man-made lagoons and ponds would be excavated and backfilled and would no longer attract wildlife; thus, there would be no need to discourage wildlife from using these areas. Under the Sitewide Removal Alternative, the dams and reservoirs would be removed. Under the Sitewide Close-In-Place Alternative, the middle third of the dams would be removed and the reservoirs would be drained. Under the Phased Decisionmaking Alternative, the dams and reservoirs would continue to be monitored and maintained during Phase 1. If significant levels of contaminants were discovered, deterrent methods could be developed and implemented at that time.

112-3

Chapter 3 of this Final EIS describes the existing environment at WNYNSC. Descriptions of activities such as those described in this comment are included in Chapter 6. However, none of the activities required to implement any of the proposed alternatives involve construction of roads across streams. Therefore, no change to this EIS is required in response to this comment.

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Commentor No. 112 (cont'd): Andrew L. Raddant, Regional Environmental Officer, U.S. Department of the Interior

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culvert. The culvert should be embedded into the natural stream bottom and appropriately sized to provide passage for fish and other aquatic organisms. Maintaining or replicating streambed conditions within the oversized culverts may facilitate use by salamanders, frogs, small mammals, and aquatic invertebrates, thereby maintaining habitat connectivity (Jackson and Griffin 1991). Additional culverts may be required in flood-prone areas to ensure passage of high water flows and aquatic species during high water events.

p. 3-54, section 3.6.1.2 Stream Sediment Contamination. The sediments proposed for removal are contaminated. The Department recommends that DOE/NYSERDA design the sediment removal to ensure compliance with the NYSDEC guidance found in In-Water and Riparian Management of Sediment and Dredged Material (NYSDEC 2004).

The contaminated sediment would likely require closed bucket dredging and other measures to minimize re-suspension of sediment.

To protect fish and wildlife resources during the stream excavation/dredging operations, we recommend that the following approaches and techniques be taken:

- a) That all stream excavation/dredging work be conducted between July 15 and March 15 to protect warmwater fish spawning habitat in Cattaraugus Creek.
- b) Dredging operations should be conducted in a manner to preclude any spillage of dredged material between the stream excavation site and the contained disposal area. Methods to prevent overflow should be incorporated into the dredge plan.
- c) Fencing should be installed around the work area to protect wildlife from coming in contact with exposed contaminants.

The Department recommends that DOE/NYSERDA evaluate the use of natural stream design in their restoration efforts instead of proposing to channelize the stream channel and install rock riprap. Stream channelization and installation of riprap or other hard material is known to increase stream velocities during high precipitation events, causing erosion and sedimentation and adversely affecting downstream waterways.

The Department recommends that DOE/NYSERDA conduct ecologic studies including aquatic/benthic/macroinvertebrate studies in the streams on site to evaluate the biota prior to project implementation and for use in planning on-site restoration/mitigation project components. Please clarify if these studies were already conducted and if so, include the information in the DEIS.

p. 3-74, section 3.8.1 Terrestrial Resources. The DEIS characterizes the majority of the site as an eastern deciduous forest with beech (*Fagus* sp.), maple (*Acer* sp.), eastern hemlock (*Tsuga canadensis*), and white pine (*Pinus strobus*). The DEIS states that: 1) approximately 35 species of reptiles and amphibians may occur on the site, however, only ten amphibians and one reptile have been observed; 2) 175 species of birds have been recorded, but does not reference any documents; and 3) 50 mammalian species may occur on site, however, only 22 have been observed. References should be included in the Final EIS (FEIS).

p. 3-75, section 3.8.2 Wetlands. On January 26, 2006, the Buffalo District of the U.S. Army Corps of Engineers (Corps) confirmed that the 375-acre site has 34.09 acres of jurisdictional

	112-3 <i>cont'd</i>		
	112-4	112-4	Chapter 3 of this Final EIS describes the existing environment at WNYNSC. Descriptions of activities such as those identified in this comment would be included in Chapter 6. Because only small streams would be dredged, and those streams would be completely diverted before dredging, Chapter 6, Sections 6.3 and 6.5, have been revised to clarify the nature of the dredging activities and to include the relevant measures identified in this comment.
	112-5	112-5	Chapter 6, Section 6.3, of this Final EIS has been revised to indicate that natural stream design will be considered when planning restoration activities.
	112-6	112-6	A comprehensive ecological survey of the site was conducted in the early 1990s (WVNS 1992), including a survey of benthic macro invertebrates, which was used in developing both the Revised Draft EIS and this Final EIS.
	112-7	112-7	The source of this information (WVNS 1996) is cited at the end of the appropriate paragraphs in Chapter 3, Section 3.8.1, of this Final EIS.
	112-7	112-8	Impacts to wetlands, including Section 404 requirements, are described for each of the alternatives, including the No Action Alternative, in Chapter 4, Sections 4.1.6.1 through 4.1.6.4. Mitigation measures are also addressed in Chapter 6, Section 6.5. DOE would avoid impacts to wetlands to the extent possible; where impacts are unavoidable, DOE would follow both Federal and state requirements, including a wetlands statement of findings under 10 CFR 1021.313(c) and 1022.14, as appropriate.

Commentor No. 112 (cont'd): Andrew L. Raddant, Regional Environmental Officer, U.S. Department of the Interior

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wetlands and 2.43 acres of non-jurisdictional wetlands on site. The NYSDEC confirmed that 17.3 acres are regulated under Article 24.

We understand that DOE/NYSERDA is working with the Corps on a jurisdictional wetland determination and that a Clean Water Act (CWA) section 404 permit will be sought for any discharges of dredged or fill material into waters of the U.S. (Clean Water Act Pub. L. 92-500, as amended by Pub. L. 95-217, 33 U.S.C. 1251, *et seq.*).

We strongly recommend avoiding impacts to wetlands and other aquatic habitat systems. We also recommend establishing protective vegetative buffers around wetlands and establishing deed restrictions to protect the remaining wetlands. If wetland impacts are unavoidable, DOE/NYSERDA should minimize impacts to the greatest extent practicable as required by the CWA section 404(b)(1) Guidelines at 40 CFR 230.10 (a)-(d).

p. 3-79, section 3.8.3 Aquatic Resources. Cattaraugus and Buttermilk Creeks are perennial streams located in the immediate vicinity of the project or on the project site. Three intermittent streams – Friedman Creek, Franks Creek, and Quarry Creek – are located on site. These water bodies flow directly into Cattaraugus Creek and into Lake Erie. The site consists of developed and undeveloped areas with open lands and forests that provide valuable wildlife habitat. In addition, several wetlands have been delineated on the project site and include forested, scrub shrub, and emergent wetlands that support a variety of terrestrial and aquatic species, including rare species.

The following information should be included in the FEIS to characterize downstream resources that may be affected by the activities on site:

Cattaraugus Creek is a meandering, perennial stream that supports a warmwater fishery including smallmouth bass, walleye, yellow perch, bullhead, rock bass, salmon, and trout. In the late fall, thousands of anglers take advantage of the annual steelhead trout runs in the lower reaches of Cattaraugus Creek. This area has supported populations of at least 5 rare fish species including the globally rare and state-threatened eastern sand darter. Of the 5 fish species, only the mooneye, a state-threatened species, has been recorded in recent times (TNC Lake Erie Gorges Report).

p. 3-79, section 3.8.4 Threatened and Endangered Species. As you are aware, Federally-listed species in Cattaraugus County include the endangered clubshell mussel (*Pleurobema clava*) and the candidate, rayed bean (*Villosa fabalis*). The bald eagle was delisted in August 2007; however, it remains protected by the MBTA, BGEPA, and NYSDEC.

The Service responded DOE's request for information on Federally-listed species in a letter dated July 29, 2008. In response, the Service recommended that the Department of Energy obtain a list of species known to be present in Cattaraugus County from the Service's website, and to follow the ESA consultation procedures.

The DEIS states in the third paragraph that "although reported in Cattaraugus County, clubshell and rayed bean were not found in Buttermilk or Cattaraugus Creeks when those streams were surveyed in 1991." The Service has no knowledge or a copy of the 1991 survey. The FEIS should include the correct citation, including an explanation of when and where the surveys were taken and what the current monitoring protocols are for radiological impacts to these species.

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112-9 Chapter 3, Section 3.8.3, has been revised to include mention of the downstream fisheries and the popularity of the lower reaches of the stream for recreational fishing. The text has not been revised, however, to mention the mooneye because, according to NYSDEC (<http://www.dec.ny.gov/animals/26032.html>), it is only found at the mouth of the creek some 25 miles downstream from the site.

112-10 The comprehensive ecological survey of the site noted in the first sentence of the third paragraph of Chapter 3, Section 3.8.4, correctly references WVNS (West Valley Nuclear Services Company) 1992, Environmental Information Document, Vol. XI, Ecological Resources of the Western New York Nuclear Services Center, WVDP-EIS-010, Rev. 0, West Valley, New York, December. That study, which includes surveys for aquatic macro invertebrates, found no mussel species in either Buttermilk or Cattaraugus Creek.

112-10

During preparation of the Revised Draft EIS, DOE requested information on threatened and endangered federally and state-listed species and significant natural communities from the U.S. Fish and Wildlife Service (USFWS), the New York Natural Heritage Program, and state and local experts (see Appendix O, consultation letter to S. Doran, USFWS, from B. Bower, West Valley Demonstration Project, dated August 26, 2009). Based on the results of the site-specific surveys conducted for macrobenthos in the early 1990s, as well as consultation with USFWS, the New York Natural Heritage Program, and state and local experts, DOE has determined that the activities proposed in this Final EIS would have no effect on either the clubshell or rayed bean; therefore, additional studies are not necessary. DOE has reworded the paragraph dealing with these species to more clearly reference the 1992 site ecological study and to make it clear that the state was asked for both federally and state-listed species. The reference to Doran 2008 has been removed from this sentence.

Commentor No. 112 (cont'd): Andrew L. Raddant, Regional Environmental Officer, U.S. Department of the Interior

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We understand that the DOE has contacted the New York Natural Heritage Program to obtain a list of known state-listed species occurrences in the vicinity of the site. The DOE should request information on both state-and Federally-listed species. In addition, listed species may still be present even if the Heritage Database does not show any known occurrences. The next step in the consultation process involves evaluating the site for suitable habitat. If suitable habitat exists, then presence/absence surveys may be warranted. The DOE is responsible for making the final determination under section 7 of the ESA. We look forward to reviewing your final effects determination.

Chapter 4.0 Environmental Consequences

In order to determine the extent of impacts on terrestrial and aquatic habitats as a result of the proposed activities, we recommend that DOE/NYSERDA conduct a comprehensive ecological risk assessment study to evaluate risks to biota from radionuclides that occur on the West Valley Site and other areas affected by contamination. This information is essential to evaluate impacts to terrestrial and aquatic species on the WVNSC Site and assist in the decision making process (Phase II) of the preferred alternative, and should be included in the FEIS or as a supplement to the DEIS. The DOE's 2002 Report entitled "A Graded Approach for Evaluating Radiation Doses to Aquatic and Terrestrial Biota (DOE-STD-1153-2002) may be useful in the assessment.

p. 4-18, Table 4-4 Summary of Geology and Soil Resource Impacts. Site disturbance associated with removal actions including surface excavation and the construction of engineered caps would cause temporary impacts. Wildlife dispersal (mammals, birds, and fish) is expected during decommissioning and construction; however, fences will deter wildlife from entering the area and erosion control methods should reduce sediment migration during construction.

p. 4-34, Table 4-9 Summary of Ecological Resources Impacts . The Department recommends that the FEIS include impacts in acres as well as hectares in the table.

p. 4-34, Terrestrial Resources. The preferred alternative proposes to impact 2 acres of terrestrial resources and approximately 41 acres of woodlands for the remediation of the Cesium Prong (Phase 1). Phase 2 would impact about 25 acres from the construction of erosion control methods (pg. 4-39).

We recommend that the proposed tree removal be scheduled during the winter months to minimize impacts to plants and animals, especially breeding birds, and reduce erosion and sedimentation associated with site disturbance.

p. 4-35, Wetlands. The DEIS states that the project may adversely impact between 4.4 and 7.0 acres of wetland. For example, approximately 5.1 acres of wetlands are proposed to be impacted by the remediation of the Cesium Prong and about 0.2 acre (and the 100 ft buffer regulated by NYSDEC) will be impacted by the removal of the SDA. Approximately 1.8 acres will be indirectly impacted by the closures of dams and reservoirs in WMA 12.

The Corps may require a CWA section 404 permit for these impacts if the construction involves discharges of fill material into regulated wetlands and other waters. The permit process may require further consultation with the Service pursuant to the FWCA and section 7 of the ESA. As stated above, additional comments may be provided under the BGEPAs and MBTA. The Service may also provide technical assistance on fish, wildlife, wetland and aquatic impacts during development of the Final EIS pursuant to the NEPA.

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I12-11 Habitat dispersal is addressed under Terrestrial Resources in Chapter 4, Section 4.1.6.1, and is noted in Chapter 6, Section 6.5. The latter section has been revised to include mention of fencing as a deterrent to wildlife movement onto disturbed areas. That section also provides a discussion regarding implementation of a soil erosion and sediment control plan.

I12-12 The format used in this EIS is to include only one set of units in each table and to provide conversions to a second set of units as table notes. This is done to minimize the complexity and size of the tables.

I12-13 Note that the Final EIS text states that under Phase 1 of the Phased Decisionmaking Alternative, the total area impacted would be about 2 acres. Under Phase 2, the major impact would be the loss of 41 acres of terrestrial habitat for the remediation of the Cesium Prong and 25 acres from construction of erosion control measures. Chapter 6, Section 6.5, addresses mitigation measures relative to ecological resources. This section notes that, "Construction and decommissioning activities would incorporate mitigation measures for ecological impacts such as avoidance of undisturbed habitat (e.g., nesting areas) and timing land disturbing activities to avoid animal breeding seasons." Erosion control is addressed in Section 6.5.

Commentor No. 112 (cont'd): Andrew L. Raddant, Regional Environmental Officer, U.S. Department of the Interior

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p. 4-132, section 4.5.10 Ecological Resources, 3rd paragraph. In regards to the construction of U.S. Route 219, construction has begun on Section 5.

5th paragraph... "Studies have documented an average mortality rate of 2.3 birds and 3.4 bats per turbine per year (NWCC, 2004)."

The Service is actively involved in reviewing energy projects, including wind projects, under FWCA, MBTA, and the BGEPA. New studies show that the average mortality rate is much higher. Therefore, we recommend that DOE/NYSERDA revise this statement in the DEIS.

Hydrogeology

General Comments

Conclusions of the hydrogeologic studies and modeling that have been conducted at the site in past 20 years are largely consistent with the results of earlier studies conducted by the U.S. Geological Survey (Bergeron and Bugliosi, 1988; Kappel and Harding, 1987; Prudic, 1986 and Yager, 1987). On the South Plateau, the potential for lateral flow through the weathered Lavery till and much slower, downward flow through the unweathered Lavery Till are noted (p. E-53). On the North Plateau, hydraulic conductivity values (5 to 14 m/d; 6×10^{-3} to 1.6×10^{-2} cm/s) reported for the sand and gravel unit (p. 3-56, 3-58; now termed "thick-bedded unit") are similar to the 2 to 10 m/d range used Yager (1987) in a ground-water-flow model. The hydraulic conductivity of material above the eroded channel in the till surface north of the former reprocessing plant (now termed "slack-water sequence") has been found to have a higher hydraulic conductivity than surrounding areas, as noted in Yager (1987).

Estimated recharge to the sand and gravel unit used in the current modeling study (26 cm/yr, p. E-60) is identical to the effective recharge used by Yager (1987). The DEIS summarizes the ground-water budget reported by Yager (1987) on p.3-58, but fails to note that the effective recharge to ground water is total recharge (infiltration to the water table) minus evapotranspiration (ET) ($46 - 20 = 26$ cm/yr). The model documented in the DEIS uses effective recharge and does not represent ET from ground water, so the effective recharge from Yager (1987) provides the correct comparison.

Ground water contamination on the North Plateau is correlated with the location of the slack-water sequence and emanated from the former reprocessing plant, as postulated by Yager (1987). The contamination appears to be contained by ongoing remedial activities. Estimates of ground-water velocity by Yager (120 to 200 m/yr, 1987) are similar to the range reported by the DEIS (50 to 170 m/yr, Table E-12, p. E-67).

The development of the regional (far-field) ground-water-flow model is generally well documented. The vertical discretization appears sufficient, but we question the adequacy of the horizontal discretization (43 m), which is less than the grid resolution used by Yager (30 m, 1987). We understand the need to incorporate both the North and South Plateau areas in a single model, but the grid resolution should be increased to better simulate flow directions in the vicinity of the plant structures. This higher resolution model could then be divided in two parts and further refined to assess the effects of various structures proposed as remedial measures in the DEIS for the North and South Plateaus. Instead, two relatively crude near-field models were used to simulate the effects of these structures. The development and application of these near-

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112-14 Paragraph 3 of Chapter 4, Section 4.5.10, has been revised to indicate that construction of the new U.S. Route 219 Freeway is contributing to habitat fragmentation.

112-15 Chapter 4, Section 4.5.10, has been revised and appropriate references were added to acknowledge that studies conducted at wind farms in the eastern United States have indicated that bird and bat mortality may be locally higher than stated in the Revised Draft EIS.

112-16 The hydrology discussion in Chapter 3, Section 3.6.2, has been revised to clarify that the recharge rates are effective recharge rates (total recharge minus evapotranspiration). In addition, the discussion in Appendix E, Section E.2.3.3, has been clarified to make this point.

The discussion on the top of page E-30 in the Revised Draft EIS has been clarified for the Final EIS as suggested by the commentor.

112-17 The regional model was developed to understand flow on the larger scale. The separate model was used for the near-field flow analysis model because it was easier to construct and check input files and analyze predicted results.

The near-field flow analysis (Appendix E, Section E.4) has been refined for this Final EIS to reflect the more recent interpretation of the structure of the slack water sequence. The refined analysis for the North Plateau has been expanded to represent the entirety of the irregular shape of the sand and gravel unit. The revised discussion in Section E.4 clarifies the nature and results of the near-field flow analysis. The revised discussion also describes how the results were used to evaluate the alternatives.

Commentor No. 112 (cont'd): Andrew L. Raddant, Regional Environmental Officer, U.S. Department of the Interior

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field models is not well written and the presentation is difficult to follow. The DEIS does not make clear why the far-field model, which more accurately represents the flow system, was not used as the basis for these assessment simulations, which are the focus of the ground-water-flow modeling effort described in the DEIS. No summary or conclusions are presented for these simulations of alternative management scenarios, which are the main objective of the modeling effort. These concerns should be addressed in the Final Environmental Impact Statement.

Specific Comments

Chapter 3, Affected Environment

p. 3-37, Table 3-5 Summary of Erosion Rates at the Western New York Nuclear Service Center. An estimated erosion rate is included for USGS (2007) under "Downcutting of Buttermilk Creek, Optically stimulated luminescence age dating of 9 terraces along Buttermilk Creek", but no such reference appears in the reference list and, to my knowledge, no USGS studies were conducted at the site after the 1980's.

p. 3-58. The effective recharge rate (26 cm/yr, infiltration minus evapotranspiration) estimated by Yager (1987) is identical to that reported as recharge to the ground-water flow model discussed in this document (p. E-60), which does not represent evapotranspiration from ground water directly.

Appendix E, Geohydrology

p. E-21. The ground-water budgets reported here for Yager (1987) fail to mention that part of the estimated ground-water recharge was assumed to be discharged as evapotranspiration. Therefore, the effective recharge to ground water, which corresponds to "recharge" as discussed in the DEIS, is recharge minus evapotranspiration.

p. E-30, par. 1. It is not surprising that hydraulic heads simulated with a total recharge of 46 cm/yr as estimated by Yager (1987) would be too high if evapotranspiration from groundwater is not represented in the model. Please clarify in the FEIS.

p. E-42. The FEIS should include clarification on how the target water-level data were obtained through the trend analysis.

p. E-46. The reported RMSE (4.6 m) is about 10 percent of the observed measurement range. The travel-time observation (330 m in 1.6 years) is not discussed in the DEIS. The FEIS needs to clarify how this estimate was obtained. Is the travel time for a conservative solute?

p. E-58. The FEIS needs to clarify why the STOMP code was used in place of the FEHM code. In addition, the FEIS needs to make clear if the three 3D models referred to represent different management scenarios, and what the 1D model represents. The FEIS should also clarify why the boundary conditions were not taken from the far-field model, as is used in the telescopic refinement approach.

p. E-62. The FEIS should provide justification or clarification as to why a more refined approximation of the site geometry wasn't used for these simulations. This could easily be done by dividing the far-field model into separate parts and refining the finite-element mesh. Revision for the FEIS may be appropriate.

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I12-18 The citation "USGS 2007" in Table 3-5 has been changed to "Mahan 2007," which is also cited in Appendix F. The reference has been added to the list of references in Chapter 7 of this Final EIS. The reference is a memorandum from the U.S. Geological Service Luminescence Dating Lab regarding data and final luminescence ages for sediment samples collected near Buttermilk Creek and from Cattaraugus Creek and Connoisarauley Creek.

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I12-19 Clarification of selection of the target water-level data has been added to Appendix E, Section E.3.5, of this EIS.

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I12-20 Additional language was added in Appendix E, Section E.3.5, that explains how the travel time estimate was developed and acknowledges that it is based on strontium-90 travel.

I12-19

I12-21 Refinement of the grid using the Finite Element Heat and Mass (FEHM) model is a cumbersome process. Therefore, the Subsurface Transport Over Multiple Phases (STOMP) model was selected because it provides full simulation of unsaturated-saturated conditions and could be implemented more readily. The titles of Appendix E, Sections E.4.1.1, E.4.1.2, and E.4.1.3, of this EIS indicate which of the three different management scenarios the model discussed in that section represents. Also, as stated in Appendix E, Section E.4, to provide understanding of the nature of one-dimensional flow models used in estimating human health impacts in this EIS, a description of the use of a one-dimensional groundwater transport model is presented in the discussion of historical conditions (Appendix E, Section E.4.1.1). Appendix E, Section E.4 notes that the approach for development of the near-field models is to use the stratigraphy and boundary conditions incorporated into the sitewide model to the extent possible with the STOMP computer code.

I12-22

I12-22 The text for the refined near-field flow analysis (Appendix E, Section E.4, of this EIS) has been revised to state that the model for the North Plateau has been expanded to represent the entire irregular shape of the sand and gravel unit.

Commentor No. 112 (cont'd): Andrew L. Raddant, Regional Environmental Officer, U.S. Department of the Interior

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p. E-64. We assume that the attenuation of strontium-90 can be described by linear adsorption; please explain in the FEIS.

p. E-65. The FEIS should show the comparison of observed and simulated strontium-90 values as a graph.

p. E-67. The FEIS should clarify/explain how the simulated velocities compare with those observed.

p. E-70. The FEIS should clarify what the 1D model is/references to in this discussion; please clarify in the FEIS.

p. E-71-72. The FEIS should clarify/present how the 2D cap model is coupled to the near-field model, and the conclusions from these near-field simulations.

Thank you for the opportunity to provide comments on the DEIS for the "Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center." Please contact me at the above-noted address, or at 617-223-8565, if I can be of further assistance. For specific questions on hydrogeology, please contact Mr. Richard Yager, U.S. Geological Survey, 30 Brown Road, Ithaca, New York 14850-1573 (phone: 607-266-0217, ext. 3004). Questions concerning fish and wildlife resources should be directed to Ms. Sandra Doran, U.S. Fish and Wildlife Service, New York Field Office, 3817 Luker Road, Cortland, New York 13045 (phone: 607-753-9334).

Sincerely,

Andrew L. Raddant
Regional Environmental Officer

- || **I12-23** The text for the refined near-field flow analysis (Appendix E, Section E.4, of this EIS) discusses the use of linear adsorption of strontium to approximate the plume profile observed at the site and provides reference to two site-specific measurements of the value of the distribution coefficient of strontium.
- || **I12-24** A comparison of observed and simulated values is presented in Appendix E, Figure E-45, of this EIS.
- || **I12-25** A comparison of values of groundwater flow observed on site and predicted using the regional model is presented in Appendix E, Table E-7, of this EIS. The ability of the near-field flow model to match observed levels of strontium-90 on the North Plateau provides additional evidence that flow parameters are in the proper range.
- || **I12-26** The text for the refined near-field flow analysis (Appendix E, Section E.4, of this EIS) states that the one-dimensional model is used for estimation of human health impacts.
- || **I12-27** The text for the refined near-field flow analysis (Appendix E, Section E.4, of this EIS) clarifies how the cap model is integrated with the near-field flow model and discusses the conclusions from these analyses.

Commentor No. 112 (cont'd): Andrew L. Raddant, Regional Environmental Officer, U.S. Department of the Interior

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**Commentor No. 112 (cont'd): Andrew L. Raddant, Regional
Environmental Officer, U.S. Department of the Interior**

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Yager, R. M., 1987, Simulation of groundwater flow near the Nuclear-Fuel Reprocessing Facility at the Western New York Nuclear Service Center, Cattaraugus County, New York, Geological Survey, Water-Resources Investigations Report 85-4308, U.S. Nuclear Regulatory Commission, Ithaca, New York.

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Commentor No. 113: Richard Weiskopf, MD

June 9, 2009

Richard Weiskopf MD
5031 Onondaga Road
Syracuse, NY 13215

We need comprehensive clean up and excavation of the West Valley nuclear waste site NOW. It is unconscionable to have left this radioactive waste unattended to all this time. More delay will endanger future generations.

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113-1

DOE and NYSERDA acknowledge the commentor's request for comprehensive cleanup and excavation of WNYNSC now. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 114: Edward and Mary Chapin

June 9, 2009

Mary Q. Chapin

LWV, Utica/Rome Metro

56 Woodbrooke Road

New Hartford, NY 13413-4805

20 years ago the LWV trained a group to monitor nuclear waste sites. Since that time, there has been no appreciable effort to protect the public. Instead projects such as West Valley have been stalled and stonewalled with the result that millions of people in the areas contiguous to nuclear waste sites have been placed in jeopardy. It is criminal to leave nuclear and/or chemical waste in an area that could endanger soil, air and water for millions of people. We sincerely hope that this project becomes a priority (before 30 years goes by) and that the public is kept aware of this situation and is a participant in any decisions that are made regarding the West Valley nuclear Waste cleanup. Respectfully yours, Edward and Mary Chapin

114-1

114-1 DOE and NYSERDA note the comment. It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. Decisions on the remaining approximately 30 percent of these radionuclides would be made as soon as practicable, but no later than 10 years from issuance of the initial Record of Decision and Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Please see the Issue Summary “Concerns About Potential Contamination of Water” in Section 2 of this CRD for a discussion of this issue and DOE’s and NYSERDA’s response.

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until final decisions are made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support

Commentor No. 114 (cont'd): Edward and Mary Chapin

the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate Phase 2 decisions for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

**Commentor No. 115: Keith McConnell,
U. S. Nuclear Regulatory Commission**

**United States Nuclear Regulatory Commission Comments on Revised Draft
EIS "Decommissioning and/or Long-Term Stewardship at the West Valley
Demonstration Project and Western New York Nuclear Service Center"
DOE/EIS-0226-D (Revised) November 2008**

Review Results: As part of this review effort, NRC evaluated significant comments that were made by NRC during the 2008 review (pre-concurrence and concurrence meeting) and also performed a high-level review of the document from a National Environmental Policy Act (NEPA) perspective. Most of the comments made by NRC last year were incorporated into the DEIS issued for public comment. Some of the comments were not incorporated, but the lack of incorporation of these comments would not necessarily prevent NRC from continuing to concur on the document.

The following list of comments is not considered complete; many of the comments that were made by NRC during the pre-concurrence review that were not incorporated in the EIS are expected to be considered during the ongoing assessment period (e.g., comments made on the erosion modeling in the long-term performance assessment due to the understanding that additional data will be collected and modeling performed to continue to evaluate potential erosion impacts at the West Valley site).

NRC is also still awaiting more detailed information from DOE on its resolution of parking lot issues. Some of these issues may be repeated below.

The detailed comments on the following pages can be summarized and binned into three categories:

Potential Issues Identified During Parallel Review of DEIS and Decommissioning Plan

- Differences in scenarios and parameter values evaluated in DEIS and DP used to calculate DCGLs
- Additional detail regarding DCGL development for the Preferred Alternative could be provided in the DEIS
- Potential lack of consideration of significant adverse (or beneficial) impacts resulting from Phase 1 engineered barriers on remaining facilities or closure

Comments Related to Issues Expected to be Addressed During the Ongoing Assessment Period

- Uncertainty in hydrogeological conceptual models
- Uncertainty in long-term performance assessment models (e.g., erosion predictions)

Other Comments that Would Increase Transparency in the DEIS

- Resolution of other comments listed below would also greatly increase transparency in the FEIS.

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**Commentor No. 115 (cont'd): Keith McConnell,
United States Nuclear Regulatory Commission**

Detailed Comments

1. Depending on DOE resolution of issues NRC raised in its requests for additional information on the decommissioning plan, DOE should consider updating the DEIS to reflect its latest understanding of potential significant impacts that may result from implementation of Phase 1 remedial activities (e.g., impacts of hydraulic barriers on tank/vault drying system, increased corrosion potential, and changes to flow velocities/directions on the North Plateau that may affect closure decisions) that were not previously considered in the EIS. DOE should also consider performing additional modeling during the ongoing assessment period to consider the impact of hydraulic barriers on the flow field making use of post-remedial monitoring data.
2. Additional information regarding the water balance for the South Plateau based on results from the regional groundwater flow modeling could be presented in Appendix E and in Chapter 3. Modeling results provided in Appendix E provide limited information on the water balance for the South Plateau. Additional information on the fraction of infiltration expected to seep or discharge to surface water versus infiltrate through the lavery till to the Kent Recessional Sequence (KRS) could be provided.
3. A key uncertainty identified in the water balance for the North Plateau is the discharge rate to Erdman Brook. As the highest rate is on the same order of magnitude as the total outflow of water from the North Plateau and lowest rate an order of magnitude lower than the highest rate (see Table E-7), it would seem important to include a discussion regarding how this uncertainty is being managed to support decommissioning decision-making.
4. A statement is made on page E-51 that a more refined interpretation of flow in the area of Erdman Brook would require further characterization of the lavery till sand, but that at present it was not expected to be a critical factor to the prediction of contaminant transport at the site. A basis for this statement is not provided. As discussed in a DP comment, the updated geological interpretation near the process building may impact exposure pathways for the Phased Decisionmaking alternative. Page E-10 identifies a flow pathway from the lavery till sand to streams as unconfirmed but this pathway may be important to the risk calculations if hydrological connection to the slack water sequence near the Main Plant Process Building is present as indicated on Figure E-8. Appendix E models were constructed and calibrated with old geologic interpretations and to old well screen designations (e.g., Figure E-21 shows locations of slack-water sequence and lavery till sand wells that do not appear to be consistent with current geological interpretations). Final calibrated parameters could be significantly different due to changes in hydrostratigraphy and updated modeling with the revised geology should be considered to support future decisions during the ongoing assessment period.

115-1	115-1	Appendix E of this Final EIS includes updated information on the changes to flow velocities and directions following installation of the hydraulic barriers that would support the Phase 1 removal actions. Water levels in the area of the waste tank farms would continue to be managed by the existing dewatering wells noted in Appendix C.
115-2	115-2	Water balance information has been developed for the revised near field-flow analysis presented in Appendix E, Section E.4, of this EIS. Tables have been added to Appendix E to present this water balance information.
115-3	115-3	Water balance information has been developed for the revised near-field flow analysis presented in Appendix E, Section E.4, of this EIS. Tables were added to Appendix E to present this water balance information. This shows that the flow to Erdman Brook is a small percentage (approximately 15 percent) of the total outflow from the North Plateau. The data are reported in Table E-10.
115-4	115-4	The revised interpretation of the Lavery till sand unit is that it is totally contained in the Lavery till. The potential for a pathway from the Lavery till sands to the streams, as described in the Revised Draft EIS, is no longer considered appropriate. The revised interpretation is used in the updated near-field flow analysis presented in Appendix E, Section E.4, of this EIS. The hydrologic effect of this updated interpretation is discussed in Section E.4. The dose consequences are presented in Chapter 4, Section 4.1.10, and Appendix H.

**Commentor No. 115 (cont'd): Keith McConnell,
United States Nuclear Regulatory Commission**

5. Transparency regarding how Appendix E flow and transport modeling results were used to support Appendix H long-term performance assessment calculations could be increased. For example, information on predicted seepage and baseflow from Appendix E modeling along stream reaches and other data on surface water flow rates and dilution factors used in the risk calculations in Appendix H could be provided.
6. It is not clear how lack of consideration of subsurface structures on the North Plateau affects the risk calculations (see pages E-51 and E-53). For example, subsurface structures underneath the Main Plant Process Building significantly affect the flow field and vertical profile of the North Plateau Groundwater Plume. These structures were not considered in the Appendix E models and the significance of their inclusion on the risk calculations is not clear.
7. A transport pathway to the KRS is dismissed for an on-site groundwater receptor (see page H-49). More specific information from the regional groundwater flow model on the expected rates of infiltration into the KRS from the overlying lavery till on both the North and South Plateaus could be provided to support elimination of this pathway of exposure or a more quantitative evaluation of potential impacts to the KRS could be provided.
8. The near-field flow and transport model assumes atmospheric pressure boundary conditions for the east side of the model domain to simulate seepage to Erdmann Brook and a constant head boundary condition to simulate discharge to the North Plateau drainage ditch to the north (page E-60). Results of the modeling appear to show little to no flow towards Erdman Brook on the east (Figure E-37). It is not clear that the water balance for the near-field model is consistent with the data. It is also not clear why the eastern portion of the model was truncated for the Phased Decisionmaking alternative (page E-76).
9. NRC expects DOE to continue to collect data and update modeling during the ongoing assessment period to address key uncertainties identified in the long-term performance assessment.
10. Transparency in Appendix H dose calculations could be increased including the following:
 - a. Reference is made to use of RESRAD and tables of parameters are provided for the RESRAD calculations (page H-11 through H-14); however, Appendix G discusses a human health effects impact model with no specific reference to RESRAD. Please clarify if the human health effects impact model is RESRAD.
 - b. Discuss the appropriateness of using one set of parameters to perform risk calculations for the entire site when the parameters would vary based on location on the site, exposure point location, and presence of engineered barriers (see Tables H-6 through H-11).
 - c. Clarify if the occupancy factors for the on-site erosion receptor described on page H-18 are the same as those presented in Table H-9.

115-5	115-5	The transparency has been improved by the addition of clarifying text to Appendix H, Section H.2.2.1, of this EIS.
115-6	115-6	The updated near-field flow analysis shows relatively rapid vertical mixing for sources near the Main Plant Process Building. The inclusion of additional structural detail in the analysis would not affect this conclusion. Values of hydraulic conductivity used for subsurface structures for the Sitewide Close-In-Place Alternative are presented in Appendix E, Section E.4.1.2, of this EIS.
115-7	115-7	The primary reason for dismissing the Kent recessional sequence from being a pathway for a receptor on the NDA or SDA is because the Kent recessional sequence is only partially saturated and is not considered a reasonable aquifer. The partial saturation of the Kent recessional sequence is observed in monitoring wells and is predicted by the hydrologic models. Flow balance results from the near-field flow models have been added to Appendix E of this EIS; these results report Darcy velocities to the Kent recessional sequence on the order of 2 centimeters per year. The regional-scale model reports similar results.
115-8	115-8	The domain of the near-field flow waste has been expanded in the updated analysis presented in this Final EIS. The expanded domain includes the entire length of Erdman Brook. Water balance tables for the updated analysis presented in Appendix E, Section E.4, of this Final EIS show the limited flow to Erdman Brook.
115-9	115-9	DOE and NYSERDA note the comment; however, it is premature to commit to detailed studies and projects in this EIS. DOE and NYSERDA agree that, if the Phased Decisionmaking Alternative is selected, under Phase 1 important work would be conducted that is critical to completing the project. For example, information gathering or improved analytical methods for long-term performance assessment conducted during Phase 1 would aid consensus decisionmaking for Phase 2 activities.
115-10	115-10	Appendix G does refer to RESRAD. Appendix G, Section G.2.1, of this EIS describes the use of RESRAD for the analysis of impacts to surface soil users. Section G.3.4.3 refers to the use of RESRAD for the calculation of impacts from groundwater releases. Section G.4.2.3 refers to the use of RESRAD for the analysis of impacts from direct intrusion.
115-11	115-11	Parameters are varied to reflect known changes in physical properties. Available data are adequate to support different properties between the North and South Plateaus, but are not adequate to support local variation on a finer scale.

**Commentor No. 115 (cont'd): Keith McConnell,
United States Nuclear Regulatory Commission**

<ul style="list-style-type: none"> d. The RESRAD parameterization in the EIS is different than used in the decommissioning plan for Phase 1 (e.g., Table H-10 ingestion rates are from NUREG-5512 while RESRAD default values are generally used to derive DCGLs in the DP). Clarify why risk estimates in the DEIS are based on different scenarios and parameters than those evaluated in the DP. e. Deer bioaccumulation factors should be provided (see Table H-16). f. A statement is made on page H-22 that the calibrated one-dimensional Sr-90 model presented in Appendix E was used for risk calculations starting from the initial release in 1968. It is not clear why current plume distributions were not used in the risk calculations or why the model was not calibrated to present conditions rather than calibrating the model to the 1995 plume data. Significant inaccuracies in the leading edge of the plume could result in significant underestimates of the risk to downgradient and offsite receptors due to decay. g. A statement is made on page H-47 that for the purposes of the analysis of the No Action alternative, the Main Plant Process building and vitrification facility and waste tank farm are assumed to have collapsed and lost their structural integrity after exactly 100 years. The implementation of this assumption in the performance assessment calculations is not clear. For example, are releases assumed to not occur until 100 years or are releases assumed to occur but catastrophic failure assumed at 100 years? h. It is not clear why zero doses are realized for the North Plateau Groundwater Plume in Table H-45 or why there would be no dose to a home construction worker in Table H-46. The plume is close to the surface on the North Plateau and could result in a dose to a home construction worker. Sr-90 contaminated groundwater could be deposited on the ground surface and lead to resident farmer doses. i. Clarify why the well driller doses are negligible in Tables H-44 and H-45 (i.e., clarify if this is a result of the cuttings pond shielding assumption). Clarify if cuttings pond assumptions affecting shielding for the well driller scenario are consistent with regional practices and expected site conditions. j. Suggest adding footnote "a" in Tables H-44 and H-45 to the appropriate rows in the Sitewide Close-In-Place alternative column. It appears a sentence should also be added to footnote "a" to state that the dose to the well driller is also nearly zero due to presence of the cap. k. Footnote "a" on page H-49 may need to be corrected as a well appears to be located on top of Lagoon 1 on Figure H-3. l. Suggest adding statements, as appropriate, to the paragraphs on page H-70 or other sections of the EIS regarding how facilities will be maintained in a safe configuration during the ongoing 	<p>115-13 The text for the onsite erosion receptor has been expanded to clarify that exposure is continuous, and thus different from the data values for exposure presented in Table H-9 for a residential farmer.</p> <p>115-14 The scenarios and parameters used in this EIS are considered to be reasonable and appropriate for estimating environmental consequences consistent with the requirements and guidance of NEPA.</p> <p>115-15 The scenarios and parameters used in the <i>Phase 1 Decommissioning Plan for the West Valley Demonstration Project (Phase 1 Decommissioning Plan)</i> are being prepared consistent with the separate NRC guidance for preparing Decommissioning Plans.</p> <p>115-16 The deer bioaccumulation factors have been added to Appendix H, Table H-16, of this EIS, even though this pathway is a small contributor to total receptor dose.</p> <p>115-17 The 1995 data is the primary source of data for calibrating the plume because it is the only sampling program that characterized the entire plume. The more recent data is only for selected areas of the plume, but it is still used as a check on the calibrated plume model. In addition, the long-term performance assessment considered the potential impacts of the radionuclides (carbon-14, iodine-129, uranium-238, and plutonium-239) included in the estimated source term, but not reflected in the sampling program.</p> <p>115-18 The release is assumed to occur after 100 years because it is assumed that the maintenance activities will be effective in keeping water out of the facilities.</p> <p>115-19 Appendix H, Tables H-46 and H-47, of this EIS have been revised to present estimates of dose for the North Plateau Groundwater Plume for the direct intrusion scenario.</p> <p>115-20 The cutting pond assumptions are consistent with traditional well driller assumptions used in NRC and DOE analyses. Appendix H, Tables H-46 and H-47, of this EIS were revised to present dose estimates for the North Plateau Groundwater Plume.</p> <p>115-21 In finalizing this EIS, the footnotes for these tables were checked to ensure that they accurately reflect the analysis.</p> <p>115-20 The footnote was revised in this Final EIS to clarify that the cap prevents direct intrusion for the NDA, SDA, Main Plant Process Building, and Waste Tank Farm.</p>
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**Commentor No. 115 (cont'd): Keith McConnell,
United States Nuclear Regulatory Commission**

- assessment period to prevent any significant releases into the environment under the Phased Decisionmaking alternative.
11. Other specific performance assessment comments:
- Discuss whether a time- and spatially varying Kd to account for the geochemical changes (e.g., buffering of the acid release that led to creation of the North Plateau Plume) along the flow path from the Main Plant Process Building over time could improve calibration of the transport model to data.
 - Although the peak was captured adequately, the leading edge of the plume is also important as it impacts the downgradient and offsite Sr-90 concentrations (see Figure E-41 and associated text). If the leading edge of the plume is delayed, the risk associated with Sr-90 may be significantly reduced due to decay.
 - Additional details on the representation of the HLW tanks in the models would assist with interpretation of the results..
 - It is not clear why recharge was reduced upgradient of the slurry wall to simulate the effects of the slurry wall. It would seem that the slurry wall hydraulic properties would lead to the intended response (page E-71).
 - Page H-5, first bullet, It appears Franks Creek should be changed to Buttermilk Creek
 - A footnote is provided on page H-8 that states that dilution along any stretch of Buttermilk Creek towards Cattaraugus Creek would have essentially the same dilution. A basis for this statement is not provided. Provide information on the dilution factor for this stretch and provide supporting information for this assumption.
 - Suggest including the expected extent of the engineered barrier (cover) in Figure H-3 so that it is clear to the reader where certain exposure scenarios are either reduced or eliminated due to the presence of a thick cover.
 - Table H-4, page H-10, Suggest adding text or a footnote to clarify if the maximum hole depth listed in the table or the actual depth to waste is used in the risk calculations.
 - Table H-4, page H-10, It is not clear what soil ingestion rates are used for the well drilling scenario and how the presence of a wet cuttings pond affects the inhalation dose.
 - Page H-11, first paragraph, Suggest adding clarifying text to state that the resident farmer is evaluated for only off-site receptors in the erosion case.
 - Table H-43, Footnote "c" states that the dose for the North Plateau Groundwater Plume for the No Action alternative is slightly less than the Sitewide Close-In-Place Alternative but this does not appear to be the case. Please check the footnote and values in the table.
12. Draft Environmental Impact Statement (EIS) Section 4.1.6 and Appendix M indicate that wetland delineation activities were conducted for the

- 115-21** Additional explanation was added as suggested by the comment.
- 115-22** The rate of contaminant transport is influenced by both hydraulic conductivity and the distribution coefficient (Kd). As illustrated in Appendix E, Section E.4, of this EIS, the use of a model that reflects two zones with different hydraulic conductivity provides a good match to monitoring data. The text of Appendix E identifies spatial variation of groundwater velocity as an important factor in determining the shape of the leading edge of the plume.
- 115-23** For the purpose of the long-term performance assessment, the entire contaminant inventory of the plume is represented as discharging to offsite surface water through the North Plateau ditch rather than through the combination of the ditch and seeps along Franks Creek. In addition, the revised near-field groundwater flow analysis predicts movement of the peak of the plume off site in less than 100 years. The combination of these factors reduces the role of decay and provides a conservative estimate of dose to offsite receptors.
- 115-24** Appendix E, Section E.4, of this EIS contains additional details on the representation of the Waste Tank Farm in the long-term performance assessment model.
- 115-25** The refined near-field flow analysis (Appendix E, Section E.4, of this EIS) includes a french drain for a more realistic representation of the system and uses the historical estimate of recharge rate for the upgradient area.
- 115-26** The recommended change to cite Buttermilk Creek was made.
- 115-27** The note was expanded to provide a basis for the assumption.
- 115-28** Revising Appendix H, Figure H-3, of this EIS would make it too difficult to read. Instead, a footnote has been added to the text in Section H.1.2, which refers the reader to Appendix C figures that show the extent of the various engineered caps.
- 115-29** Table H-4 was expanded to include the requested information.
- 115-30** No changes to the table are necessary. The text describing the well driller scenario in Appendix H (and Appendix G) was revised to remove the inadvertent soil ingestion pathway in order to accurately reflect the analysis performed in this EIS.
- 115-31** The suggested change was not made. An onsite resident farmer along Buttermilk Creek is analyzed for the unmitigated erosion case.

**Commentor No. 115 (cont'd): Keith McConnell,
United States Nuclear Regulatory Commission**

Western New York Nuclear Service Center (WNYNSC) in July and August 2003 and confirmed by the U.S. Army Corps of Engineers in November 2005. Note that a Supreme Court decision (*Rapanos vs. United States*) was made in June 2006 which addressed the geographic extent of federal jurisdiction under the Clean Water Act. In 2007, the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency issued joint guidance to their staffs on implementing the court's decision. The guidance suggests that the two agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether the waters have a significant nexus with traditionally navigable waters:

- Non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary

In addition, in July 2008, the Draft Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region was published, which is part of a nationwide effort to address regional wetland characteristics and improve the accuracy and efficiency of wetland-delineation procedures.

The 2007 guidance and 2008 draft manual may warrant a revision of the determination of 0.98 hectares [2.43 acres] of isolated wetlands that were previously determined to be not under U.S. Army Corps of Engineers jurisdiction.

Editorial Comments

13. Chapter 1 defines the developed areas on WNYNSC, with the exception of the state disposal area, as the project premises. Throughout the document, especially in Chapter 3, several terms are used in place of the project premises, such as West Valley Demonstration Project (WVDP) premises, WVDP grounds, WVDP project premises, WVDP, WVDP site, West Valley site, West Valley, WVDP site area, the project, and the site. As appropriate, limit the use of terms for the property to the Project Premises and WNYNSC.
14. The last sentence of Section 2.4, Alternatives Evaluated in this Environmental Impact Statement, on page 2-32 states, "The text box above describes the disposal assumptions used for each waste type." However, the referenced text box is located on page 2-30.
15. The surficial geology at the WNYNSC consists of a North Plateau, South Plateau, and East Plateau. The three plateaus are discussed throughout the document and predominantly are spelled with capital letters; however, use of capital letters is not always implemented. For consistency throughout the document, determine a grammatical standard and revise accordingly.

**115-33
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- 115-32** The results changed for the Final EIS, so the comment has been overtaken by events.
- 115-33** DOE reviewed the 2007 EPA and U.S. Army Corps of Engineers (ACE) guidance memorandum, "Clean Water Act Jurisdiction," and the 2008 ACE *Draft Interim Regional Supplement to the ACE Wetland Delineation Manual*. With regard to the latter, the first page of the draft states that, "The determination that a wetland is subject to regulatory jurisdiction under Section 404 or Section 10 must be made independently of procedures described in this supplement." Thus, the issue of whether or not the 12 isolated wetlands are jurisdictional depends on a review of the 2007 EPA and ACE guidance memorandum.
- The guidance memorandum states that ACE will decide the jurisdiction of isolated wetlands "...based on a fact-specific analysis to determine whether or not they have a significant nexus with a traditional navigable water." The guidance goes on to state that, "...(the) analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters." Although a specific analysis has not been conducted, DOE recognizes that the 12 isolated wetlands identified in 2003 and reaffirmed during the 2005 review are similarly situated to the site tributaries, as are the jurisdictional wetlands. Further, these wetlands could be expected to function similarly because, like many jurisdictional wetlands, nearly all are wet meadows. Thus, for purposes of the analyses in this EIS and based on the new guidance, DOE has conservatively included the 0.98 hectares (2.43 acres) of isolated wetlands as jurisdictional, thereby resulting in a total area of regulated wetlands of 14.78 hectares (36.52 acres). Chapter 3, Section 3.8.2; Chapter 4, Sections 4.1.6.1, 4.1.6.2, and 4.1.6.3; and Appendix M of this EIS have been revised to reflect this change.
- 115-34** This Final EIS has been reviewed and revised for consistent terminology. "Project Premises" is the term used for the area and facilities used by DOE to carry out its responsibilities under the West Valley Demonstration Project Act. "Western New York Nuclear Service Center" and "the site" are used interchangeably, as appropriate. A text box has been added to Chapter 1 to define these terms.
- 115-35** The reference to the text box has been reviewed and revised accordingly in this Final EIS.
- 115-36** This EIS has been revised to use capital letters when referring to the specific plateaus.

**Commentor No. 116: Barbara Warren,
Citizens' Environmental Coalition**

■ Seneca Nation of Indians ■

Beyond Nuclear ■ Buffalo Diocese Care for Creation Committee ■ Canadian Coalition for Nuclear Responsibility ■ Catholic Charities of Buffalo ■ Center for Health, Environment & Justice ■ Citizens Campaign for the Environment ■ Citizens' Environmental Coalition ■ Citizens Resistance at Fermi 2 ■ Coalition for a Nuclear-Free Great Lakes ■ Coalition on West Valley Nuclear Wastes ■ Community Concerned About NL Industries ■ Concerned Citizens of Cattaraugus County ■ Don't Waste Michigan ■ Empire State Consumer Project ■ Environmental Action Group of Western New York ■ Environmental Advocates of New York ■ Finger Lakes Citizens for the Environment ■ Finger Lakes Zero Waste Coalition ■ Fluoride Action Network ■ Freshwater Future ■ Franciscan Sisters of St. Joseph ■ Great Lakes Sport Fishing Council ■ Great Lakes United ■ Greenpeace ■ Hopewell Junction Citizens for Clean Water ■ Niagara Improvement Association ■ Niagara Watershed Alliance ■ Nuclear Information & Resource Service ■ NY Public Interest Research Group ■ Peace Action of Central New York ■ Peace & Justice Committee ■ Public Employees Federation/Encon ■ Rainbow Alliance for Clean Environment ■ Religious Coalition for the Great Lakes ■ Save the Pine Bush ■ Selkirk, Coeymans, Rensselaer Against Pollution ■ Sierra Club Atlantic Chapter ■ Sierra Club Niagara Group ■ Sisters of St. Joseph Global Environment Committee ■ Social Justice Committee ■ Social Justice Ministry ■ Solidarity Committee of the Capital District ■ The League of Women Voters of New York State ■ Veterans For Peace, Chapter 10 ■ WNY Council on Occupational Safety & Health ■ Western NY Peace Center ■

September 8, 2009

Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
US Department of Energy
PO Box 2368
Germantown, MD 20874

Re: Draft Decommissioning and /or Long -Term Stewardship EIS Comments

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**Commentor No. 116 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

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Dear Ms. Bohan,

The final cleanup plan for the West Valley nuclear waste site is an extremely important issue which will have a major impact on the future of the Great Lakes and New York's environment, drinking water supplies, public health and economic vitality for tens of thousands of years. Four options are presented in the Draft Environmental Impact Statement for the West Valley site: 1) Sitewide Removal; 2) Sitewide Close-In Place; 3) Phased Decision Making; and 4) No Action. The agencies' preferred alternative, Phased Decision-Making, fails to satisfy the requirements of NEPA, as it is a non-decision which therefore unnecessarily postpones the cleanup decision for nearly 99% of the site's radioactivity for up to 30 more years.

We strongly recommend that the Department of Energy (DOE) and NYS Energy Research & Development Authority (NYSERDA) select the Sitewide Removal Alternative. This is the only alternative that provides a comprehensive cleanup of the site through excavation of the large inventories of radioactive wastes in the burial grounds. Sitewide Removal also provides the safest solution by ultimately removing radioactive waste from an unstable site with serious erosion problems. This approach prevents catastrophic releases which could cause severe damage to communities, drinking water supplies and Lakes Erie and Ontario and the St. Lawrence Seaway.

The Sitewide Removal approach also is the most cost-effective. The state-funded study, The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (FCA Study) found that leaving buried waste on site is both high risk and expensive while a waste excavation cleanup presents the least risk to a large population and the lowest cost. Over 1000 years, waste excavation costs \$9.9 billion while onsite buried waste costs \$13 billion to \$27 billion or more if a catastrophic release occurred.

We oppose the options which would leave radioactive waste buried on the site, including the preferred Phased Decision Making Alternative. The Phased Decision Making in Phase 1 would demolish the process building in order to excavate the suspected source of the radioactive strontium plume, remove a portion of the strontium plume, clean up the lagoons and install barriers in an attempt to control groundwater contamination. All of this cleanup work would address only 1.2% of the total radioactivity on the site. Decisions on a majority of the waste, or almost 99% of the radioactivity would be put off for up to 30 years and addressed in a vaguely described Phase 2 with no defined public process as required by NEPA (National Environmental Policy Act). Wastes left buried on site includes high-level radioactive waste tanks and sludge and the two burial grounds with enormous amounts of long-lasting radioactive waste. Given the decades of study of this site, and the 14 year delay on the DEIS, the Phased Decision Making approach is an unacceptable and unnecessary delay.

In addition, this Alternative not only fails to tell us about key elements of Phase I, such as the type of data collection, but it is unclear about what future actions would be done in Phase 2. As such this DEIS is not in compliance with both the State Environmental

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| 116-1 | DOE and NYSERDA have prepared a single, comprehensive EIS for the decommissioning and long-term stewardship of the WNYNSC. This EIS adequately analyzes the totality of the environmental impacts of a broad spectrum of reasonable alternatives that meet the respective purposes and needs of DOE and NYSERDA (Sitewide Close-In-Place, Phased Decisionmaking, and Sitewide Removal), as well as the No Action Alternative required by NEPA and SEQR. |
| 116-2 | While the Phased Decisionmaking Alternative temporarily defers a final decision on the disposition of the Waste Tank Farm, the NDA, and the Construction and Demolition Debris Landfill, DOE believes that the impacts of this deferred decision are adequately analyzed within the current EIS. |
| 116-3 | DOE and NYSERDA acknowledge the commentors' preference for the Sitewide Removal Alternative and opposition to alternatives that would leave waste on site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses. |
| 116-4 | DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. |
| 116-5 | DOE and NYSERDA have reviewed the report referred to by the commentors. Please see the "Conclusions of the Synapse Report" Issue Summary in Section 2 of this CRD for further discussion of the report's issues and DOE's and NYSERDA's response. |
| 116-4 | The commentors' statement regarding actions that would be taken during Phase 1 of the Phased Decisionmaking Alternative is consistent with what is stated in the EIS. It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue |

**Commentor No. 116 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

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Quality Review Act (SEQRA) and the National Environmental Policy Act (NEPA). Specifically, the DEIS does not fully assess the environmental impacts of a specific cleanup method because there is no decision on whether to even do a cleanup. Future decisions on the remaining 99% of the cleanup could be made by the agencies with no public input. No monitoring and maintenance of on-site facilities during the 30 year period is described. The Phased Decision Making does not commit to a full cleanup and is incomplete, thus the DEIS is incomplete.

Among the problems with leaving wastes buried onsite at West Valley is that it does not protect the environment due to serious erosion problems, and it poses a significant risk to residents if controls fail and waste pollutes nearby drinking water. Erosion is an especially powerful and fast moving force at the West Valley site as it sits on a geologically young landscape which is undergoing a relatively rapid rate of erosion. Michael P. Wilson, Ph.D., SUNY Fredonia Professor of Geosciences found in the FCA study that, "Nuclear wastes, radioactive for tens of thousands of years, will be consumed by erosion and discharged downstream to Lakes Erie and Ontario in less than 3,000 years and may be dangerously exposed in less than 200 or 300 years."

Another problem is that the potential environmental and health impacts of leaving an estimated 99% of the radioactivity on site for another 30 years was not studied in the DEIS. For instance, the high-level waste tanks, with 300,000 curies of radioactivity, are nearing the end of their functional life (50 years) and any leaks could seriously pollute the EPA-recognized sole source aquifer. Scientists found the site poses a significant danger to people who live nearby, in Buffalo and along the shores of Lakes Erie and Ontario, and if just 1% of radioactivity leaked from the site, Lake Erie water users would be exposed to substantial radiation, causing hundreds of cancer deaths, and water replacement would cost hundreds of millions of dollars. (FCA Study) The DEIS underestimates such risks and was severely criticized by NYSERDA in the Forward to the DEIS. NYSERDA stated that the DOE's environmental assessments are fatally flawed and scientifically indefensible for analyzing impacts over the long term for erosion, engineering controls and health impacts. The failure to adequately analyze the long term impacts of buried waste biases the resulting cleanup decision.

Other problems include the fact that the DEIS ignores that the site must be maintained into perpetuity if buried waste is left on site. In this case, perpetuity is not a dozen years, or even two or three generations—the buried radioactive waste would have to be monitored, tracked, and maintained in place for tens of thousands of years with burdensome and expensive maintenance costs. The EIS failed to analyze long term costs of monitoring and maintaining controls at the site for even 1,000 years and failed to consider any impacts from climate change.

The site sits on top of a sole-source aquifer and has been plagued with problems, such as radioactive contaminated groundwater. We strongly recommend that the Final Environmental Impact Statement select the Sitewide Removal Alternative as it is the only remedial approach that will protect the precious Great Lakes of Erie and Ontario.

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**116-2
cont'd**

ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

DOE and NYSERDA agree that public involvement is an essential component in the decisionmaking process for any EIS. Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until final decisions are made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate Phase 2 decisions for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

**Commentor No. 116 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

4

We have a unique opportunity at West Valley. The state and federal governments can take the long term cost effective approach and protect the Great Lakes by making the decision now to exume all of the waste before more of it leaks and causes irreversible damage. Implementing a full cleanup decision will be challenging but now is the time to make that choice and put our best resources toward protecting the water and Great Lakes region. Thank you for considering our comments. We have enclosed a penny for each group and individual with this letter to symbolize the fact that the proposed 1% cleanup will not protect the Great Lakes, a priceless freshwater resource.

Please direct correspondence to Citizens' Environmental Coalition, 33 Central Ave., Albany, NY 12210.

Sincerely,

Barbara Warren
Citizens' Environmental Coalition
 Albany, New York

Anne Rabe
Center for Health, Environment & Justice
 Albany, New York

Tony Ciarfello
Community Concerned About NL Industries
 Colonie, New York

Ellen Connell and Paul Connell, PhD
Fluoride Action Network
 Canton NY

Diane D'Arrigo
Nuclear Information & Resource Service
 Washington, DC

Doug Bullock
Solidarity Committee of the Capital District
 Albany, NY

Victoria B. Ross
Western NY Peace Center
 Buffalo, NY

116-2
cont'd

- 116-5** As indicated in the response to Comment no. 116-1, DOE and NYSERDA believe the analysis in this EIS meets the requirements of NEPA and SEQR.

Chapter 2, Section 2.4.3, of this EIS describes decommissioning activities under the Phased Decisionmaking Alternative and provides a discussion of the data collection, studies, and monitoring to be performed during implementation of Phase 1 and the purpose of each of these activities. The overall intent of these Phase 1 activities is to further characterize the site and to research technology developments and engineering to aid consensus decisionmaking for Phase 2. Section 2.4.3.3 explains how the additional data and studies would be used in making a decision regarding potential future activities. Information on current monitoring activities is provided in Chapter 3 and Appendix C; these activities would continue for the facilities remaining on site during Phase 1 implementation. The environmental impacts of Phase 1 implementation are described for each resource area in Chapter 4.

If the Phased Decisionmaking Alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. For each resource area, Chapter 4 discusses the impacts that would occur if either removal or close-in-place is selected for Phase 2. The chapter also discusses which alternative(s) bound the impacts in the event that continued active management is selected for the SDA. The short-term impacts of a Phase 2 decision that involves continued active management of the SDA are bounded by either the removal or close-in-place impacts. The post-decommissioning impacts of a continued active management decision for the SDA, which include staffing, occupational exposure, and waste generation related to SDA monitoring and maintenance, as well as long-term impacts on public health and safety, would be similar to the no action impacts for the SDA. DOE and NYSERDA believes this phased approach is consistent with NEPA and SEQR requirements. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Public involvement in the Phase 2 decisionmaking process is addressed in the response to Comment no. 116-4.

**Commentor No. 116 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

5

Raymond Turner Jr.
Seneca Nation of Indians
Salamanca, NY

Debra Hall
Hopewell Junction Citizens for Clean Water
Hopewell Junction NY

Wayne Bayer
Public Employees Federation/ Encon
Division 169
Albany, NY

Bob Ciesielski
Sierra Club Niagara Group
Niagara Falls, New York

Shirley Hamilton
Niagara Improvement Association
Niagara Falls, NY

Katherine Bourbeau
Finger Lakes Zero Waste Coalition
Geneva, New York

Dennis Walczek
Catholic Charities of Buffalo
Buffalo, New York

Thomas Marks
Great Lakes Sport Fishing Council
Derby, NY

Sister Judith Elaine Salzman
Franciscan Sisters of St. Joseph
Hamburg, NY

Linda Ochs
Finger Lakes Citizens for the Environment
Waterloo, NY

Judy Braiman
Empire State Consumer Project
Rochester, New York 14618

116-6 DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. In addition to the previously cited Issue Summaries, please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE and NYSERDA's response.

116-7 Responses to the commentor's statements regarding "leaving an estimated 99 percent of the radioactivity on site" and the "FCA Study" are provided in the responses to Comment nos. 116-4, and 116-3, respectively.

DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE has developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flow is into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being further reduced by tank drying.

Additionally, much of the residual contamination in the tanks is attached (i.e., "fixed") to metal surfaces and is not readily mobile. Chapter 2, Section 2.3.1, of this EIS, as well as text in the *Phase 1 Decommissioning Plan for the West Valley Demonstration Project (Phase 1 Decommissioning Plan)*, have been clarified to acknowledge that the liquids remaining in the tanks will be dried as a result of installation and operation of the tank and vault drying system and that this drying

**Commentor No. 116 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

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Donald Weigel
Peace & Justice Committee
Immaculate Conception RC Church
East Aurora, NY

James Travers
Selkirk, Coeymans, Ravena Against Pollution
Ravena, NY

Lynn Jackson
Save the Pine Bush
Albany, NY

Gordon Edwards, PhD
Canadian Coalition for Nuclear Responsibility
Montreal, Quebec

Roger Cook
WNY Council on Occupational Safety & Health
Buffalo, NY

Michael J. Keegan
Coalition for a Nuclear-Free Great Lakes
Monroe, MI

Sister Sharon Goodremote, FSSJ
Buffalo Diocese Care for Creation Committee
Buffalo, NY

Renato Sanges
Sandra Fonda
Rainbow Alliance for Clean Environment
Gloversville, NY

Rachel Heckl
Great Lakes United
Amherst, New York

John Amidon
Veterans For Peace, Chapter 10
Albany, NY

Cecilia Resti and Jerry Lotierzo
Peace Action of Central New York
Syracuse, New York

will be complete before any Waste Tank Farm decommissioning actions are initiated.

DOE disagrees with many of the points raised in NYSERDA's View, which is included as the Foreword to this EIS. At the core, differences between DOE and NYSERDA center on different views about the nature of analysis required for an EIS and the attendant level of acceptable risk associated with any uncertainties in that analysis as it relates to decisionmaking. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, this EIS (1) acknowledges the information limitation and its relevance to environmental consequence, (2) summarizes existing credible scientific evidence, and (3) presents an analysis using a theoretical approach that is generally accepted by the scientific community involved in such analyses. This Final EIS contains text boxes in the relevant subject matter areas that acknowledge the differences of opinion between DOE and NYSERDA. In general, DOE's position is that the Agency spent much time and effort engaging highly qualified and respected experts in hydrology and hydrological transport, landscape evolution (erosion), human health and environmental risk analysis, and other technical fields, and stands behind the analyses performed for this EIS.

116-8

As acknowledged in this EIS, long-term monitoring and maintenance would be required for alternatives that would leave waste on site. This EIS provides a summary description of current and potential future environmental monitoring programs. The descriptions of the alternatives were revised to further describe the use of engineered barriers and long-term monitoring and maintenance. Long-term monitoring and maintenance are described in Chapter 2, Sections 2.4.2.6 and 2.4.3.8. Information on current monitoring and institutional controls activities is provided in Chapter 3. Long-term monitoring and institutional controls are also discussed in Chapter 6. Additional information about current and proposed monitoring and institutional controls is provided in Appendices C, H, and I. Chapter 2, Table 2-4, includes estimates of the environmental consequences if (1) monitoring and maintenance are successful (institutional controls remain in place) and (2) monitoring and maintenance programs fail (institutional controls are lost).

Detailed information regarding long-term monitoring and maintenance programs and institutional controls under alternatives that would leave waste on site indefinitely have not been specifically defined at this time. Such definition

**Commentor No. 116 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

7

Laura Haight
NYPIRG
Albany, NY

Brian Smith
Citizens Campaign for the Environment
Buffalo, NY

Roger Downs
Sierra Club Atlantic Chapter
Albany, NY

Jim Riccio
Greenpeace
Washington DC

Jackson Morris
Environmental Advocates of New York
Albany, NY

Joanne Hameister
Coalition on West Valley Nuclear Wastes
Springville, NY

Kathy Fonte
Social Justice Ministry
Nativity of Blessed Virgin Mary Church
Williamsville, NY

Gloria McLaughlin
Social Justice Committee
St Joseph's Roman Catholic Church

Judith M. Anderson
Environmental Action Group of Western NY
Buffalo, NY

Lois Ann Zendarski
Concerned Citizens of Cattaraugus County

Betsey Swan
The League of Women Voters of New York State

Irene Senn
Religious Coalition for the Great Lakes

would occur after an alternative is selected for implementation and would include consultation with appropriate regulatory authorities. An element of the long-term programs would be the development of plans and procedures for responding to emergencies. The plans and procedures would include coordination and agreements with local police and fire departments and medical facilities. Consistent with current practices, DOE and NYSERDA would provide training to emergency responders (see Chapter 3, Section 3.10.3.2, of this EIS).

The analysis in this EIS recognizes the potential for climate change to influence the long-term consequences of waste management. Climate changes, whether natural or influenced by human actions, could change the nature and amount of precipitation. Appendix H, Section H.3.1, of both the Revised Draft EIS and the Final EIS discusses the sensitivity of groundwater flow to changes in annual precipitation. The revised erosion prediction used for the unmitigated erosion dose analysis is based on the assumption that storms could occur more frequently than indicated by current records. This prediction includes the effects of storms of greater severity than the one that occurred in the region in August 2009. The use of this higher erosion rate associated with an elevated precipitation rate is discussed in Appendix H, Section H.2.2.1. Chapter 4, Section 4.3.5, has been revised to include a discussion of how the uncertainties about future climate change are addressed in this EIS.

**Commentor No. 116 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

8

Cheryl Mendoza
Freshwater Future
Petoskey, MI

Sister Phyllis Tierney
Sisters of St. Joseph Global Environment Committee
Rochester, NY

Vincent Agnello
Niagara Watershed Alliance
Youngstown NY

Kevin Kamps
Beyond Nuclear
Takoma Park, MD

Alice Hirt
Don't Waste Michigan
Holland, MI

Keith Gunter
Citizens Resistance at Fermi 2
Livonia, MI

Individuals

Ronald J. Scudato, Ph.D.

Rev. John R. Long, DD
Pastoral Associate at First Presbyterian Church
Buffalo, NY

Margaret Holland
Doctoral Candidate
Teachers College, Columbia Univ.
NYC, NY

Elinor Weiss
East Amherst, New York

Kathleen Duwe
Springville, NY

Amy Witryol
Lewiston, NY

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**Commentor No. 116 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

9

Robin McClellan
Potsdam, NY

Arthur J. Giacalone
Attorney-at-Law
East Aurora, NY

Bob Sullivan
St. Pete, FL

Meryl Brott
Brighton, MA (formerly of E. Aurora, NY)

Judith Z Deck
Tonawanda, NY

Esther Bates
Kenmore, NY

Elaine Kellick
Tonawanda, NY

Linda Weiss
Williamsville, NY

cc. Nuclear Regulatory Commission, Rebecca Tadesse, Chief

Letters also to

Steven Chu
Secretary of Energy
U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585

Francis J. Murray, Jr.
President & CEO
New York State Energy Research and Development Authority
17 Columbia Circle
Albany, New York 12203-6399

Governor David A. Paterson
State Capitol
Albany, NY 12224

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Commentor No. 117: Michael and Joanne Middagh

June 10, 2009

Michael and Joanne Middagh
1082 Sweet Road
East Aurora, NY 14052

CLEAN IT UP! ISN'T IT ABOUT TIME

|| 117-1

- 117-1** DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

**Commentor No. 118: Barbara Warren, Executive Director,
Citizens' Environmental Coalition**

Citizens' Environmental Coalition

Nuclear Information and Resource Service

June 5, 2009

Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
US Department of Energy
PO Box 2368
Germantown, MD 20874

Re: Draft Decommissioning and /or Long –Term Stewardship EIS Comments

Dear Ms. Bohan,

Our comments address both the Decommissioning Plan and the Draft EIS. There are numerous problems with these documents and public disclosure and involvement. While DOE is supposedly entertaining comments on 4 Cleanup Alternatives in the EIS, the Agency has chosen one alternative, Phased Decision-making for the Decommissioning Plan and submitted this to the Nuclear Regulatory Commission for review. This would indicate that the Agency is only going through the motions of a public process and that DOE has already made its final decision on an Alternative, no matter what the public and its elected officials have to say about it.

We believe that the public process and major portions of the documents are fatally flawed and require major corrections, which we discuss below. However, there is one alternative that has been adequately disclosed and presented to the public in the EIS: Sitewide Removal, a complete excavation and cleanup of all radioactive material. All other Alternatives have significant problems related adequate public disclosure of the entire project, a reasonable future public process, scientifically indefensible analyses of long term impacts and evidence of a reasonable rationale for selecting a particular alternative. The health and environmental assessments understate the future risks regarding loss of containment and control of dangerous radioactivity. In other words for NEPA purposes, the EIS is fatally flawed.

In the Decommissioning Plan DOE goes through a tortuous analysis of various legal and regulatory structures related to West Valley, and despite clear legal and regulatory requirements, DOE crafts a future scenario where its responsibilities are very limited and where the public and New York State will be left with an extensively

- 118-1** Consistent with an agreement between NRC and DOE, DOE is preparing the *Phase 1 Decommissioning Plan for the West Valley Demonstration Project (Phase 1 Decommissioning Plan)* simultaneously with the preparation of this EIS. The proposed decommissioning approach described in the *Phase 1 Decommissioning Plan* is consistent with the Preferred Alternative in the EIS. NRC recognizes that the use of the Preferred Alternative in the *Phase 1 Decommissioning Plan* before completion of the EIS is preliminary and subject to change based on the content of the Final EIS and DOE's Record of Decision. If DOE selects an action other than the current Preferred Alternative, the *Phase 1 Decommissioning Plan* would be revised to reflect DOE's Record of Decision. While DOE is conducting the NEPA review and *Phase 1 Decommissioning Plan* preparation processes in parallel, the Agency has not yet made its final decision regarding its actions for completion of the West Valley Demonstration Project.
- 118-2** DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.
- 118-1** DOE and NYSERDA agree that public involvement is an essential component in the decisionmaking process for any EIS. Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until final decisions are made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.
- 118-2** NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate Phase 2 decisions for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.
- 118-3**

**Commentor No. 118 (cont'd): Barbara Warren, Executive Director,
Citizens' Environmental Coalition**

2

contaminated site that will threaten the Great Lakes and the sole source aquifer. We believe DOE has a moral and legal obligation to fully cleanup the West Valley site in order to protect priceless natural resources and future generations and that can only be accomplished by choosing the Sitewide Removal Alternative.

Below we review the major problems we have found thus far. These major problems indicate that the Decommissioning Plan and the EIS are fatally flawed and cannot be used for Decommissioning or Long Term Stewardship. One cleanup alternative stands out in the EIS as having been adequately analyzed and presented to the public: the Sitewide Removal Alternative, which we support.

Thank you for your consideration. We would appreciate being kept informed of future meetings and deliberations on this important matter.

Sincerely,

Barbara Warren
Executive Director
Citizens' Environmental Coalition

Diane D'Arrigo
Radioactive Waste Project Director
Nuclear Information & Resource Service

118-3
cont'd

118-4

118-3
cont'd

Regarding the analysis of long-term impacts and future risks, DOE disagrees with statements that the long-term performance assessment is "scientifically indefensible." This point is discussed in more detail in response to Comment no. 118-4. Chapter 4, Section 4.1.10, presents the future risks associated with the alternatives evaluated in this EIS. The analysis accounts for human health risk for onsite and offsite receptors and considers the site hydrology and hydrological transport of contaminants under scenarios of continuing institutional control, loss of institutional control, and unmitigated erosion following loss of institutional control.

DOE and NYSERDA provide their rationale for identifying the Phased Decisionmaking Alternative as the Preferred Alternative in Chapter 2, Section 2.7, of this EIS. As noted above, a decision on the selected course of action and rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

118-3 DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative, as well as the commentor's concern about continued DOE participation in the cleanup of the WNYNSC site. DOE will remain on site until it completes its responsibilities as assigned under the West Valley Demonstration Project Act. DOE would not leave the site after completion of the Phase 1 actions because it would not have completed the actions required under the Act. The description of the Phased Decisionmaking Alternative in Chapter 2 of the EIS has been revised to clarify this, and the wording in the *Phase 1 Decommissioning Plan* has been revised to avoid the implication that DOE would leave the site at the end of Phase 1.

118-4 Please see the response to Comment no. 118-2.

This EIS has been prepared in accordance with the requirements of NEPA and SEQR. DOE and NYSERDA have prepared this single, comprehensive EIS for the decommissioning and long-term stewardship of WNYNSC. As required by NEPA and SEQR, it analyzes the environmental impacts of a broad spectrum of reasonable alternatives that meet the respective purposes and needs of DOE and NYSERDA (Sitewide Removal, Sitewide Close-In-Place, and Phased Decisionmaking), as well as the No Action Alternative. A detailed work plan is not required to complete an EIS and normally is not developed until a decision is made.

This EIS adequately analyzes the totality of the environmental impacts, including costs, of the identified alternatives. These impacts are presented in Chapter 4 of this EIS.

**Commentor No. 118 (cont'd): Barbara Warren, Executive Director,
Citizens' Environmental Coalition**

3

**Comments on the West Valley Decommissioning Plan and
Draft Environmental Impact Statement**

I The Environmental Impact Statement and the Public Process are fatally flawed and cannot support moving forward with any option other than Sitewide Removal for the following reasons:

- A. An Environmental Impact Statement should contain these major and essential elements:
 - A Complete Plan or Project
An EIS should start with a complete plan or project and then fully describe all elements of the project.
 - Identification of all Potential Environmental Impacts and then full Analysis of those impacts.
 - Full Public Disclosure involving a legitimate public process with information made available and an adequate opportunity for the public to have some influence on the decisions that are made.
 - A reasonable rationale for any decision, such as the choice of the Preferred Alternative
- B. The only cleanup option that has been fully analyzed and disclosed to the public is the Sitewide Removal Alternative—full excavation and cleanup of the radioactive material. As a result this is the only cleanup option that is legally eligible under NEPA, National Environmental Policy Act, for consideration by the agencies for adoption.
- C. For all of the other options, there is no detailed description of the monitoring of containment for leaks or failures, no assessment of the impacts associated with a containment failure, no plan for rapid response to containment failure and as a result there is little public information about an essential element of any cleanup option that allows buried waste to be maintained on site. Similarly there is no detail regarding the engineering and institutional controls needed to maintain buried waste on site. Items B & C here appear to be the result of the agency viewing only concrete actions, such as excavation, as something to be covered in the EIS. Neglecting or taking no action to cleanup major facilities at the site gets little attention in the EIS.
- D. In the case of the Phased Decision-making Alternative, the preferred alternative, the situation is even worse, because there is no complete plan or project described in the DEIS.
 - Phased Decision-making is not a complete plan or project. Agency personnel engaged in thinking over a long time period can not be considered a project.

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The public comment process for this EIS meets the requirements of NEPA and SEQR. The Revised Draft EIS was issued for public review and comment on December 8, 2009. DOE's Notice of Availability announced a 6-month public comment period (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE) and three public hearings. In response to requests from the public, DOE and NYSERDA extended the original public comment period for an additional 90 days, through September 8, 2009. An additional public hearing was held in Albany, New York, and the hearing originally scheduled for Blasdell, New York, was moved to a more central downtown Buffalo, New York, location. DOE and NYSERDA held the public hearings to provide interested members of the public with opportunities to learn more about the content of the Revised Draft EIS from exhibits, fact sheets, and other materials; to hear DOE and NYSERDA representatives present the results of the EIS analyses; to ask clarifying questions; and to provide oral or written comments. A website (<http://www.westvalleyeis.com>) was established to further inform the public about the Revised Draft EIS, how to submit comments, the public hearings, and other pertinent information. Comment submission mechanisms and public hearing dates, times, and locations were announced in the *Federal Register* and New York State Environmental Notice Bulletin notices, in local newspapers, and on the website. Members of the public who expressed interest and are on the DOE and NYSERDA mailing list for the Revised Draft EIS were notified by U.S. mail regarding hearing dates, times, and locations.

In addition to the Sitewide Removal Alternative, this EIS addresses the Sitewide Close-In-Place Alternative, which would leave some radioactive and hazardous wastes in place. Phase 2 of the Phased Decisionmaking Alternative would have impacts ranging between these two alternatives, depending on the decision made during Phase 1 activities. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in the sense that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, the EIS (1) acknowledges the information limitation and its relevance to environmental consequence, (2) summarizes existing credible scientific evidence, and (3) presents an analysis using a theoretical approach that is generally accepted by the scientific community involved in such analysis. In general, DOE's position is that the Agency spent much time and effort engaging highly qualified and respected experts in hydrology and hydrological transport, landscape evolution (erosion), human health and environmental risk analysis, and other technical fields, and stands behind the analyses performed for this EIS.

**Commentor No. 118 (cont'd): Barbara Warren, Executive Director,
Citizens' Environmental Coalition**

4

- The action portion of Phase 1 only addresses 1.2% of on-site radioactivity. There is no explanation regarding why Phase 1 is limited to such a small amount of cleanup.
- Decisions regarding 99% of dangerous radioactive material needing cleanup are delayed for 30 years. The complete plan or project for cleanup is unknown.
- 30 years of Data Collection-- absolutely necessary additional studies, according to the agencies involved—but only cursory information provided the public in the DEIS. The public has received no justification as to why these studies are needed in lieu of an approach that plans to fully cleanup the site and completes needed studies while other cleanup tasks are in progress. If these studies are necessary for determining a safe and adequate work plan in Phase 2, we should have received more detail so that we could comment.
- At the end of Phase I, future final decisions on the remaining 99% of the cleanup will be made by the Agencies involved with no public input.
- No monitoring and maintenance of on-site facilities during the 30 year period is described—a fatal flaw—when the high level waste tanks are at the end of their 40 year life span and there is no plan for replacement as initially envisioned.
- An immediate cleanup of just 1% of the radioactive materials on site, with no rational provided in the DEIS for why 10%, 20% or more of the radioactive waste was not slated for cleanup in Phase I.
- A reasonable person would naturally approach the two issues of limited clean-up and 30 year delay with a lot of questions regarding the wisdom of such an approach as it relates to safety, health and environmental contamination. A reasonable person would be disappointed that the major documents provided, the Decommissioning Plan and the Environmental Impact Statement, fail to adequately discuss appropriate care and maintenance for the major radioactive facilities that are being put off to Phase II.
- There is no definitive statement that Phase II is the final phase. If only 1% of radioactivity is dealt with in each phase we might have 100 phases before completion of the work at the site.

II The Draft Environmental Impact Statement is identified as for Decommissioning and Long Term Stewardship at the West Valley Site, yet fails to adequately analyze and discuss decommissioning or long term stewardship. The Decommissioning Plan also suggests that DOE will no longer be involved at the site after Phase I activities are completed.

- A. An immediate cleanup of just 1.2% of the radioactive materials on site could have been accomplished as a necessary remedial measure without wrapping it into a package identified as Decommissioning and Long Term Stewardship.
- B. Decommissioning and Decontamination of the site and the majority of the dangerous radioactive material, including those activities covered under the

118-6
cont'd

118-7

- 118-5** DOE and NYSERDA acknowledge the commentator's opposition to leaving radioactive or hazardous waste on site. Please see the response to Comment no. 118-2.

As acknowledged in this EIS, long-term monitoring and maintenance would be required for alternatives that would leave waste on site. This EIS provides a summary description of current and potential future environmental monitoring programs. The descriptions of the alternatives were revised to further describe the use of engineered barriers and long-term monitoring and maintenance. Long-term monitoring and maintenance are described in Chapter 2, Sections 2.4.2.6 and 2.4.3.8. Long-term monitoring and institutional controls are also discussed in Chapter 6. Additional information about current and proposed monitoring and institutional controls is provided in Appendices C, H, and I. Chapter 2, Table 2-4, includes estimates of the environmental consequences if (1) monitoring and maintenance are successful (institutional controls remain in place) and (2) monitoring and maintenance programs fail (institutional controls are lost). Chapter 4, Section 4.2, includes monitoring and maintenance costs for the alternatives that would leave waste on the site.

Detailed information regarding long-term monitoring and maintenance programs and institutional controls under alternatives that would leave waste on site has not been specifically defined at this time. Such definition would occur after an alternative is selected for implementation and would include consultation with appropriate regulatory authorities. An element of the long-term programs would be the development of plans and procedures for responding to emergencies. These plans and procedures would include coordination and agreements with local police and fire departments and medical facilities.

In addition, all DOE sites, including WNYNSC, have developed plans that assure prompt responses to emergencies. As discussed in Chapter 3, Section 3.10.3.2, of this EIS, agreements have been established among police and fire departments in the West Valley area that would ensure responders provide emergency services in the event of an incident or accident. Responders are trained and briefed annually by the Radiation and Safety Department at WNYNSC and NYSERDA on how to deal with potential emergencies, including training to provide assistance in chemical or radioactive occurrences. In the event of an emergency, a written protocol for emergency medical needs at WNYNSC provides the basis for support from Bertrand Chaffee Hospital and the Erie County Medical Center.

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West Valley Demonstration Project Act, were not presented in any detail. In fact the Decommissioning Plan went to great lengths to emphasize that future Decommissioning would be the responsibility of New York State as the owner of the site. The objectives identified therefore are much narrower than decontamination and decommissioning. As stated by DOE their primary objective is not prejudicing final decisions in Phase II.

- C. Long Term Stewardship and a complete description of what the Agencies consider to be necessary engineering and institutional controls were similarly not presented in the Decommissioning Plan and DEIS. The only possible explanation, we can find, for identifying the DEIS as covering Decommissioning and Long Term Stewardship is to attempt to avoid requirements under NEPA, the National Environmental Policy Act, for public involvement in critically important decisions about leaving radioactive material on site and the necessary engineering and institutional controls.

III Health Impact analyses are distorted by non-conservative assumptions. The examination of alternatives is not enlightening because DOE set up comparisons that were non-comparable.

- A. It is not conservative for DOE to assume minimal air and water releases subsequent to decommissioning under any of the alternatives, p. 4-51 EIS.
- B. It is not conservative to assume that the cessation of maintenance and other activities under the Close-in-place alternative will have little effect on the rate of release of contamination, P. 4-73.
- C. Table 4-12 of the EIS calculates the population dose for 64 years for Sitewide removal, 7 years for Close-In-Place and 8 years for No Action alternatives. Thus even before beginning the analysis you would know a priori that the highest person-rem would occur under the Sitewide removal alternative, but the answer would be incorrect.
- D. We also question the absence of any analysis of dairying, since it is a principle farm usage and there is potential for radionuclides to enter the human food chain in milk.

IV The DOE has chosen one option, Phased Decision-making as its preferred alternative. This alternative is the most INCOMPLETE of all the alternatives and yet it is the focus of the entire Decommissioning Plan. Indeterminate future decision-making cannot be considered an Action Plan for NEPA purposes.

Future indeterminate decision-making does not constitute a comprehensive Action Plan. NEPA is geared to Agency actions not long term decision-making and possible decisions. Specific agency actions, plans or projects must be analyzed for their potential environmental impacts. This is very difficult to accomplish in the absence of specific plans or projects. In this case the public has been denied basic information about the long term action plan, and essential information about environmental monitoring and studies that will inform Phase II. Indeterminate future decision-making with no public involvement and inadequate disclosure of the potential for environmental and health impacts cannot possibly meet the requirements of NEPA.

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As stated in the response to Comment no. 118-4, this EIS evaluates a Sitewide Removal Alternative that would remove all waste from the site; a Sitewide Close-In-Place Alternative that would leave some radioactive and hazardous waste safely stored in place; and a Phased Decisionmaking Alternative that ultimately would have impacts ranging between these two prior alternatives, depending on the Phase 2 decision made during Phase 1 activities. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, the EIS (1) acknowledges the information limitation and its relevance to environmental consequence, (2) summarizes existing credible scientific evidence, and (3) presents an analysis using a theoretical approach that is generally accepted by the scientific community involved in such analysis.

While the Phased Decisionmaking Alternative temporarily defers a final decision on the disposition of the Waste Tank Farm, the NDA, and the Construction and Demolition Debris Landfill, DOE believes that the impacts of this deferred decision are adequately analyzed within the current EIS. Of course, as with all tiered decisions, DOE would continue to assess the results of any site-specific studies along with any emerging technologies to ascertain whether or not a Supplemental EIS is warranted prior to any Phase 2 decision. Based upon data available to date, however, DOE believes this EIS adequately evaluates the environmental impacts associated with the range of reasonable alternatives.

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage

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- A. Phase I activities at the site will handle just 1.2% of the radioactive contamination on site. These activities could constitute Actions under NEPA.
- B. Little Information on Phase I studies. Phase I studies and data collection are critical to the decisions about the scope of Phase II. As such these studies could be considered an Agency action. However, the Draft EIS describes such studies very briefly and in vague terms. As a result the public has not been informed regarding the essential foundation for future decision-making.
- C. No detailed information regarding Environmental monitoring. There will be an up to 30 year delay in decision-making about handling almost 99% of the buried highly radioactive waste. Three major facilities will be untouched by Phase I—the NDA, the SDA and the High Level waste tanks. Leaving radioactive waste in the ground untouched by cleanup plans requires an examination of the potential for environmental impacts during this period. However, detailed information about the environmental monitoring that will be conducted to monitor for leaks, groundwater contamination and other untoward events was not presented in the Draft EIS. For two alternatives- No Action and Phased Decision-making—we are told only that existing monitoring and institutional controls will continue. We doubt that any elected public official or any member of the public could identify what this means. For the Close-in-Place Alternative there is a slightly expanded statement; we are told a series of monitoring devices would be installed for various environmental and geotechnical parameters and performance assessment reviews would take place. How many monitoring devices? Installed where? Which environmental and geotechnical parameters? What kind of performance assessment? Obviously a half page on this topic is not sufficient. We are not reassured regarding the adequacy of planned monitoring and institutional controls for 3 alternatives.
- D. There is no future defined public process where information will be presented for public consideration. There will be no opportunity for public comments. Presumably the DOE will make its future decisions in secret without further public input. This opens up the possibility that even new information about spreading contamination could be ignored by the Agency.

V **The Documents, DEIS and Decommissioning Plan, are inadequately grounded in the on-the-ground realities at the site and other factual scientific information. Here we discuss information from the Independent Full Cost Accounting Study, NYSERDA comments in the Foreword to the EIS, the CHEJ report regarding Climate impacts, and earthquake potential.**

- A. In December an independent, state-funded study, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site*, was released. That study started from an obvious place: the existing conditions at the site. It found that:
 - Erosion is a powerful and fast moving force at the West Valley site as it sits on a geologically young landscape which is undergoing a relatively rapid rate of erosion. Michael P. Wilson, Ph.D., SUNY Fredonia Professor of Geosciences found in the

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at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSEDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

DOE and NYSEDA agree that public involvement is an essential component in the decisionmaking process for any EIS. Public input as part of the Phase 2 decisionmaking process is discussed in the response to Comment no. 118-2.

Regarding the commentator's statement that the tanks are nearing the end of their 40-year lifespan, DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE has developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flows into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being further reduced by tank drying.

Additionally, much of the residual contamination in the tanks is attached (i.e., "fixed") to metal surfaces and is not readily mobile. Chapter 2, Section 2.3.1, of this EIS, as well as text in the *Phase I Decommissioning Plan*, have been clarified to acknowledge that the liquids remaining in the tanks will be dried as a result of installation and operation of the tank and vault drying system and that this drying will be complete before any Waste Tank Farm decommissioning actions are initiated.

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FCA study that "Nuclear wastes, radioactive for tens of thousands of years, will be consumed by erosion and discharged downstream to Lakes Erie and Ontario in less than 3,000 years and may be dangerously exposed in less than 200 or 300 years."

- Scientists found the site poses a significant danger to people through their drinking water. If just 1% of radioactivity leaked from the site, Lake Erie water users would be exposed to substantial radiation, causing hundreds of cancer deaths, and Buffalo and Erie County water replacement would cost hundreds of millions of dollars.

- The study looked closely at the necessary engineering and institutional controls that would be needed in order to contain the radioactive material on-site given the powerful forces of erosion. Then the study compared these costs to the cost of a full waste excavation cleanup. The study revealed leaving buried waste at the site is both high risk and expensive while a full waste excavation cleanup presents the least risk to a large population and the lowest cost. Over 1000 years, waste excavation costs \$9.9 billion while trying to contain buried waste onsite would cost \$13 billion, and \$27 billion if a catastrophic release occurred.

B. In the Foreword to the DEIS, NYSERDA raises the problems that an independent scientific panel had with the analyses done by DOE, particularly the long term analyses. We summarize most of the points here.

- The Draft EIS analysis of Soil Erosion over the Long Term is not Scientifically Defensible and should not be used for Long-Term Decisionmaking. Predictions of population doses to the public will not be accurate, if using the current erosion models, to support decisions for the long term.
- The Draft EIS analysis of Contaminant Transport by groundwater needs improvement. Similarly the groundwater modeling used cannot be relied on in predicting radiation doses to the public and for making long term decisions about site cleanup.
- The Draft EIS Assumptions used for the performance of Engineered Barriers have not been substantiated and may be overly optimistic. Engineered barriers such as caps, slurry walls, grout, and other materials are "critical" to containment of radiation on site under the Close In-place Alternative. Since there is inadequate support for the performance of these barriers over the long term, the radiation doses to the public could be underestimated.
- The Connection between the Draft EIS Analyses and the Applicable Regulatory Framework must be strengthened. Here NYSERDA points out that the License Termination Rule is the applicable regulation not portions of NRC's low level disposal regulations. "It does not seem logical to prepare an EIS to assess the impacts from decommissioning actions that must meet the requirements of the NRC's LTR, and use regulations and guidance that are not part of the LTR regulatory framework to structure the analyses." The EIS should be reframed to reflect the LTR requirements.
- The Draft EIS Approach for Exhumation may be Overly Conservative. The approach for exhumation is overly conservative and based on extreme conditions, resulting in maximal costs. NYSERDA highlights that alternative

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Regarding appropriate care and maintenance of major radioactive facilities at the site, please see the response to this issue under Comment no. 118-5.

Regarding the commentor's request for a definitive statement that Phase 2 is the final phase of the Phased Decommissioning Alternative:

DOE Response:

DOE intends for the decision on the Phase 2 actions to complete decommissioning activities at the site, either by removal of the remainder of the waste and facilities or by in-place closure.

NYSERDA Response:

In the Final EIS, NYSERDA has clarified that, for the SDA, alternatives that would be considered for Phase 2 actions, if the Phased Decisionmaking Alternative is selected, would include at least: complete exhumation, close-in-place, or continued active management consistent with permit and license requirements. Unlike the West Valley Demonstration Project, the SDA does not have a decommissioning requirement. Through its rigorous monitoring and maintenance program, NYSERDA has demonstrated for the past 25 years that the SDA can be managed safely in its current configuration. However, NYSERDA also recognizes the dynamic nature of the environment at West Valley and decisions made 10 years from now would need to reflect the knowledge gained from scientific studies and data gathering (during Phase 1) as well as continued review of routine monitoring data collected for the SDA. NYSERDA's decisions have been and will continue to be protective of human health and the environment. And, as it has done for Phase 1, NYSERDA would solicit stakeholder input on its Phase 2 decision through a formal public comment period and public hearings.

DOE and NYSERDA note the comments.

Concerning the amount of radioactivity that would be removed under Phase 1 of the Phased Decisionmaking Alternative, please see the response to this issue under Comment no. 118-6.

Decontamination and decommissioning of the facilities at WNYNSC under the proposed action alternatives are discussed throughout this EIS. Please see, for example, Chapter 4, Sections 4.1.9 and 4.1.11. Additional discussion is provided in Appendices C, H, and I.

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methods could reduce the costs of exhumation and waste disposal. (This would add further support for the Site Removal Alternative.)

- **The Existing Long-Term Performance Assessment is not Adequate to Support the In-Place Closure of the Waste Tank Farm or any Other Facilities.** "NYSERDA believes that the Draft EIS long term performance assessment for the in-place closure alternative is seriously flawed and scientifically indefensible."

C. The Center for Health and Environmental Justice addressed the threats that climate change and its attendant severe weather events have had on superfund sites around the nation in a report this year, *Superfund: In the Eye of the Storm*. We are enclosing Chapter One of that report as part of the official record. The report can be accessed at http://www.besafenet.com/media/superfund_2009.shtml. The parallels to the West Valley site are obvious. With landslides a frequent occurrence in this area, extreme rainfalls are likely to exacerbate erosion. However, DOE, rather than dealing with reasonably likely scenarios such as climate change and accepting what thousands of reputable scientists and the federal government have accepted as fact, instead engages in wishful thinking that global warming will not occur for the next 10,000 years.

D. Concerning seismic activity in this area, the original operator shut down the operation in order to increase the seismic stability of the Facility. The operator decided not to continue with the project. However, we would like to know whether a seismic evaluation of the burial grounds and the HLW tanks has been done in relation to current criteria for seismic stability.

VI The Long Term Containment of Radioactive Material that is Dangerous for Thousands of Years Poses Extraordinary Management Challenges.

About 50 years ago the federal government embarked on a plan to reprocess the nation's nuclear waste using private entities. The government was very enthusiastic and optimistic that its plan would work successfully and as a result sold the public and the state on the plan.

Fifty years later it is pretty clear that the plan was a stupendous failure:

- The private operator walked away from the project.
- A long list of accidents and spills have left the site extensively contaminated.
- The government now has responsibility for the site.
- The perpetual care fund was never adequately funded to deal with the massive amount of radioactive material that must be isolated and contained for thousands of years.
- The risks to groundwater, surface water, the Great Lakes and public health are enormous.

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DOE and NYSERDA acknowledge the commentor's concern about continued DOE participation in the cleanup of the WNYNSC site. As stated in the response to Comment no. 118-3, DOE will remain on site until it completes the actions required under the West Valley Demonstration Act. Please see this response for further discussion of this issue.

Regarding long-term stewardship and necessary engineering and institutional controls, please see the response to this issue under Comment no. 118-5.

Concerning continued public involvement in the Phase 2 decisionmaking process under the Phased Decisionmaking Alternative, please see the response to this issue under Comment no. 118-6.

DOE and NYSERDA note the comments. Responses to the comments are presented in the order provided by the commentor:

A. Air and water releases subsequent to decommissioning were used to calculate the annual population doses presented in this EIS in Chapter 4, Table 4-15. These releases would be due to periodic replacement of the permeable treatment wall and demolition of the interim storage facility under the Sitewide Close-In-Place and Phased Decisionmaking Alternatives. The No Action Alternative population doses in Table 4-15 would be due to releases associated with the continued operation of the existing ventilation and wastewater treatment systems. The largest projected releases and population doses cited in this table are for the No Action Alternative, based on the radionuclide releases recorded from prior years of WNYNSC operation. The annual population dose for the No Action Alternative as shown in Table 4-15 is a very small fraction (less than 1 percent) of the peak annual population doses presented in Table 4-14 for decommissioning actions under the three action alternatives. The population doses after decommissioning that are presented in Table 4-15 are negligible compared to the doses presented in Table 4-14 during decommissioning actions.

B. As described in Chapter 2, Section 2.4.2, during decommissioning activities associated with the Sitewide Close-In-Place Alternative, the leachate treatment system would have processed the leachate from the NDA and SDA and engineered multi-layer covers and erosion control structures would have been installed at the NDA and SDA. These actions would be designed to remove radionuclides in the leachate and isolate and confine the remaining radionuclides in the NDA and SDA for longer than 100 years. For the Sitewide Close-In-Place Alternative, the rate of release of contamination is based on an assumed loss of institutional controls

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The actual record of spills, mishaps, accidents and contamination spreading offsite provides a realistic picture of just a few decades of active management of highly dangerous radioactive materials and the abilities of regulatory agencies to safely contain these materials. The delay between discovery of the strontium leak and the extensive strontium plume that now must be dealt with at taxpayer expense is just one example of containment failure and inadequate management. The DOE approach for the long term assumes a degree of control never achieved by private companies and multiple federal and state agencies that have been actively involved at the site. If active management and control have not been successful historically in containing and controlling mishaps, spills and leaks it is difficult to imagine how DOE can justify a dramatically reduced level of control in the future for thousands of curies of buried radioactive waste. The Draft EIS makes the assumption that engineering and institutional controls will be successful for over a thousand years.

We believe that the historical record is a much more reliable indicator of the types of incidents that can occur in the future. If sophisticated models (with little public disclosure of inputs) display results that are optimistic or rosy compared to the historical record, there should be warning flags hoisted for everyone concerned.

Sophisticated models run by PhD mathematicians were used by Wall Street to assure themselves that the financial risks were being diluted when instead their financial instruments were linked, exposing them to very high systemic risks. We still don't have a clear path out of this financial meltdown and its economic impacts. Models are only as good as the care, judgment and wisdom of the people running the models and reviewing and reporting the results.

The public may have been fooled once by the optimism and salesmanship related to reprocessing, but it is unlikely to be fooled again. Fifty years of experience with the on-the-ground realities at West Valley has undermined trust and increased skepticism.

Rather than flippancy and vague assurances that dangerous radioactivity will be safely contained, we need a careful, realistic and sound approach to the difficulties of containing this material over the long term. Beyond the Sitewide Removal Alternative, that approach is absent for all of the other alternatives.

VII The Draft Environmental Impact Statement and the Proposed Decommissioning Plan are grossly inadequate for their stated purposes: decontamination, decommissioning and long term stewardship.

It should also be noted that the title of the EIS, *Revised Draft Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center*, does not reflect the contents of the EIS.

A. **Decontamination.** Only one Cleanup Alternative would decontaminate the site and make it available eventually for unrestricted use. However, that Alternative:

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at 100 years. Loss of institutional controls has the same effect as cessation of maintenance and other activities.

- C. Chapter 4, Table 4-12, of this EIS correctly presents the total population dose for each alternative during decommissioning actions. It is true that, because the total removal alternative involves the largest removal of radioactive material, the decommissioning actions population dose for this alternative would be expected to be greater than those of the other three alternatives considered. In contrast, Table 4-15 presents the annual public dose for actions following decommissioning under each alternative. For this time period, the No Action Alternative is shown to have the largest public dose of the four alternatives.
- D. The transport of radionuclides into the human food chain through the ingestion of milk is included in the analysis of normal operations impacts in Chapter 4. The assumed consumption of milk by the general population and the maximally exposed individual is presented in Appendix I, Table I-6.

DOE and NYSERDA acknowledge the commentor's opposition to the Phased Decisionmaking Alternative. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in the sense that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, the EIS (1) acknowledges the information limitation and its relevance to environmental consequence, (2) summarizes existing credible scientific evidence, and (3) presents an analysis using a theoretical approach that is generally accepted by the scientific community involved in such analysis. As stated in the response to Comment no. 118-4, in general, DOE's position is that the Agency spent much time and effort engaging highly qualified and respected experts in hydrology and hydrological transport, landscape evolution (erosion), human health and environmental risk analysis, and other technical fields, and stands behind the analyses performed for this EIS.

Impacts associated with both phases of the Phased Decisionmaking Alternative are presented for each resource area in Chapter 4 of this EIS. If the Phased Decisionmaking Alternative is selected, options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close in place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. For each resource area, Chapter 4 discusses the impacts that would occur if either removal or close

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Sitewide Removal is not examined in the Decommissioning Plan which was submitted to the NRC. The Decommissioning Plan only presents the Phased Decision-making Alternative and makes two important contrary statements: that the High Level Waste Tanks will be empty at the Start of Phase I and that they contain over 320,000 curies of radioactivity. In fact there are no plans to remove the remaining material that is stuck at the bottom of these tanks, thus they will not be empty at the beginning or at the end of Phase I. In addition, both the waste tanks and the NDA should be subject to the requirements of the West Valley Demonstration Project Act. The Decommissioning Plan offers no plan to decontaminate or decommission the NDA —fuel rods and cladding as well as reprocessing waste are buried in holes 50-70 feet deep over a sole source aquifer.

B. **Decommissioning.** Despite the titles of the documents prepared by DOE, the Agency has very carefully constructed a limited legal framework for itself. DOE's own Decommissioning Plan states that long term decommissioning of the site will be the responsibility of NYSERDA. So the Decommissioning Plan is supposed to address only the requirements of the West Valley Demonstration Project Act, but ignores the Act's requirements to decontaminate and decommission facilities involved in reprocessing and solidification. The Plan also suggests that DOE's involvement at the site will end after Phase I is completed. We are concerned that DOE has constructed a 2 phased decision-making process with no intent to be involved in any work beyond the work defined for Phase I.

C. **Long-Term Stewardship.** In all scenarios where buried waste must be contained on site for thousands of years, proper stewardship is essential. Sitewide Removal avoids such long term monitoring, engineering and institutional controls because the radioactive material is dug up and removed. The analyses in the EIS related to long term engineering controls, monitoring and containment at the site have been called into serious question by both the independent state-funded study, *The Real Costs of Cleaning Up Nuclear Waste: A Full cost Accounting of Cleanup Options for the West Valley Nuclear Site*, released in December, and by NYSERDA's comments in the Foreword to the EIS, where it called the EIS' long term analyses fatally flawed and scientifically indefensible. DOE wants to avoid the immediate costs of a full cleanup as well as the long term costs necessary if buried waste is left on site. We believe DOE cannot be allowed to have it both ways.

VIII High Level Waste Tanks. The potential for serious environmental impacts from the failure of these HLW tank and the release of highly radioactive material has not been studied adequately in the EIS. Failure scenarios begin now and continue as long as the tanks remain in the ground.

Underground tanks used to store High Level Waste are also NOW nearing the end of their useful life (40-50 years) and have been subjected to extraordinary conditions during

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in place is selected for Phase 2. The chapter also discusses which alternatives bound the impacts in the event that continued active management is selected for the SDA. The short-term impacts of a Phase 2 decision that involves continued active management of the SDA are bounded by either the removal or close-in-place impacts. The post-decommissioning impacts of a continued active management decision for the SDA, which include staffing, occupational exposure, and waste generation related to SDA monitoring and maintenance, as well as long-term impacts on public health and safety, would be similar to the no action impacts for the SDA.

Responses to the comments are presented in the order provided by the commentor:

- A. Regarding the amount of radioactivity that would be removed under Phase 1 of the Phased Decisionmaking Alternative, please see the response to this issue under Comment no. 118-6.
- B. The Phase 1 studies are designed to further characterize the site and research technology developments and engineering to aid consensus decisionmaking for Phase 2 actions. These studies are described in Chapter 2, Section 2.4.3, of this EIS.
- C. Concerning appropriate care and maintenance of major radioactive facilities at WNYNSC, please see the response to this issue under Comment no. 118-5. DOE and NYSERDA believe the analysis conducted for this EIS provides a basis for understanding the environmental and health impacts of continuing to manage the inventory in the WTF, NDA, and SDA in their current configuration. The impacts of storage are presented in Chapter 4, Section 4.1.9, where the Phase 1 human health impacts are discussed. Potential mitigation measures that could be implemented during this period are discussed throughout Chapter 6. Information on the human health impacts during this period is also provided in Appendices I, J, and P. Decisions regarding how many monitoring devices will be installed and where, the environmental and geotechnical parameters, and the nature of performance assessments will be made after the decision on the selected course of action and the supporting rationale are announced in DOE's Record of Decision and NYSERDA's Findings Statement.

As noted in the response to Comment no. 118-6 regarding the "30-year delay" cited by the commentor, in response to public comments on this issue, DOE and NYSERDA have reconsidered this timeframe. The Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision

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their installation and subsequently in operation with acidic liquids, then chemical reactions with bases, and sodium salts. The public is obviously concerned about the potential for the waste tanks to leak, contaminating the sole source aquifer, and potentially going undetected for some period of time.

Starting the Decommissioning Plan from an untruth—that the High Level Waste Tanks are empty at the start of Phase I—does not eliminate the responsibility to analyze potential environmental impacts of leaving these tanks in the ground for another 30 years. The tanks cannot both be empty and contain over 320,000 curies of radioactivity, yet according to the Decommissioning Plan, this contrary situation will be the condition for the waste tanks at the start of Phase I. We would like to understand where all this radioactivity resides if the tanks are empty.

The Decommissioning Plan indicates that Phase I is being limited to facilities and equipment used under the West Valley Demonstration Project for reprocessing and DOE's responsibilities under the WVDP Act. However the whole purpose of the Act was related to the vitrification of high level waste that was contained in the HLW tanks and its disposal. Why then is the remaining HLW in the underground tanks not being dealt with in Phase I?

p. ES-2 Decommissioning Plan

The WVDP Act and the WVDP

This decommissioning project is being conducted under the WVDP Act of 1980. The WVDP Act directed DOE to carry out the following activities: (1) solidify the high-level waste (HLW) at the site, (2) develop containers suitable for permanent disposal of the solidified HLW, (3) transport the waste to a federal repository for permanent disposal, (4) dispose of low-level radioactive waste and transuranic waste produced in the solidification of the HLW, and (5) decontaminate and decommission the tanks, facilities, materials, and hardware used in the project in accordance with requirements prescribed by the NRC. The WVDP was initiated to allow DOE to carry out its responsibilities under the WVDP Act. This plan focuses on the fifth activity—decontamination and decommissioning.

As stated on p. 2 of the Executive Summary of the Decommissioning Plan, the WVDP Act directed DOE to solidify HLW, transport it to a federal repository, dispose of LLW and decontaminate and decommission the tanks, facilities, materials and hardware used. It would appear that the DOE has not fulfilled the majority of its responsibilities under the Act, starting with the fact that high level waste in the form of sludge remains in the tanks. DOE was unable to remove this material at the bottom of the tanks during the vitrification project. Yet on p. ES-2 of the Decommissioning Plan, we are told that the Plan focuses on the fifth activity under the Act—decontamination and decommissioning. In fact the fifth activity under the Act refers to the tanks and this Plan proposes to do nothing with the remaining HLW and these tanks.

Is it possible under the WVDP Act and other NRC and DOE requirements to decontaminate and decommission the HLW tanks by claiming that they will be empty at the start of Phase I? We are unaware of any plan to actually remove sludge from the

118-18
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and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.

D. Concerning continued public involvement in the Phase 2 decisionmaking process under the Phased Decisionmaking Alternative, please see the response to this issue under Comment no. 118-6.

118-10

DOE and NYSERDA acknowledge the commentor's support for the conclusions of the *Synapse Report* and for NYSERDA's View. Please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for further discussion of the report's issues and DOE and NYSERDA's response.

DOE disagrees with many of the points raised in NYSERDA's View, which is included as the Foreword to this EIS. At the core, differences between DOE and NYSERDA center on different views about the nature of analysis required for an EIS and the attendant level of acceptable risk associated with any uncertainties in that analysis as it relates to decisionmaking. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, this EIS (1) acknowledges the information limitation and its relevance to environmental consequence, (2) summarizes existing credible scientific evidence, and (3) presents an analysis using a theoretical approach that is generally accepted by the scientific community involved in such analyses. This Final EIS contains text boxes in the relevant subject matter areas that acknowledge the differences of opinion between DOE and NYSERDA. As stated in the responses to Comment nos. 118-4 and 118-9, in general, DOE's position is that the Agency spent much time and effort engaging highly qualified and respected experts in hydrology and hydrological transport, landscape evolution (erosion), human health and environmental risk analysis, and other technical fields, and stands behind the analyses performed for this EIS.

118-11

DOE and NYSERDA acknowledge the commentor's support for NYSERDA's View. Please see the response under Comment no. 118-10 above.

118-12

The analysis in this EIS recognizes the potential for climate change to influence the long-term consequences of waste management. Climate changes, whether natural or influenced by human actions, could change the nature and amount of precipitation. Appendix H, Section H.3.1, of both the Revised Draft EIS and the Final EIS discusses the sensitivity of groundwater flow to changes in annual precipitation. The revised erosion prediction used for the unmitigated erosion

**Commentor No. 118 (cont'd): Barbara Warren, Executive Director,
Citizens' Environmental Coalition**

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HLW tanks between now and the start of Phase I. If there is no plan to remove sludge from the HLW tanks, how exactly will DOE decontaminate and decommission the tanks in accordance with this fifth activity in the Act, when the Phase I plan states it will do nothing with the tanks? And when the DOE states it will no longer be involved with the West Valley site after Phase I?

DOE stated its objective as fulfilling its responsibilities under the WVDP, yet DOE is not dealing with the HLW waste tanks. What then are DOE's objectives? What was the rationale for choosing not to remove the tanks?

We note that the Decommissioning Plan indicates very little environmental monitoring in the area of the Waste Tank Farm, despite transfer leaks having occurred. (p. 4-40) No surface or subsurface soil monitoring has been done despite findings related to groundwater contamination and very few samples have been taken. The single groundwater monitoring well in the vicinity of the HLW tanks record a depth of only 22 feet, when the tanks are 27 feet deep. As a result monitoring could entirely miss a leak occurring at a depth beyond that of the monitoring well. It is possible that the tanks could be contributing to the Strontium plume.

Pumps remove excess groundwater near the tanks. Equipment that will aid the drying of the vaults will be installed in Phase I. Several problems exist. Apparently the work on the strontium plume and the barrier wall will alter groundwater flow potentially significantly increasing the water in the area of these tanks. Climate change could increase the occurrence of severe weather events such as flash flooding following downpours. Existing pumps and planned drying equipment may be totally inadequate under these circumstances in preventing flooding of the vaults.

IX The NRC Disposal Area

This area is under DOE control and has been undergoing measures to limit surface water flow into the area and to cap the site. A large amount of radioactive material is buried at this site including high level wastes. NFS used the NDA prior to 1972 to bury high level solid waste from reprocessing. Unprocessed fuel from a Hanford reactor and cladding from processed fuel have been buried in deep holes the NDA. Sludge from vitrifying activity was being disposed at the NDA post 1975. The deep holes are from 50-70 feet deep. These deep holes that reach the Kent Recessional Sequence pose significant risks of leaks to the sole source aquifer, that could go undetected for some time. In addition, the 2004 monitoring data indicate high contamination levels near the NDA. A responsible decommissioning plan should address this.

X The Work Plan, Construction Impacts and Facilities Being Removed

We have noted the absence of a detailed work plan. The absence of a Work Plan is however consistent with all the other elements that have not been adequately disclosed to the public. We naturally had questions about the proximity of the HLW tanks to the excavation for the source of the Strontium plume. Construction impacts ordinarily are the

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dose analysis is based on the assumption that storms could occur more frequently than indicated by current records. This prediction includes the effects of storms of greater severity than the one that occurred in the region in August 2009. The use of this higher erosion rate associated with an elevated precipitation rate is discussed in Appendix H, Section H.2.2.1. Chapter 4, Section 4.3.5, has been revised to include a discussion of how the uncertainties about future climate change are addressed in this EIS.

118-13 DOE and NYSERDA note the comment. Information about the hazard to the site presented by earthquakes is presented in this EIS in Chapter 3, Section 3.5. Please also see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue.

118-14 DOE and NYSERDA note the comment.

118-15 DOE and NYSERDA acknowledge the commentator's support for the Sitewide Removal Alternative. Please see the responses to Comment nos. 118-1, 118-2, 118-5, and 118-6.

The *Phase I Decommissioning Plan* only presents information on the proposed Phase 1 actions. The disposition of the high-level waste tanks and the NDA would be the subject of future Decommissioning Plans that would be prepared after DOE and NYSERDA identify a Phase 2 decision for these facilities. Text in the *Phase I Decommissioning Plan* has been revised to clarify that the radionuclide inventory in the tanks would be dry at the beginning of Phase 1 activities.

If a different approach is selected in the Record of Decision, the Decommissioning Plan will be revised as necessary to reflect the changes.

118-16 DOE and NYSERDA acknowledge the commentator's concern about continued DOE participation in the cleanup of the WNYNSC site. As stated in the response to Comment no. 118-3, DOE will remain on site until it completes the actions required under the West Valley Demonstration Act. Please see this response for further discussion of this issue.

118-17 DOE and NYSERDA acknowledge the commentator's preference for the Sitewide Removal Alternative. Please see the responses to Comment nos. 118-1, 118-2, 118-5, 118-6, 118-10, and 118-14.

**Commentor No. 118 (cont'd): Barbara Warren, Executive Director,
Citizens' Environmental Coalition**

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subject of an entire Chapter in an EIS. Despite extensive construction activity we are provided with very brief descriptions. Extensive demolition and excavation will be occurring in WMA-1 and 2. As a site map clearly shows the High Level Waste Tanks are in an adjacent area known as WMA-3. The potential for demolition and excavation to impact the waste tanks is real, yet the EIS fails to explore the potential for damage to the tanks and groundwater contamination impacting the sole source aquifer. No precautionary measures are discussed.

Facility Removals. DOE states its primary objective for Phase I as not prejudicing any options in Phase 2, however, there is inadequate explanation of the planned site activities to assure us that these actions won't actually preclude a complete excavation and cleanup later. Waste water treatment capacity is being removed. The remote handling facility is being removed. Pumps are being removed in the High Level tanks. We are not told when in the sequence of things these are being done, or why they are not needed for remaining activities. Won't removing the pumps and the lines increase the potential for leakage?

Similarly, it is not clear why facilities that have not been impacted by radioactivity are a priority for removal under Phase I of the Preferred Alternative such as the new Warehouse in WMA-10. We are concerned that eliminating this facility and others could hinder a full excavation and cleanup of the NDA and the SDA in the future. Also included in this area and slated for demolition are an administration building, an environmental laboratory, and a waste management storage area. If the Preferred Alternative is chosen, we object to any buildings, facilities or equipment being removed in phase I that pose no radioactive or hazardous material problem, because we can see no benefit to prioritizing such facilities for removal and we fear it could hinder or foreclose reasonable and cost-effective options for full clean-up. In the hearings others testified that they believed a purpose might be to reduce the visual presence of the facility to its neighbors. While not actually cleaned up the facility would have less of a presence with more buildings removed.

A complicated procedure will probably be necessary to remove the vitrified canisters from the Process building to the new interim storage facility given the very high radiation emissions of as much as 1760 Rads per hour. Yet we are not provided any detail about how this will be undertaken and remote handling is not even mentioned.

XI Cost Analysis
A Full Cost-Benefit Analysis was not done in this EIS. Instead only a limited cost analysis was done.

DOE avoided thorny questions related to Cost-Benefit Analysis by simply not completing one. However, a cost analysis alone provides a one-sided picture of the issue by looking only at the costs of an action without considering the benefits. We acknowledge that the mechanisms for cost benefit analysis do not take account of our values and as a result undervalue priceless assets, like the Great Lakes, the sole source aquifer and the health of future generations – children and grandchildren. Some things are priceless.

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- 118-18** DOE and NYSERDA note the comments. Please see the responses to Comment nos. 118-5, 118-6, 118-9, and 118-15 regarding the topics mentioned in this comment. Note that DOE maintains tank leak detection equipment located in the tank pans and vaults and the tanks have never leaked; therefore, they have not contributed to the source of groundwater contamination on the North Plateau. Please also see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's responses.
- 118-19** Please see the responses to Comment nos. 118-6 (regarding the tanks) and 118-12 (regarding climate change).
- 118-20** A detailed work plan is not required to complete an EIS, and normally is not developed until a decision is made. Appendix C describes the construction and demolition activities to be conducted to the extent known and provides a basis for determining impacts for each alternative. At the starting point of the time period analyzed in this EIS, the contents of the High Level Waste Tanks would be in a dry form and would not readily migrate to groundwater should the tanks be breached. Appendix I, Section I.5, contains an evaluation of an accident scenario whereby the roof of the vault and the tank collapse, exposing the tank contents to the atmosphere. Because the contents are dry, the exposure route that is considered in the accident analysis is through the air. It should be noted that the tanks have never leaked and have not contributed to the source of groundwater contamination on the North Plateau. It should also be noted that, should an accident occur resulting in breaching of the tanks, mitigative measures would be immediately implemented to minimize environmental and worker impacts.
- 118-21** DOE and NYSERDA acknowledge the commentator's concerns that the removal of facilities under Phase 1 of the Phased Decisionmaking Alternative could affect a future decision on site cleanup. However, their removal under Phase 1 would not bias any decision to be made about Phase 2 implementation.
- Phase 1 would involve short-term actions where there is Agency consensus and would undertake characterization work and studies that would facilitate future decommissioning decisionmaking for the remaining facilities or areas including a full excavation and cleanup of the NDA and the SDA. Many of the facilities and areas identified by the commentator as being eliminated under Phase 1 of the Phased Decisionmaking Alternative would actually be removed to their floor slabs or to grade prior to the starting point of the EIS (see Chapter 2, Section 2.3.1, of this EIS). These include the Administration Building and Expanded Environmental

**Commentor No. 118 (cont'd): Barbara Warren, Executive Director,
Citizens' Environmental Coalition**

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DOE's Cost- analysis devalues future priceless assets by calculating a present value for expenditures today to protect priceless assets. Present values are calculated using discount rates. For long time periods priceless assets and future generations can only be protected by assuming a discount rate of zero.

Discounting was used in the cost analysis of the cleanup options. The total costs of their analysis should be an undiscounted cost. The economists who authored the Full Cost Accounting Study critiqued the use of discounting in nuclear waste cleanups over long time periods for the following reasons. In standard shorter investments, a discount rate is applied to account for future interest earnings. For instance, at a 3 percent discount rate, \$103 next year has a present value of \$100 today, because \$100 is the amount one would have to put in the bank today at 3 percent interest, in order to end up with \$103 next year. But, since West Valley's waste is radioactive for tens of thousands of years, a cost analysis should start out with at least a review over the next 1,000 years as a first step.

Over periods of 1000 years, any substantial discount rate implies that the health and wellbeing of future generations has no present value—or no worth to us today. Since the cleanup options are meant to protect the public for many generations, we cannot reasonably assume that there is no value to public health in the 1000th year. Also, the existence of regulatory requirements for protection of sites that will remain dangerous for 1,000 years must imply that we care today about health hazards that will be experienced in 3008. Costs and benefits incurred in that distant year must have a significant present value; otherwise, we could ignore them and we could "prove" via discounting that it is not cost-effective to spend anything today on our successors a thousand years down the road. At a discount rate of 1.4 percent, considered low by many economists, \$1 million in 3008 has a present value of \$1 today. Thus it would not be worth spending more than \$1 today to prevent \$1 million of harm in 3008. To validate the commonsense idea and the moral imperative that outcomes in 3008 matter today, the discount rate must be no more than zero. If we care about the long-term impacts of today's nuclear waste, then the only supportable discount rate is zero. While the choice of a discount rate for short term decisions is an economic question, the choice of an intergenerational discount rate is a matter of ethics and policy.

It is also worth noting in relation to the West Valley site that prevention is usually a fraction of the cost of response, remediation and clean-up. Protecting New Orleans from storms and flooding would have prevented hundreds of billions of dollars in damages from Hurricane Katrina at a fraction of the ultimate cost. The FCA Study showed that a catastrophic release could have costs far exceeding a full cleanup, \$27 billion and this estimate is based on replacing the water supply for only one drinking water system taking water from Lake Erie.

Sitewide Removal or Full Cleanup could be considered prevention of future catastrophic outcomes.

XII The Sitewide Removal Alternative is the ONLY Alternative that:

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118-23

Laboratory in Waste Management Area (WMA) 10 and most of the facilities in WMA 5. The decisions regarding which facilities will be removed prior to the EIS starting point were developed by DOE and NYSERDA after careful consideration of all facilities and areas on WNYNSC.

All facilities to be closed at the starting point of the EIS are not expected, either individually or collectively, to affect the decommissioning plans for the site. None of them would be needed to safely monitor and maintain or support future removal of the vitrified high-level radioactive waste on the site or to assist in site decommissioning. Leaving the unneeded facilities in place would require continued maintenance and monitoring, resulting in unnecessary costs. The only facility that will not be removed prior to the EIS starting point is the New Warehouse in WMA 10. The New Warehouse and other facilities and storage areas that would be removed from the site during Phase 1 of the Phased Decommissioning Alternative, if that alternative is selected in the Record of Decision, are addressed in Chapter 2, Section 2.4.3.1, of this EIS. Again, DOE and NYSERDA carefully reviewed the facilities that would be removed during Phase 1 to assure that no reasonable and cost-effective options for decommissioning under Phase 2 would be foreclosed. The facilities that could be used in future decommissioning actions would be monitored and maintained.

118-22 DOE and NYSERDA acknowledge the commentor's concern about cost discounting and interest in the cost-benefit analysis included in the Revised Draft EIS. Please see the Issue Summary for "Questions about Cost-Benefit Analysis" in Section 2 of this CRD for further discussion of these issues and DOE and NYSERDA's responses.

The cost-benefit analysis presented in Chapter 4, Section 4.2, of the Revised Draft EIS was performed to support NRC's request for cost-benefit information consistent with its as low as is reasonably achievable (ALARA) analysis guidelines. This cost-benefit analysis follows the principles in the NRC ALARA guidance presented in NUREG-1757, "NRC Consolidated Decommissioning Guidance." The analysis in Section 4.2 has been revised for this Final EIS and uses several relatively low discount rates (1, 3, and 5 percent) to investigate the sensitivity of the results to lower discount rates. The use of a single discount rate of zero for the ALARA analysis is not considered to be consistent with the NRC guidance.

118-23 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. Please see the responses to Comment nos. 118-2 an 118-17.

**Commentor No. 118 (cont'd): Barbara Warren, Executive Director,
Citizens' Environmental Coalition**

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- Provides a complete and comprehensive cleanup of the entire site through excavation of radioactive and toxic waste, including any off-site contamination;
- Provides a permanent and safe solution that removes radioactive waste from a site with serious erosion problems, earthquake hazards, and a sole source aquifer;
- Prevents any catastrophic releases which could pollute community drinking water supplies, Lakes Erie and Ontario, harm public health and cost billions of dollars;
- Significantly lowers health risks to nearby communities, leaving behind a contamination-free area after 64 years;
- Provides the most cost-effective approach over the long term according to a recent study (*An independent, state-funded study, The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site*, revealed leaving buried waste at the site is both high risk and expensive while a full waste excavation cleanup presents the least risk to a large population and the lowest cost. Over 1000 years, waste excavation costs \$9.9 billion while containing onsite buried waste costs \$13 billion, and \$27 billion if a catastrophic release occurred);
- Is not jeopardized by the powerful forces of erosion, weather, water, earthquakes or human intruders;
- Eliminates the worry for nearby residents and public officials;
- Does not require maintenance of emergency radiological services in nearby towns;
- Does not require a financial set aside to guarantee care at the site for thousands of years; and,
- Has been adequately disclosed to the public, so they can have some confidence in the outcome.

Finally, the Sitewide Removal Alternative is the only Alternative that has our Full support for all the reasons contained in these comments.

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Information about the environmental impacts that could be associated with WNYNSC activities is presented in several places in this EIS. For example, information about the hazard to the site presented by earthquakes is presented in Chapter 3, Section 3.5. Projected short-term and long-term impacts for each EIS alternative are summarized in Chapter 2, Section 2.6, and presented in detail for each environmental resource area (human-health and safety, ecological and water resources, etc.) in Chapter 4, Section 4.1. In particular, a detailed assessment of the effects of radioactive and toxic wastes on human health, including potential impacts to individuals and populations assumed to consume and use water from Lake Erie and other water bodies in the region, is given in Section 4.1.10. This section includes the public impacts that could result from a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. Chapter 4, Section 4.2, presents a discussion of costs associated with each alternative.

Chapter 4, Section 4.2, of this EIS presents a discussion of costs associated with each alternative. Please also see the “Conclusions of the *Synapse Report*” Issue Summary in Section 2 of this CRD for information regarding DOE’s response concerning the report’s cost estimate associated with waste remaining on site and the apparent inconsistencies employed to arrive at the cost estimate.

Enclosure:
Superfund: In the Eye of the Storm, CHEJ, 2009.

Commentor No. 119: Town of Aurora (Erie County)



TOWN OF AURORA
5 South Grove Street, East Aurora, NY 14052
www.townofaurora.com

June 4, 2009

NYS Energy Research & Development Authority
Paul Bembia, Program Director
West Valley Site Management Director, NYSERDA
Ashford Office Complex
9030 Route 219
West Valley NY 14170

Dear Mr. Bembia:

The Town of Aurora (Erie County) Planning Board has become aware that the U.S. Department of Energy and NYS Energy Research & Development Authority are proposing to leave buried waste on-site including high level radioactive waste tanks, even when subject tanks are at the end of their useful safe storage life and could leak contamination at any time. These agencies are delaying the final cleanup decisions for up to 30 years. Radioactive wastes reputedly do not diminish in concentration, migrating through the ground, essentially are time dependent for diminishing the health hazard.

Based on the above information, the Town of Aurora Planning Board passed a motion to remove all buried wastes from the West Valley Site.

119-1

119-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. The selected course of action, including appropriate mitigation measures, will provide protection of water and other natural resources. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 120: D. S. Kiefer

8 June 2009

To: Catherine Bohan
 EIS Document Manager
 West Valley Demonstration Project
 U.S. Department of Energy
 P. O. Box 2368
 Germantown, MD 20874

in re Revised DEIS for
 Decommissioning and/or
 Long-term Stewardship at the
 West Valley Demonstration
 Project and Western New
 York Nuclear Service Center

From: D. S. Kiefer
 629 Highland Rd.
 Ithaca, NY 14850

Dear Sirs and Madams,

Thank you for using soy-based ink on recycled paper!

In keeping with that enlightened approach, it follows that the best thing for the environment and human health is a comprehensive cleanup of West Valley, including excavation of the entire contaminated site. We have learned over and over that humans underestimate consequences of their supposedly scientific decision. West Valley remains a stunning example.

The preferred alternative of two phases seems a reasonable approach at this time, but a phase two achieving complete clean up is crucial. NYSERDA's view appears to be more conservative and seems closer to the precautionary principle. Removal of contamination in our lifetimes is the best we can do to be sure of the future...

Good luck.

Darby Kiefer (Ms.)

120-1

120-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative and support for Phase 1 of the Phased Decisionmaking Alternative as an initial step toward complete removal. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. It should be noted that, based on the results of Phase 1 investigations, the decision for implementation of Phase 2 could be either sitewide removal of remaining facilities and contamination (Sitewide Removal Alternative) or in-place closure of remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements.

Commentor No. 121: Donald C. Kosloff

Donald C. Kosloff
11800 Edgewater Drive #815
Lakewood OH 44107
June 10, 2009

Catherine Bohan, EIS Document Manager
West Valley Demonstration Project
U.S. Department of Energy
P.O. Box 2368
Germantown, MD 20874

Dear Ms. Bohan:

I strongly **oppose** the Sitewide Removal Alternative.

We humans have a moral obligation to care for God's good creation and to clean up our mess before handing the work off to our descendants.

Therefore, I am writing you in **opposition** to the Sitewide Removal Alternative (full waste excavation cleanup) for the West Valley Demonstration Project (WVDP) as described in the Draft Environmental Impact Statement issued by the DOE and the NYS Energy and Research Authority in December, 2008.

I **support the Preferred Alternative** because it would delay the final cleanup decision for the majority of the wastes for another 30 years, leaving most of the nuclear waste **safely** on the site.

Such a delay is the most responsible because it will reduce dose to humans and better protect the environment.

The radioactive materials from the site that has been found already at the juncture of the Niagara River and Lake Ontario is harmless and may actually be beneficial to human health.

The Sitewide Removal Alternative provides no benefits.

Sincerely:



Donald C. Kosloff

cc: President Barack Obama
The White House
1600 Pennsylvania Avenue
Washington, DC 20500

121-1

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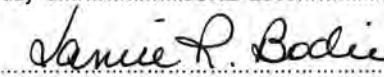
DOE and NYSERDA acknowledge the commentor's opposition to the Sitewide Removal Alternative and preference for the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

Commentor No. 122: Janice R. Bodie, Clerk,
City of Tonawanda

STATE OF NEW YORK
County of Erie, City of Tonawanda, N.Y. { ss

I, Janice R. Bodie, Clerk of the City of Tonawanda, do hereby certify that I have compared the annexed copy of.....RESOLUTION..... duly offered and adopted by theCOMMON COUNCIL..... of said City at aREGULAR.....meeting thereof held on the.....17TH.....day of.....MARCH 2009.....with the original record on file in my office and the annexed.....RESOLUTION..... is a true correct copy thereof and the whole thereof.

In Testimony Thereof, I have hereunto set my hand and affixed the seal of said City this9TH.....day of.....JUNE 2009.....


Janice R. Bodie, Clerk

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**Commentor No. 122 (cont'd): Janice R. Bodie, Clerk,
City of Tonawanda**

52. By the Council

seconded by the Council
 Whereas, thirty miles south of Buffalo, New York, the West Valley nuclear waste site, located in Cattaraugus County, is burdened with vast amounts of toxic and radioactive wastes, many of which will remain radioactive for tens of thousands of years, some for millions of years, including plutonium, uranium, strontium-90 and iodine-129, and can cause leukemia and cancer at low doses;

Whereas, the site is the nation's only venture into commercial reprocessing of irradiated nuclear fuel, was operated by Nuclear Fuel Services and ended in a total failure in 1976 with the company leaving and passing on cleanup responsibility to the government and taxpayers;

Whereas, the site sits on top of a sole source aquifer and has been plagued with problems, such as radioactive contaminated groundwater, and radioactivity from the site has been found as far away as the shore at the juncture of the Niagara River and Lake Ontario demonstrating a potential for the leaking site to contaminate drinking water supplies for millions of people;

Whereas, the Department of Energy and NYS Energy Research & Development Authority are proposing to leave buried waste onsite, (including high level radioactive waste tanks when such tanks are at the end of their useful lives and could leak contamination at any time), and delay final cleanup decisions for up to 30 years;

Whereas, economists and scientists recently released a first-ever study on the long-term cleanup costs, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site*, funded by a New York State grant sponsored by Senator Catharine Young (R-Olean), and the study was conducted by Synapse Energy Economics, experts from Tufts University, SUNY Fredonia and Radioactive Waste Management Associates;

Whereas, the study investigated the costs of digging up radioactive waste versus leaving waste buried onsite for the next 1,000 years and found that a full waste excavation cleanup costs less, at \$9.9 billion, and presents the least risk to the population than leaving buried waste onsite, which is expensive, at \$13 billion, carries high risks, and could also cost an additional \$27 billion or more if a catastrophic release of radioactive waste contaminated drinking water supplies;

Whereas, scientists found that erosion is a powerful and fast moving force in the region, and leaving buried waste onsite poses a risk to people if controls fail and dangerous radioactive waste pollutes local, regional and international waterways into Lake Erie, the Niagara River and beyond;

Whereas, scientist found the site poses a significant danger to people who live along nearby creeks, Buffalo residents and people living along the shores of Lakes Erie and Ontario, and if just 1% of radioactivity leaked from the site, Lake Erie water users would be exposed to substantial radiation, causing hundreds of cancer deaths, and Buffalo and Erie County water replacement would cost hundreds of millions of dollars;

Whereas, scientists and economists concluded that if wastes are left buried at West Valley and a release occurs, it can have expensive and disastrous consequences irreparably contaminating the precious Great Lakes region, and the costs of maintaining buried waste in an attempt to thwart future disaster will be far more expensive and far more risky than excavating the radioactive waste which is the safest, precautionary approach, now therefore be it

Resolved, that the City of Tonawanda, supports the full cleanup of the entire West Valley nuclear waste site (also known as the Western NY Nuclear Service Center & Demonstration Project) through waste excavation; and be it further

Resolved, that the City of Tonawanda, supports cleanup standards that are at least as protective as current state radiation standards and unrestricted use toxic standards, and are fully protective of vulnerable populations, including children, fish, wildlife and water.

Ayes: Perkins, Waterhouse, Kosow, Davis, Zeisz
 Nays: None

Resolution declared adopted

03/17/09 Mtg.

***Commentor No. 122 (cont'd): Janice R. Bodie, Clerk,
City of Tonawanda***

The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program.

- 122-4** Some of the alternatives evaluated in this EIS, including the Preferred Alternative (Phased Decisionmaking), could result in some facilities and waste remaining on the site, including the high-level radioactive waste tanks. Under the Phased Decisionmaking Alternative, action would be undertaken during Phase 1 for all facilities except the Waste Tank Farm, NDA, SDA, and Construction and Demolition Debris Landfill. Options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close in place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. DOE is required by the West Valley Demonstration Project Act to decontaminate and decommission the waste storage tanks and facilities used to solidify high-level radioactive waste, as well as any material and hardware used in connection with the WVDP, in accordance with such requirements as NRC may prescribe.

DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE has developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flows into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being

**Commentor No. 122 (cont'd): Janice R. Bodie, Clerk,
City of Tonawanda**

further reduced by tank drying. Additionally, much of the residual contamination in the tanks is attached (i.e., “fixed”) to metal surfaces and is not readily mobile.

- 122-5** Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed the Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.
- 122-6** DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for “Conclusions of the *Synapse Report*” in Section 2 of this CRD for a discussion of the report’s issues and DOE’s and NYSERDA’s response.
- 122-7** DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in this EIS. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. In addition to the previously cited Issue Summaries, please see the Issue Summary for “Questions about Long-term Erosion Modeling” in Section 2 of this CRD for further discussion of this issue and DOE’s and NYSERDA’s response.
- 122-8** The conclusions referenced in the comment are taken from the *Synapse Report*. As noted above, please see the Issue Summary for “Conclusions of the *Synapse Report*” in Section 2 of this CRD for a discussion of the report’s issues and DOE’s and NYSERDA’s response.

***Commentor No. 122 (cont'd): Janice R. Bodie, Clerk,
City of Tonawanda***

- 122-9 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 123: Patti Jankowski

July 9, 2009

Patti Jankowski

10690 Autumn View Trail

West Valley, NY 14171

I have lived here in West Valley now 10 plus years now.I moved here fully knowing what was my neighbor(the Plant)I myself Would Really like to see what ever is left at plant to be stored above ground to be monitored.(I live 2 miles from plant)I think it is the safest way !Also I would like to see the State give anyone living with in a 5 mile radius a major property tax cut.I think its only fair as we live with it on a daily bases.It affects and would affect us if anything would go array

123-1

123-1

DOE and NYSERDA note the comment.

As explained in Chapter 2, Section 2.5.1, of this Final EIS, DOE and NYSERDA do not consider the use of existing structures or construction of new aboveground facilities at WNYNSC for indefinite storage of decommissioning or long-term management of waste to be a reasonable alternative for further consideration because it would not meet the Purpose and Need for Agency Action stated in Chapter 1, Section 1.3.

Decisions about New York property tax rates are not made by DOE or NYSERDA.

Commentor No. 124: Bruce C. Chapman

July 9, 2009

Bruce C. Chapman

Landowner Zoar Valley/ Cattaraugus Creek

166 Juniper Dr.

North Kingstown, RI 02852

NYS DEC informed us that we have Bald Eagles nesting on our property in East Otto. What is to become of them and all the other valley wildlife, should there be leakage of nuclear material from the storage sight? This could be the single most catastrophic environmental disaster in the history of mankind. The entire St. Lawrence basin including lakes Erie and Ontario would be devastated. What about our neighbors to the north in Canada?

124-1

124-1

DOE and NYSERDA note the commentor's concerns. DOE's site monitoring program addresses media (air, water, crops) where wildlife and humans could come into contact with radioactive contamination. Chapter 4 of this EIS presents a screening-level analysis of the impacts of radionuclide releases to biotic receptors for the Sitewide Close-In-Place Alternative (Section 4.1.6.2) and the No Action Alternative (Section 4.1.6.4). In addition, see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for a discussion of potential impacts to regional and Great Lakes water users.

Commentor No. 125: Angela Knisley

May 31, 2009

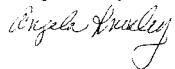
Dear Mr. Murray,

If there was ever a time to act ...for the protection of your people and your environment...it is now. You have the power to protect the Great Lakes (and as a result drinking water for western New York). I urge you to please support the immediate and complete clean-up of the West Valley nuclear waste site.

You play a vital role in the stewardship of one of the greatest fresh water supplies in the world and the danger to these waters is imminent. Waiting thirty years for some type of alternate solution to this clean-up is courting an environmental disaster.

Please use your position of authority to help the people under your protection as well as one of the most sensitive and important eco-systems in the world. Thank you for your time.

Sincerely,
Angela Knisley



125-1

125-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of all Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for a discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 126: Jacqueline E. Rushton,
Common Council, City of Buffalo



Common Council
CITY OF BUFFALO

Council Staff

Chief of Staff

James S. Palak

April 1, 2009

Senior Legislative Assistant/N

Kevin Linde

Dr. Steven Chu, Secretary of Energy
 US Department of Energy
 1000 Independence Ave, SW
 Washington, DC 20585

Senior Legislative Assistants

Monte Bellfield

Brian C. Bray

Mark J. Jaskula

William K. Lutz

Karen D. Pylekar

Jacqueline E. Rushton

Legislative Aide

James N. Jackson

Dear Secretary Chu:

At the Common Council meeting held on Tuesday, March 31, 2009, the following resolution was **ADOPTED** by the full Council:

Item #100 CCP 3/31/09, "West Valley Nuclear Waste Site Cleanup"

68 Niagara Square, Room 4413
 Buffalo, New York 14202-3318
 Phone: (716) 851-5105
 Fax: (716) 851-4224

Please review the enclosed item and address and file your comments and/or recommendations with the Common Council, 1308 City Hall, by 2:00 PM

Thursday, April 9, 2009.

Fax: (716) 851-4224

Your assistance is greatly appreciated.

Sincerely yours,

Jacqueline E. Rushton
JACQUELINE E. RUSHTON
 Senior Legislative Assistant

Encl.-1

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**Commentor No. 126 (cont'd): Jacqueline E. Rushton,
Common Council, City of Buffalo**

By: David Franczyk

Re: WEST VALLEY NUCLEAR WASTE SITE CLEANUP

Whereas: Thirty miles south of Buffalo, NY, the West Valley nuclear waste site, located in Cattaraugus County, is burdened with vast amounts of toxic and radioactive wastes, many of which will remain radioactive for tens of thousands of years, some for millions of years, including plutonium, uranium, strontium-90 and iodine-131, and can cause leukemia and cancer at low doses;

Whereas: The site is the nation's only venture into commercial reprocessing of irradiated nuclear fuel, was operated by Nuclear Fuel Services and ended in a total failure in 1976 with the company leaving and passing on cleanup responsibility to the government and taxpayers;

Whereas: The site sits on top of a sole source aquifer and has been plagued with problems, such as radioactive contaminated groundwater, and radioactivity from the site has been found as far away as the shore at the juncture of the Niagara River and Lake Ontario demonstrating a potential for the leaking site to contaminate drinking water supplies for millions of people;

Whereas: The Department of Energy and NYS Energy Research & Development Authority are proposing to leave buried waste onsite, (including high level radioactive waste tanks when such tanks are at the end of their useful lives and could leak contamination at any time), and delay final cleanup decisions for up to 30 years;

Whereas: Economists and scientists recently released a first-ever study on the long-term cleanup costs, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site*, funded by a New York State grant sponsored by Senator Catharine Young (R-Clean), and the study was conducted by Synapse Energy Economics, experts from Tufts University, SUNY Fredonia and Radioactive Waste Management Associates;

Whereas: The study investigated the costs of digging up radioactive waste versus leaving waste buried onsite for the next 1,000 years and found that a full waste excavation cleanup costs less, at \$9.9 billion, and presents the least risk to the population than leaving buried waste onsite, which is expensive, at \$13 billion, carries high risks, and could also cost an additional \$27 billion or more if a catastrophic release of radioactive waste contaminated drinking water supplies;

Whereas, scientists found that erosion is a powerful and fast moving force in the region, and leaving buried waste onsite poses a risk to people if controls fail and dangerous radioactive waste pollutes local, regional and international waterways into Lake Erie, the Niagara River and beyond;

Whereas: Scientists found the site poses a significant danger to people who live along nearby creeks, Buffalo residents and people living along the shores of Lakes Erie *100
5X*

- | | |
|--------------|---|
| 126-1 | WNYNSC has inventories of radionuclides and hazardous chemical constituents in the facilities (buildings, lagoons, and waste disposal areas) as well as environmental contamination from past facility operations (e.g., in the North Plateau Groundwater Plume). A description of the facilities and inventories of the radionuclides and hazardous chemical constituents is included in Appendix C of this EIS. This EIS was prepared to evaluate the potential environmental impacts, including impacts from radiological and hazardous chemical constituents, of alternatives for decommissioning and/or long-term stewardship of the site. |
| 126-2 | The commentor is correct that scientific studies have not clearly demonstrated the existence of a threshold below which exposure to ionizing radiation conveys no risk of health effects. By assuming that the risk of health effects at low doses is proportional to the exposure (i.e., doubling the exposure also doubles the risk), regulatory agencies such as EPA and NRC have adopted a prudent approach to establishing standards to protect human health and the environment from the effects of ionizing radiation. EPA typically regulates radiation exposure based on a lifetime cancer risk of 1×10^{-6} to 1×10^{-4} (1 in a million to 1 in 10,000), consistent with its approach for chemical carcinogens. NRC's license termination dose criterion of 25 millirem per year total effective dose equivalent is consistent with the recommendations of advisory bodies such as the International Commission on Radiological Protection to limit exposures to members of the public from individual sources of radiation. Estimated exposures from the alternatives considered in this EIS are presented throughout this document in a manner that allows a comparison with these levels of protection. |
| 126-3 | Chapter 1 of this EIS summarizes the history of WNYNSC. Section 1.1 provides an accurate history of the development of the site and how DOE and NYSERDA became responsible for their respective roles. |
| 126-4 | Chapter 3, Section 3.6.2.1, of this EIS addresses groundwater at WNYNSC that was contaminated due to past activities (for example, the North Plateau Groundwater Plume). This EIS was prepared to evaluate the environmental impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC. Under all of the action alternatives, DOE would either remove contamination sources, mitigate their impacts to groundwater, or both. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the North Plateau Groundwater Plume. Potential groundwater impacts associated with the EIS alternatives are discussed in Chapter 4, Sections 4.1.4 and 4.1.10, and Appendix H of this Final EIS. Please refer to the Issue Summary for "Concerns |
| 126-5 | |
| 126-6 | |
| 126-7 | |
| 126-8 | |

**Commentor No. 126 (cont'd): Jacqueline E. Rushton,
Common Council, City of Buffalo**

and Ontario, and if just 1% of radioactivity leaked from the site, Lake Erie water users would be exposed to substantial radiation, causing hundreds of cancer deaths, and Buffalo and Erie County water replacement would cost hundreds of millions of dollars;

Whereas: Scientists and economists concluded that if wastes are left buried at West Valley and a release occurs, it can have expensive and disastrous consequences irreparably contaminating the precious Great Lakes region, and the costs of maintaining buried waste in an attempt to thwart future disaster will be far more expensive and far more risky than excavating the radioactive waste which is the safest, precautionary approach;

Now Therefore, Be It Resolved:

That the Buffalo Common Council, supports the full cleanup of the entire West Valley nuclear waste site (also known as the Western NY Nuclear Service Center & Demonstration Project) through waste excavation; and

Now Therefore, Be It Further Resolved:

That the Buffalo Common Council supports cleanup standards that are at least as protective as current state radiation standards and unrestricted use toxic standards, and are fully protective of vulnerable populations, including children, fish, wildlife and water.

Be it Finally Resolved That:

This resolution will be distributed to state and federal elected officials and the US Department of Energy and NYS Energy Research and Development Authority.

[Signature]

David Franczyk

126-8
cont'd

126-4

126-9

126-10

about Potential Contamination of Water" in Section 2 of this CRD for a discussion of this issue and DOE's and NYSERDA's response.

The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program.

Some of the alternatives evaluated in this EIS, including the Preferred Alternative (Phased Decisionmaking), could result in some facilities and waste remaining on the site, including the high-level radioactive waste tanks. Under the Phased Decisionmaking Alternative, action would be undertaken during Phase 1 for all facilities except the Waste Tank Farm, NDA, SDA, and Construction and Demolition Debris Landfill. Options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close in place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. DOE is required by the West Valley Demonstration Project Act to decontaminate and decommission the waste storage tanks and facilities used to solidify high-level radioactive waste, as well as any material and hardware used in connection with the WVDP, in accordance with such requirements as NRC may prescribe.

DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE has developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flows into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level

**Commentor No. 126 (cont'd): Jacqueline E. Rushton,
Common Council, City of Buffalo**

waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being further reduced by tank drying. Additionally, much of the residual contamination in the tanks is attached (i.e., “fixed”) to metal surfaces and is not readily mobile.

- 126-5 Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed the Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected
- 126-6 DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for “Conclusions of the *Synapse Report*” in Section 2 of this CRD for a discussion of the report’s issues and DOE’s and NYSERDA’s response.
- 126-7 DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in this EIS. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. In addition to the previously cited Issue Summaries, please see the Issue Summary for “Questions about Long-term Erosion Modeling” in Section 2 of this CRD for further discussion of this issue and DOE’s and NYSERDA’s response.

**Commentor No. 126 (cont'd): Jacqueline E. Rushton,
Common Council, City of Buffalo**

- 126-8** DOE and NYSERDA note that the impacts of a release of 1 percent of the site radioactivity referred to by the commentor are taken from the *Synapse Report*. Please see the Issue Summary for “Conclusions of the *Synapse Report*” in Section 2 of this CRD for a discussion of the report’s issues and DOE’s and NYSERDA’s response. See also the response to Comment no. 126-7 regarding the long-term impacts analysis addressed in this EIS.
- 126-9** The conclusions referenced in the comment are taken from the *Synapse Report*. As noted above, please see the Issue Summary for “Conclusions of the *Synapse Report*” in Section 2 of this CRD for a discussion of the report’s issues and DOE’s and NYSERDA’s response.
- 126-10** DOE and NYSERDA acknowledge the commentor’s preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE’s Record of Decision and NYSERDA’s Findings Statement. Please see the Issue Summary for “Support for Sitewide Removal of All Radioactive and Hazardous Wastes” in Section 2 of this CRD for further discussion of this issue and DOE’s and NYSERDA’s response. Agency actions would comply with the applicable cleanup and decommissioning criteria for WNYNSC embodied in Federal and New York State environmental, safety, and health regulatory requirements promulgated under various statutory authorities (see Chapter 5 of this Final EIS). As summarized in Chapter 1, Section 1.3, these regulatory requirements include, in part, RCRA permitting and corrective actions under New York State and/or EPA requirements, decommissioning according to NRC requirements in its License Termination Rule, and EPA assessments of compliance with National Emission Standards for Hazardous Air Pollutants.

**Commentor No. 127: Deborah Bruch Bucki, Town Clerk,
Town of Amherst**

Amherst Town Clerk's Office

5583 Main Street Williamsville, New York 14221

Deborah Bruch Bucki RN, PhD
Town Clerk

Adrienne I. Kotler
Mary E. Wik
Deputy Town Clerks



Phone (716) 631-7021
Fax (716) 631-7152

www.amherst.ny.us

June 3, 2009

NYS Energy Research and Development Authority
17 Columbia Circle
Albany, NY 12203

Gentlemen:

At its meeting on May 18, 2009, the Amherst Town Board unanimously voted to approve a resolution supporting the option of full cleanup of the West Valley Nuclear Waste Site using standards that are at least as protective as current state radiation standards and toxic standards for unrestricted use.

As an elected official representing this area of New York State, the Town of Amherst wanted to make you aware that the enclosed resolution was approved by the Amherst Town Board.

Please contact me should you have any further questions or concerns.

Sincerely,

Deborah Bruch Bucki

Deborah Bruch Bucki
Amherst Town Clerk

DBB:aik

Serving the Community of Amherst

127-1

127-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

Agency actions would comply with the applicable cleanup and decommissioning criteria for WNYNSC embodied in Federal and New York State environmental, safety, and health regulatory requirements promulgated under various statutory authorities (see Chapter 5 of this Final EIS). As summarized in Chapter 1, Section 1.3, these regulatory requirements include, in part, RCRA permitting and corrective actions under New York State and/or EPA requirements, decommissioning according to NRC requirements in its License Termination Rule, and EPA assessments of compliance with National Emission Standards for Hazardous Air Pollutants.

**Commentor No. 127 (cont'd): Deborah Bruch Bucki, Town Clerk,
Town of Amherst**



Town of Amherst
5583 Main Street
Williamsville, NY 14221
www.amherst.ny.us

RESOLUTION 2009-474

Deborah Bruch Bucki
Town Clerk
Meeting: 05/18/09 07:00 PM
Department: Councilmembers
Initiated by: Daniel J. Ward
ADOPTED

West Valley Nuclear Waste Site CleanUp

Consent

Whereas the West Valley nuclear waste site (also known as the Western New York Nuclear Service Center & Demonstration Project) is located 30 miles south of Buffalo and contains large amounts of toxic and radioactive wastes, some of which will remain dangerous for thousands of centuries and;

Whereas the site represents the nation's sole venture into commercial reprocessing of irradiated nuclear fuel, and whereas this venture ended in 1976 when the private partner failed, leaving cleanup responsibility to government taxpayers, and

Whereas contamination from this site has been found as far away as the Niagara River at Lake Ontario, and

Whereas Lake Erie represents the drinking water supply source for Erie County, and the Great Lakes represent a drinking water source for millions of people, and

Whereas the Department of Energy has identified alternatives for the remediation of the West Valley site ranging from complete removal of all radioactive materials to taking no action, and proposes a partial remediation while leaving buried waste onsite, including high level radioactive waste tanks, and

Whereas the Department of Energy preference would postpone a final cleanup decision for up to 30 years, and

Whereas independent joint economic and scientific analysis, funded by a New York State grant, was conducted by expert consultants and academics. And whereas these experts concluded that over time full clean up is approximately 30% less expensive than partial clean up and maintenance, not including any future leaks that would increase clean up costs exponentially.

Therefore, Be It Resolved that the Town of Amherst Town Board supports the option of full cleanup of the West Valley nuclear waste site using standards that are at least as protective as current state radiation standards and toxic standards for unrestricted use.

Be it further resolved that copies of this resolution be sent to all state and federal elected officials representing Niagara, Erie and Cattaraugus counties, as well as the U.S. Department of Energy, and the New York State Energy Research and Development Authority.

The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site, conducted by Synapse Energy Economics, experts from Tufts University, SUNY Fredonia and Radioactive Waste Management Associates

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| 127-2 | WNYNSC has inventories of radionuclides and hazardous chemical constituents from past facility operations in the facilities (buildings, lagoons, and waste disposal areas) as well as environmental contamination (e.g., in the North Plateau Groundwater Plume). A description of the facilities and inventories of the radionuclides and hazardous chemical constituents is included in Appendix C of this EIS. This EIS was prepared to evaluate the potential environmental impacts, including impacts from radiological and hazardous chemical constituents, of alternatives for decommissioning and/or long-term stewardship of WNYNSC. |
| 127-3 | Chapter 1 of this EIS summarizes the history of WNYNSC. Section 1.1 provides an accurate history of the development of the site and how DOE and NYSERDA became responsible for their respective roles. |
| 127-4 | Chapter 3, Section 3.6.2.1, of this EIS addresses groundwater at WNYNSC that was contaminated due to past activities (for example, the North Plateau Groundwater Plume). This EIS was prepared to evaluate the environmental impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC. Under all of the action alternatives, DOE would either remove contamination sources, mitigate their impacts to groundwater, or both. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the North Plateau Groundwater Plume. Potential groundwater impacts associated with the EIS alternatives are discussed in Chapter 4, Sections 4.1.4 and 4.1.10, and Appendix H of this Final EIS. Please refer to the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for a discussion of this issue and DOE's and NYSERDA's response. |
| 127-4 | The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program. |
| 127-5 | Some of the alternatives evaluated in this EIS, including the Preferred Alternative (Phased Decisionmaking), could result in some facilities and waste remaining on the site, including the high-level radioactive waste tanks. Under the Phased Decisionmaking Alternative, action would be undertaken during Phase 1 for all facilities except the Waste Tank Farm, NDA, SDA, and Construction and Demolition Debris Landfill. Options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal |

***Commentor No. 127 (cont'd): Deborah Bruch Bucki, Town Clerk,
Town of Amherst***

Alternative), close in place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. DOE is required by the West Valley Demonstration Project Act to decontaminate and decommission the waste storage tanks and facilities used to solidify high-level radioactive waste, as well as any material and hardware used in connection with the WVDP, in accordance with such requirements as NRC may prescribe.

DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE has developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flows into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being further reduced by tank drying. Additionally, much of the residual contamination in the tanks is attached (i.e., "fixed") to metal surfaces and is not readily mobile.

- 127-6 Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed the Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.

**Commentor No. 127 (cont'd): Deborah Bruch Bucki, Town Clerk,
Town of Amherst**

- 127-7 DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for “Conclusions of the *Synapse Report*” in Section 2 of this CRD for a discussion of the report’s issues and DOE’s and NYSERDA’s response.

Commentor No. 128: New York State Legislature**NEW YORK STATE LEGISLATURE**

June 22, 2009

Dr. Steven Chu, Secretary of Energy
 U.S. Department of Energy
 1000 Independence Ave., S.W.
 Washington, DC 20585

Catherine Bohan
 Department of Energy
 PO Box 2368
 Germantown, MD 20874

Frank Murray
 President
 NYSERDA
 17 Columbia Circle
 Albany, NY 12203

Dear Secretary Chu, Ms. Bohan & Mr. Murray:

The Western New York Great Lakes region is threatened by the state's largest nuclear waste site, West Valley, located 30 miles south of Buffalo. The final resolution of this site's clean-up plan is an extremely important issue which will have a major impact on the future of the Great Lakes and Western New York's environment, drinking water supplies, public health and economic vitality.

We recommend that the Department of Energy (DOE) and NYS Energy Research & Development Authority (NYSERDA) select the Sitewide Removal Alternative. This is the only alternative that provides a comprehensive cleanup of the site through excavation of the large inventories of radioactive wastes in the burial grounds. Sitewide Removal also provides the safest solution by ultimately removing radioactive waste from an unstable site with serious erosion problems. This approach prevents catastrophic releases which could cause severe damage to communities, drinking water supplies and Lakes Erie and Ontario. Lastly, this approach provides the most cost-effective approach. The state-funded study, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site* (FCA Study) found that leaving buried waste on site is both high risk and expensive while a waste excavation cleanup presents the least risk to a large population and the lowest cost. Over 1000 years, waste excavation costs \$9.9 billion while onsite buried waste costs \$13 billion and \$27 billion if a catastrophic release occurred.

We oppose the options which would leave radioactive waste buried on the site. This includes the Phased Decision Making Alternative. While opposing the choice of this alternative, it is imperative that the work proposed be completed without further delay and in a manner that assures future complete cleanup of the site as well as excavation and safe, above ground storage

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- 128-1** DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

The report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, have been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for discussion of the report's issues and DOE's and NYSERDA's response.

- 128-2** If DOE and NYSERDA select the Phased Decisionmaking Alternative, the Agencies are committed to progressing to Phase 2 as soon as possible.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

128-1

128-2

The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for

Commentor No. 128 (cont'd): New York State Legislature

of all buried waste until those materials can be removed to an off-site repository. The Phased Decision Making in Phase 1 would demolish the process building in order to excavate the strontium plume source area, clean up the lagoons and install barriers for groundwater contamination. All of this new cleanup work would address only 1.2% of the total radioactivity on the site. Decisions on a majority of the waste, or almost 99% of the radioactivity, would be addressed in Phase 2 including high-level radioactive waste tanks, and the two burial grounds with enormous amounts of long-lasting radioactive waste. Given the decades it has taken to address this site, and the 14 year delay on the DEIS, the Phased Decision Making approach is an unacceptable delay.

Leaving wastes buried onsite does not protect the environment due to serious erosion problems, and poses a significant risk to residents if controls fail and waste pollutes nearby drinking water. Erosion is an especially powerful and fast moving force at the West Valley site as it sits on a geologically young landscape which is undergoing a relatively rapid rate of erosion. Michael P. Wilson, Ph.D., SUNY Fredonia Professor of Geosciences found in the FCA study that, "Nuclear wastes, radioactive for tens of thousands of years, will be consumed by erosion and discharged downstream to Lakes Erie and Ontario in less than 3,000 years and may be dangerously exposed in less than 200 or 300 years."

Another problem is that the potential environmental and health impacts of leaving an estimated 99% of the radioactivity on site for another 30 years were not studied in the Draft Environmental Impact Statement (DEIS). For instance, the high-level waste tanks, with 300,000 curies of radioactivity, are nearing the end of their functional life (50 years) and any leaks could seriously pollute the EPA-recognized sole source aquifer. Scientists found the site poses a significant danger to people who live nearby, in Buffalo and along the shores of Lakes Erie and Ontario. If just 1% of radioactivity leaked from the site, Lake Erie water users would be exposed to substantial radiation, risking hundreds of cancer deaths, and water replacement could cost hundreds of millions of dollars. (FCA Study) The DEIS was criticized by NYSERDA in the Forward to the DEIS for underestimating these risks.

The site sits on top of a sole source aquifer and has been plagued with problems, such as radioactive contaminated groundwater. We recommend that the Final Environmental Impact Statement support a Sitewide Removal Alternative as it is the only remedial approach that will protect the precious Great Lakes of Erie and Ontario. Thank you for considering our views.

Sincerely,

Senator Antoine Thompson
William T. Stachowski
Senator John Flanagan
Senator Catherine M. Young
Senator John A. DeFrancisco
Senator Kenneth P. LaValle

*128-2
cont'd*

128-3

making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

128-3

DOE and NYSERDA acknowledge the legislators' concerns about long-term erosion at the site. This EIS analyzes the consequences of unmitigated erosion. The results of the erosion modeling are presented in Appendix F. The human health consequences for the unmitigated erosion scenario are presented in Chapter 4, Section 4.1.10.3.3. See the "Questions about Long-term Erosion Modeling" Issue Summary in Section 2 of this CRD for a further discussion of this issue and DOE's and NYSERDA's response.

128-4

Please refer to the Issue Summary for "Conclusions of the Synapse Report," which addresses the comment on the alleged costs and impacts of the leakage of 1 percent of radioactivity.

128-4

Potential environmental and health impacts of leaving waste on site for 30 years: The analysis conducted for this EIS provides a basis for understanding the environmental and health impacts of continuing to manage the inventory in the Waste Tank Farm, NDA, and SDA in their current configuration. The impacts of storage are presented in Chapter 4, Section 4.1.9, where the Phase 1 human health impacts are discussed. Potential mitigation measures that could be implemented during this period are discussed throughout Chapter 6. Information on the human health impacts during this period is also provided in Appendices I, J, and P.

128-5

Status of the underground tanks in the Waste Tank Farm: DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE has developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State, or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flows into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults

Commentor No. 128 (cont'd): New York State Legislature

Signatures and names of New York State legislators:

- Senator George Mazzarri
- Senator George Onofre
- Senator Bill Perkins
- Senator Ruth Hassell-Thompson
- Assemblyman James S. Rosales
- Assemblyman Dan Burling
- Assemblywoman Jane Corwin
- Assemblyman Gary D. Finch
- Assemblyman Timothy Gordon
- Assemblyman Sam Hoyt
- Assemblyman David R. Koon
- Assemblywoman Crystal D. Peoples
- Assemblyman Peter M. Rivera
- Assemblyman Louis R. Tobacco
- Senator Michael E. Nozzolio
- Senator Frank Palavan
- Senator Michael Ranzenhofer
- Senator Dale M. Volker
- Assemblyman Philip Boyle
- Assemblyman William Coton
- Assemblyman Adriano Espaillat
- Assemblyman Joe Giglio
- Assemblyman James P. Hayes
- Assemblywoman Elizabeth Jagger
- Assemblyman David G. McDermott
- Assemblyman Jack Quinn
- Assemblyman Mark Schroeder
- Assemblyman David R. Townsend, Jr.

and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being further reduced by tank drying.

NYSERDA's View in the EIS Foreword. DOE disagrees with many of the points raised in NYSERDA's View, which is included as the Foreword to this EIS. At the core, differences between DOE and NYSERDA center on different views about the nature of analysis required for an EIS and the attendant level of acceptable risk associated with any uncertainties in that analysis as it relates to decisionmaking. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, this EIS (1) acknowledges the information limitation and its relevance to environmental consequence, (2) summarizes existing credible scientific evidence, and (3) presents an analysis using a theoretical approach that is generally accepted by the scientific community involved in such analyses. This Final EIS contains text boxes in the relevant subject matter areas that acknowledge the differences of opinion between DOE and NYSERDA. In general, DOE's position is that the Agency spent much time and effort engaging highly qualified and respected experts in hydrology and hydrological transport, landscape evolution (erosion), human health and environmental risk analysis, and other technical fields, and stands behind the analyses performed for this EIS.

128-5

Please refer to the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for a discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 129: Mary Ann Jordan

June 27, 2009
 Dear Dept. of the Environment & NYS Energy Research & Development Authority,

The West Valley nuclear site needs to be fully cleaned up now. I was not impressed with any of your plans. The idea of doing this project in phases that could take 30 years is not acceptable. It has already taken years to begin to address this site, and the 1 yr. delay on the DEIS. The phased decision-making approach, an unacceptable delay. Your plan to contain contaminants, has a major flaw. The Buffalo Evening News printed an article on Sun. May 24, 2009 entitled "Parts of Area slip - Sliding away." I quote "Questions raised in 1991 about the storage of low-level nuclear wastes in Catt. County, Town of West Valley, subject to serious erosion along its water ways" That was 18 years ago and there are still problems. It does not protect the environment due to erosion problems and it poses a serious threat to residents if controls fail, and waste pollutes near by drinking water. I believe if the final decision were put to public vote a full clean up would be the result. Cleanup will be expensive, however can anyone project how much it will cost? There is a major disaster involving not only human life but uncontrolled nuclear waste in land, air and drinking water?

129-1

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- 129-1** Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected. Please see the Issue Summary for "Modified Phased Decisionmaking Alternative" in Section 2 of this EIS for further discussion of this issue and DOE's and NYSERDA's response.
- 129-2** DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in this EIS. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. Please see the Issue Summaries for "Concerns about Potential Contamination of Drinking Water" and "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.
- 129-3** DOE and NYSERDA acknowledge the commentor's support for the full clean up of the WNYNSC site. The estimated costs for implementing each of the alternatives are presented in Chapter 4, Section 4.2, of this EIS. The cost estimates include the costs of resources for repairing engineered barriers and isolation systems. Analysis of site processes does not suggest that any single natural event would result in any major release of radionuclides.

Commentor No. 129 (cont'd): Mary Ann Jordan

I would think that as a Dept.
concerned with Environment that you
would agree with a 100% clean up.
A total cleanup that begins Now.

Most sincerely Concerned Citizen

Mary Ann Jordan

P.S. I noticed at the Bflo presentation that
members of the DEIS on stage were drinking
bottled H₂O. In 30 years we could lose
Lake Erie & Lake Ontario and shortly
thereafter "the Fresh Water - Great Lakes"
could be - History! -

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Commentor No. : 130: Members of Congress of the United States

Congress of the United States
Washington, DC 20515

June 5th, 2009

The Honorable Steven Chu
United States Department of Energy
1000 Independence Ave SW
Washington, DC 20585

Secretary Chu:

We are writing to support a full cleanup of New York's largest nuclear waste site, West Valley, located in Western New York.

West Valley is a large, complex site with vast amounts of long-lasting radioactive pollution. The final resolution of the West Valley cleanup plan will have a major impact on the future of the Great Lakes and Western New York's environment, drinking water supplies, public health, and economic vitality. We are concerned about the environmental and public health risks intrinsic in the Phased Decision Making approach and urge you to support full cleanup of the site.

Under the Phased Decision Making approach, Phase 1 would include moving vitrified high-level waste to a new storage facility. The Phase 1 new cleanup work includes excavating part of the migrating radioactive strontium plume, demolishing and removing the suspected source of the plume, cleaning up lagoons, and installing barriers for groundwater contamination. This cleanup work addresses only 1.2% of the total radioactivity at the site. Decisions on a majority of the waste and almost 99% of the radioactivity, including high-level radioactive waste tanks and two burial grounds, would be addressed in Phase 2.

Site-wide removal is the only alternative that truly protects the Great Lakes region. This approach would prevent a catastrophic release of radionuclides which could cause severe damage to communities, resources and drinking water supplies and Lakes Erie and Ontario. This approach is also the most cost-effective according to a recent study funded by the New York State Legislature. The study, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste*, found leaving buried waste at the site is both high risk and expensive while a waste excavation cleanup presents the least risk to a large population and the lowest cost. Over 1000 years, waste excavation costs \$9.9 billion while onsite buried waste costs \$13 billion to \$27 billion or more if a catastrophic release occurred.

Leaving waste buried onsite does not protect the environment due to serious erosion problems, and poses a significant risk to residents if controls fail and waste pollutes nearby drinking water. The state-funded study found that erosion is an especially

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- 130-1** DOE and NYSERDA acknowledge the commentors' preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

The report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., has been addressed in this CRD, consistent with the Council on Environmental Quality's NEPA regulations. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Waste," "Conclusions of the *Synapse Report*," and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

- 130-2** The statements regarding actions to be taken during Phase 1 of the Phased Decisionmaking Alternative are consistent with the descriptions in this EIS. It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no

Commentor No. 130 (cont'd): Members of Congress

powerful and fast moving force at the West Valley site as it sits on a geologically young landscape which is undergoing a relatively rapid rate of erosion. We are concerned that the potential environmental and health impacts of leaving an estimated 99% of the radioactivity on site for another 30 years was not studied in the DEIS. For instance, the high-level waste tanks, with 300,000 curies of radioactivity, are nearing the end of their functional life (50 years) and any leaks could pollute the local aquifers.

We cannot jeopardize the irreplaceable natural resources of the Great Lakes by leaving West Valley largely unaddressed for another three decades. We urge you to support the Site-wide Removal Alternative as it is the only cleanup approach will effectively protects New York's Great Lakes region. We also strongly advocate extending the public comment period for 90 additional days.

Thank you for your consideration.

Charles Schumer
Senator

Kirsten Gillibrand
Senator

Brian Higgins
Member of Congress

Eric Massie
Member of Congress

Maurice Hinchey
Member of Congress

Jose Serrano
Member of Congress

Steve Israel
Member of Congress

Nita Lowey
Member of Congress

Christopher Lee
Member of Congress

Daniel Maffei
Member of Congress

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130-4

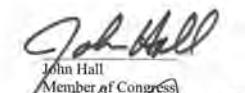
later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

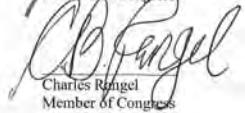
This EIS estimates the environmental consequences of leaving the waste on site in both an "as-is" condition (No Action Alternative), as well as an arrangement with increased isolation and supporting monitoring and maintenance (Sitetwide Close-In-Place Alternative). The analysis considers two cases: ongoing institutional controls and loss of institutional controls after 100 years. One of the scenarios analyzed for the postulated loss of institutional control situation is termed "the unmitigated erosion scenario." This analysis relies on a long-term erosion model calibrated to available site-specific data and used in a manner that is consistent with theoretical approaches generally accepted by the scientific community.

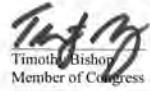
The impacts of managing the Waste Tank Farm in an "as-is" configuration is discussed in this EIS. DOE's actions to dry the waste heel remaining in the tanks also extends the service life of the tanks and reduces the potential for and consequences of a leak from the Waste Tank Farm.

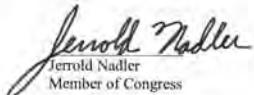
The environmental impacts of implementing Phase 1 of the Phased Decisionmaking Alternative are described for each resource area in Chapter 4 of this EIS. If this alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitetwide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitetwide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. For each resource area, Chapter 4 discusses the impacts that would occur if either removal or close-in-place is selected for Phase 2. The chapter also discusses which alternative(s) bound the impacts in the event that continued active management is selected for the SDA. The short-term impacts of a Phase 2 decision that involves continued active management of the SDA are bounded by either the removal or close-in-place impacts. The post-decommissioning impacts of a continued active management decision for the SDA, which include staffing, occupational exposure, and waste generation related to SDA monitoring and maintenance, as well as long-term impacts on public health and safety, would be similar to the no action impacts for the SDA.

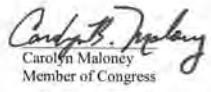
Commentor No. 130 (cont'd): Members of Congress

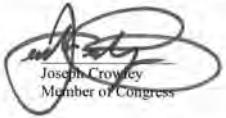

John Hall
Member of Congress


Eliot Engel
Member of Congress


Timothy Bishop
Member of Congress


Jerrold Nadler
Member of Congress


Carolyn Maloney
Member of Congress


Joseph Crowley
Member of Congress


Paul Tonko
Member of Congress

- 130-4** In response to requests from the public, DOE and NYSERDA extended the original 6-month comment period (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE) for an additional 90 days, through September 8, 2009.

**Commentor No. 131: Jonathan Weston,
Staff of Congressman Brian Higgins**

From: Weston, Jonathan <Jonathan.Weston@mail.house.gov>
To: Lerner, Steve; Milone, Lauren
Cc: Sermonis, Nathan <Nathan.Sermonis@mail.house.gov>
Sent: Mon Jul 13 14:49:09 2009
Subject: RE: Extension of Public Comment Period for 90 Days

Steve –

I am writing to clarify upon the New York State delegation letter regarding West Valley.

Congressman Higgins strongly supports moving forward with Phase One of the Preferred Alternative and believes it is a vital next step in the remediation process. We believe that the other cosigners of the letter feel the same as this was communicated in conversations with the delegation.

The letter is only meant to highlight our desire for DOE to make a stronger commitment to the site in Phase Two. If you have any questions or concerns, please do not hesitate to contact me.

Best regards –

Jonathan Weston
Senior Policy Advisor
Congressman Brian Higgins
431 Cannon House Office Building
P: 202.225.3306
F: 202.226.0347

131-1

131-1 DOE and NYSERDA appreciate the clarification and acknowledge the commentor's support for the Phased Decisionmaking Alternative followed by a strong commitment to Phase 2 cleanup. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement.

Commentor No. 132: Kathleen McCormick

August 8, 2009

**Kathleen McCormick
53 Milton Street
Williamsville, NY 14221**

I strongly support the Sitewide Removal option for West Valley. The health risks of the other two options are too high. Leaving the waste in place at West Valley brings those of us living in Western New York one step closer to making one of my childhood nightmares a reality -- the human race dying out because we've contaminated our water. Please do a complete clean-up of West Valley.

132-1

- 132-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

**Commentor No. 133: Johanna M. Coleman, Town Clerk,
Town of Lancaster**



Town of Lancaster

21 CENTRAL AVENUE
LANCASTER, NEW YORK 14086
PHONE: (716) 683-9028
FAX: (716) 683-2094

JOHANNA M. COLEMAN
Town Clerk

July 23, 2009

NYS Energy Research & Development Authority
Paul Bembia, Program Director
West Valley Site Management Director
9030 Route 219
West Valley, New York 14171

U.S. Environmental Protection Agency
Paul A. Giardina, Chief
Radiation & Indoor Branch
EPA Region 2
290 Broadway
New York, New York 10007-1866

Coalition on West Valley Nuclear Wastes
PO Box 603
Springville, New York 14131

Re: Resolution adopted by Lancaster Town Board

Gentlemen:

Enclosed is a copy of a resolution adopted by the Town Board of the Town of Lancaster on July 20, 2009.

This resolution states that the Town Board of the Town of Lancaster supports the cleanup of the West Valley Nuclear site with the clean up standards as protective as current state radiation standards and unrestricted use toxic standards, and are fully protective of vulnerable populations, including children, fish, wildlife and water.

Sincerely yours,

OFFICE OF THE TOWN CLERK


Johanna M. Coleman, Town Clerk

JMC/mp
Encl.

I133-1

133-1 DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Agency actions would comply with the applicable cleanup and decommissioning criteria for WNYNSC that are embodied in Federal and New York State environmental, safety, and health regulatory requirements promulgated under various statutory authorities (see Chapter 5 of this Final EIS). As summarized in Chapter 1, Section 1.3, these regulatory requirements include RCRA permitting and corrective actions under New York State and/or EPA requirements, decommissioning according to NRC requirements in its License Termination Rule, and EPA assessments of compliance with National Emission Standards for Hazardous Air Pollutants.

**Commentor No. 133 (cont'd): Johanna M. Coleman, Town Clerk,
Town of Lancaster, New York**

THE FOLLOWING RESOLUTION WAS OFFERED
BY SUPERVISOR GIZA, WHO
MOVED ITS ADOPTION, SECONDED BY
COUNCIL MEMBER STEMPNIK, TO WIT:

WHEREAS, thirty miles south of Buffalo, New York, the West Valley nuclear waste site, located in Cattaraugus County, is burdened with vast amounts of toxic and radioactive wastes, many of which will remain radioactive for tens of thousands of years, some for millions of years, including plutonium, uranium, strontium-90 and iodine-129, and can cause leukemia and cancer at low doses; and

WHEREAS, the site is the nation's only venture into commercial reprocessing of irradiated nuclear fuel, was operated by Nuclear Fuel Services and ended in total failure in 1976 with the company leaving and passing on cleanup responsibility to the government and taxpayers, and

WHEREAS, the site sits on top of a sole source aquifer and has been plagued with problems, such as radioactive contaminated ground water, and radioactivity from the site has been found as far away as the shore at the juncture of the Niagara River, and Lake Ontario demonstrating a potential for the leaking site to contaminate drinking water supplies for millions of people, and

WHEREAS, the Department of Energy and NYS Energy Research and Development Authority are proposing to leave buried waste onsite, (including high level radioactive waste tanks when such tanks are at the end of their useful lives and could leak contamination at any time), and delay final cleanup decisions for up to 30 years, and

WHEREAS, economists and scientists recently released a first-ever study on the long-term cleanup costs, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site*, funded by a New York State grant sponsored by Senator Catherine Young (R-Olean), and the study was conducted by Synapse Energy Economics, experts from Tufts University, SUNY Fredonia, and Radio Active Waste Management Associates, and

WHEREAS, the study investigated the costs of digging up radioactive waste versus leaving waste buried onsite for the next 1,000 years and found that a full waste excavation cleanup costs less, at \$9.9 billion, and presents the least risk to the population. Leaving buried waste onsite, which is expensive, at \$13 billion, carries high risks, and could also cost and additional \$27 billion or more if a catastrophic release of radioactive waste contaminated drinking water supplies, and

- 133-2 WNYNSC has inventories of radionuclides and hazardous chemical constituents in the facilities (buildings, lagoons, and waste disposal areas) as well as environmental contamination from past facility operations (e.g., in the North Plateau Groundwater Plume). A description of the facilities and inventories of the radionuclides and hazardous chemical constituents is included in Appendix C of this EIS. This EIS was prepared to evaluate the potential environmental impacts, including impacts from radiological and hazardous chemical constituents, of alternatives for decommissioning and/or long-term stewardship of the site.
- 133-2 The commentator is correct that scientific studies have not clearly demonstrated the existence of a threshold below which exposure to ionizing radiation conveys no risk of health effects. By assuming that the risk of health effects at low doses is proportional to the exposure (i.e., doubling the exposure also doubles the risk), regulatory agencies such as EPA and NRC have adopted a prudent approach to establishing standards to protect human health and the environment from the effects of ionizing radiation. EPA typically regulates radiation exposure based on a lifetime cancer risk of 1×10^{-6} to 1×10^{-4} (1 in a million to 1 in 10,000), consistent with its approach for chemical carcinogens. NRC's license termination dose criterion of 25 millirem per year total effective dose equivalent is consistent with the recommendations of advisory bodies such as the International Commission on Radiological Protection to limit exposures to members of the public from individual sources of radiation. Estimated exposures from the alternatives considered in this EIS are presented throughout this document in a manner that allows a comparison with these levels of protection.
- 133-3 Chapter 1 of this EIS summarizes the history of WNYNSC. Section 1.1 provides an accurate history of the development of the site and how DOE and NYSERDA became responsible for their respective roles.
- 133-4 Chapter 3, Section 3.6.2.1, of this EIS addresses groundwater at WNYNSC that was contaminated due to past activities (for example, the North Plateau Groundwater Plume). This EIS was prepared to evaluate the environmental impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC. Under all of the action alternatives, DOE would either remove contamination sources, mitigate their impacts to groundwater, or both. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the North Plateau Groundwater Plume. Potential groundwater impacts associated with the EIS alternatives are discussed in Chapter 4, Sections 4.1.4 and 4.1.10, and Appendix H of this Final EIS. Please refer to the Issue Summary for "Concerns

**Commentor No. 133 (cont'd): Johanna M. Coleman, Town Clerk,
Town of Lancaster, New York**

WHEREAS, scientists found that erosion is a powerful and fast moving force in the region, and leaving buried waste onsite poses a risk to people if controls fail and dangerous radioactive waste pollutes local, regional and international waterways into Lake Erie the Niagara River and beyond, and

WHEREAS, scientists found the site poses a significant danger to people who live along nearby creeks, Buffalo residents and people living along the shores of Lakes Erie and Ontario and if just 1% of radioactivity leaked from the site, Lake Erie water users would be exposed to substantial radiation, causing hundreds of cancer deaths, and Buffalo and Erie County water replacement would cost hundreds of millions of dollars, and

WHEREAS, scientists and economists concluded that if wastes are left buried at West Valley and a release occurs, it can have expensive and disastrous consequences irreparably contaminating the precious Great Lakes region, and the costs of maintaining buried waste in an attempt to thwart future disaster will be far more expensive and far more risky than excavating the radioactive waste which is the safest, precautionary approach.

NOW, THEREFORE, BE IT

RESOLVED, that the Town Board of the Town of Lancaster supports the full cleanup of the entire West Valley nuclear waste site (also known as the Western NY Nuclear Service Center & Demonstration Project) through waste excavation; and

BE IT FURTHER

RESOLVED, that the Town Board of the Town of Lancaster supports cleanup standards that are at least as protective as current state radiation standards and unrestricted use toxic standards, and are fully protective of vulnerable populations, including children, fish, wildlife and water.

The question of the adoption of the foregoing resolution was duly put to a vote on roll call which resulted as follows:

COUNCIL MEMBER ABRAHAM	VOTED YES
COUNCIL MEMBER AMATURA	VOTED YES
COUNCIL MEMBER RUFFINO	VOTED YES
COUNCIL MEMBER STEMPNIAK	VOTED YES
SUPERVISOR GIZA	VOTED YES

July 20, 2006

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133-9

133-5

133-10

**133-1
cont'd**

about Potential Contamination of Water" in Section 2 of this CRD for a discussion of this issue and DOE's and NYSERDA's response.

The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program.

Some of the alternatives evaluated in this EIS, including the Preferred Alternative (Phased Decisionmaking), could result in some facilities and waste remaining on the site, including the high-level radioactive waste tanks. Under the Phased Decisionmaking Alternative, action would be undertaken during Phase 1 for all facilities except the Waste Tank Farm, NDA, SDA, and Construction and Demolition Debris Landfill. Options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close in place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. DOE is required by the West Valley Demonstration Project Act to decontaminate and decommission the waste storage tanks and facilities used to solidify high-level radioactive waste, as well as any material and hardware used in connection with the WVDP, in accordance with such requirements as NRC may prescribe.

DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE has developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flows into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level

**Commentor No. 133 (cont'd): Johanna M. Coleman, Town Clerk,
Town of Lancaster, New York**

waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being further reduced by tank drying. Additionally, much of the residual contamination in the tanks is attached (i.e., "fixed") to metal surfaces and is not readily mobile.

- 133-6** Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed the Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.
- 133-7** DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for a discussion of the report's issues and DOE's and NYSERDA's response.
- 133-8** DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in this EIS. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. In addition to the previously cited Issue Summaries, please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

**Commentor No. 133 (cont'd): Johanna M. Coleman, Town Clerk,
Town of Lancaster, New York**

- 133-9 DOE and NYSERDA note that the impacts of a release of 1 percent of the site radioactivity referred to by the commentor are taken from the *Synapse Report*. Please see the Issue Summary for “Conclusions of the *Synapse Report*” in Section 2 of this CRD for a discussion of the report’s issues and DOE’s and NYSERDA’s response. See also the response to Comment no. 133-8 regarding the long-term impacts analysis addressed in this EIS.
- 133-10 The conclusions referenced in the comment are taken from the *Synapse Report*. As noted above, please see the Issue Summary for “Conclusions of the *Synapse Report*” in Section 2 of this CRD for a discussion of the report’s issues and DOE’s and NYSERDA’s response.

Commentor No. 134: Orlando C. Monaco

From: Orlando C. Monaco [mailto:monacos@monacos.us]
 Sent: Monday, August 10, 2009 11:12 PM
 To: Paul J. Bembia
 Subject: West Valley Contamination of Cattaraugus Creek and Lake Erie & Cleanup Recourse

Good evening Mr. Bembia..

I am a Western New Yorker who lives in East Aurora and the news out of West Valley gravely concerns me. The fact that we have a facility of this nature which has improper interim storage of radioactive waste and currently an active underground water leak tainted with Strontium 90 that is entering Cattaraugus Creek is disheartening. Does anyone care about the environment here in WNY? Isn't bad enough we now have to contend with this clean up and also the clean up of the Lake Ontario Ordinance Works in Niagara County, which was formerly a site for development of nuclear material for the Manhattan Project. West Valley facility needs a complete cleanup plan starting **immediately**, not partially and then pick up the majority 30 years from now. If a major leakage at this facility occurs into Cattaraugus Creek the effects will be disastrous to say the least and not just to WNY but the entire Great Lakes region. Does the Department of Energy want this kind of scenario to play out? The water shed of Cattaraugus Creek empties into Lake Erie which is the fresh water supply to millions along its 725 mile perimeter. Contaminate Cattaraugus Creek and Lake Erie and you are looking at a protracted long term manmade disaster of proportions this country has never seen. It is time for Department of Energy to put the lives and health of millions first in making a decision on the course of action to take. We have a active underground leak with radioactive contamination at West Valley, we have radioactive sediment in Cattaraugus Creek, we also have Plutonium traces showing up in the lower Niagara River and Lake Ontario. How much more does it take to convince the Department of Energy to clean up this site and move this material to an alternate location with a more suitable hydrological makeup for safe long term storage? This of course would remove the high probability of contaminating the surrounding environment of course and allow this material to be monitored long term with minimal expense. I sincerely hope the right decision is made for all our sakes. Best Regards...

Orlando C. Monaco

134-1

134-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Please note that the contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. DOE and NYSERDA are adequately managing the waste and contamination in its current configuration and releases are minimal, as demonstrated by the results from the ongoing environmental monitoring program that are reported in the annual site environmental reports. Chapter 3, Section 3.6.2.1, of this EIS addresses groundwater at WNYNSC that was contaminated due to past activities (e.g., the North Plateau Groundwater Plume). This EIS was prepared to evaluate the environmental impacts of alternatives for the decommissioning and/or long-term stewardship of WNYNSC. Under all of the action alternatives, DOE would either remove contamination sources, mitigate their impacts to groundwater, or both. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the North Plateau Groundwater Plume. Potential groundwater impacts associated with the EIS alternatives are discussed in Chapter 4, Sections 4.1.4 and 4.1.10, and Appendix H of this Final EIS.

Commentor No. 135: Orlando C. Monaco**August 10, 2009****Orlando C. Monaco****584 Crescent Ave****East Aurora, NY 14052**

Given the past history of polutions debacles in WNY and the fact that currently the West Valley Project has a major leak of strontium 90 tainted water that is currently poluting the Cattaraugus Creek and potentially if not already Lake Erie. This is unacceptable and any deferred 30 year clean up plan is a complete failure to recognize the severity of this situation. Close this facility, clean this 3000+ acre site up and move these materials to a safer location. That is the only recourse, and I know in your hearts if you lived in West Valley NY that is what you would want as well.

135-1

135-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion.

Note that, during the implementation of Phase 1 of the Preferred Alternative or the Phased Decisionmaking Alternative, the source area of the North Plateau Groundwater Plume would be removed. The nonsource area would be contained by the permeable treatment wall.

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 136: Peter Mercurio

August 6, 2009

Peter Mercurio

129 Center

East Aurora, NY 14052

Please rectify the problem now, rather then risk everyones health and cost us and our kids more later! Thank you. Peter Mercurio East Aurora, NY
Village Trustee

136-1

136-1

DOE and NYSERDA note the commentor's desire for prompt action to address site cleanup. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement.

Commentor No. 137: Kevin Manne

August 14, 2009

**Kevin Manne
1178 Akron Road
Corfu, NY 14036**

Please clean up the ENTIRE West Valley site immediately, not just the “bad” nuclear waste. As a concerned citizen of Western New York, I urge you to take immediate action on this issue before Lake Erie is contaminated, and subsequently the rest of the Great Lakes for the sake of the generations to come and for the good of the environment.

137-1

- 137-1 DOE and NYSERDA acknowledge the commentor’s preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE’s Record of Decision and NYSERDA’s Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE’s Record of Decision and NYSERDA’s Findings Statement. Please see the Issue Summary for “Support for Sitewide Removal of All Radioactive and Hazardous Wastes” in Section 2 of this CRD for further discussion of this issue and DOE’s and NYSERDA’s response.

Commentor No. 138: Melanie Scherer

August 17, 2009

Melanie Scherer

46 Brookpark Drive

Amherst, NY 14228

I am asking you to support a full clean up of the West Valley area. It is essential to our current health, and to the future health of our community.

|| 138-1

138-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 139: Dr. H. Rosalie Bertell

August 17, 2009

Dr. H. Rosalie Bertell

1750 Quarry Rd.

Yardley, PA 19067-3910

It was in 1975 that I first head about the desecration of the lush farm and dairy land south of Buffalo with a failed nuclear reprocessing plant and nuclear waste dump! I was working at Roswell Park Cancer Hospital at the time and had been studing low level radiation for ten years - measuring its age acceleration effect on humans. It is hard to believe that West Valley has not been cleaned up! It is an outrage against Public Health and the people of New York State. The failure of State and Federal government to record the damage to the health of the people does not make that damage disappear. All of Western New York has experienced the economic and damaged health legacy of this failed experiment. The children have suffered the most. There is no excuse for walking away from this environmental disaster!

139-1

139-1

This EIS was prepared to evaluate the environmental impacts of the alternatives for decommissioning and/or long-term stewardship of WNYNSC, which are presented in Chapter 4 of this EIS. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

Commentor No. 140: Mary Herbst

August 17, 2009

**Mary Herbst
5541 East River Road
Grand Island, NY 14072**

For many years now citizens in the Western New York area have been asking to clean up the West Valley Demonstration Project in order to prevent dangerous carcinogenic materials from entering the water supply. Due to erosion, it is unacceptable to continue to allow nuclear waste products to remain on the site and contaminate the water. This has been recognized for long enough and to study it further only causes more problems.

140-1

140-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in Appendix F of this EIS. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users.

Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

**Commentor No. 141: James Steinwachs,
St. Joseph's University Parish Social Justice Committee**

August 16, 2009

James Steinwachs

St. Joseph's University Parish Social Justice Committee

Buffalo, NY 14214

This problem has been ongoing for years. It is about time to put a plan together with a reasonable timetable to clean up this DUMP.

141-1

141-1

DOE and NYSERDA note the commentor's desire for prompt action to address site cleanup. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement.

Commentor No. 142: Charlotte Koons

August 19, 2009

Charlotte Koons

CODEPINK, LONG ISLAND

81 Locust Lane

Northport, NY 11768-1150

A complete clean up of West Valley Nuclear Waste site is imperative. More and more of the surrounding environment, the ground water, and the lives of surrounding wildlife and people are in danger. This is neglect and malfeasance of giant proportions. Better our tax dollars for this than endless war! A deadly oxymoron = Safe Nukes!

142-1

142-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 143: Alice Shields

August 20, 2009

Alice Shields

7 West 96 St.

New York, NY 10025

Please approve a full clean-up of the West Valley nuclear waste site.
Thank you.

143-1

143-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 144: Lia and Avery Braico

August 20, 2009

Lia & Avery Braico

138 Howe Rd

Lake Luzerne, NY 12846

Please clean fully clean up the West Valley demonstration project. My wife and I are starting a family this fall, and we hope that our daughter can grow up in a nuclear contamination free NYS.

144-1

144-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 145: Rosalinda Iacovitti

August 20, 2009

**Rosalinda Iacovitti
1 Avon Place
Suffern, NY 10901**

Good Morning! This is a short and quick plea. Please show your support for a clean and safe drinking water supply. I urge you to approve a full cleanup of the West Valley nuclear waste site. Our environment needs everyones help. Many Thanks.

145-1

145-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 146: Hazel Landa

August 19, 2009

Hazel Landa

3837 NY Highway 2

Cropseyville, NY 12052

Please do a complete cleanup of the West Valley nuclear waste site.

|| 146-1

146-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 147: H. Reiser

August 19, 2009

H. Reiser
611 W. 239th St.
#4B

Bronx, NY 10463

I strongly urge the Department of Energy and NYS Energy Research & Development Authority to select the Sitewide Removal Alternative as it provides a full cleanup for the West Valley nuclear waste site. Sitewide Removal is the safest solution by ultimately removing radioactive waste from an unstable site with serious erosion problems. It is the only alternative that will prevent catastrophic releases which can cause severe damage to communities, drinking water supplies and Lakes Erie and Ontario.

147-1

147-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in Appendix F of this EIS. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users.

Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

**Commentor No. 148: Thomas Connor,
St. Peter Damian Fraternity Secular Franciscan Order**

August 20, 2009

Thomas Connor

St. Peter Damian Fraternity Secular Franciscan Order

17 Dubois Street

Wallkill, NY 12589-3113

Now is the time to begin a thorough clean-up of the West Valley nuclear waste site. Thank you.

|| 148-1

- 148-1** DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 149: Dale Saltzman

August 21, 2009

**Dale Saltzman
3091 Hickory St.
Yorktown Hts., NY 10598**

Please remediate the entire West Valley site no matter what the cost. For the future of us all do a really good job. The money that is spent to do this work should come from the Nuclear Industry that has reaped the benefits for years and been subsidized by the government.

149-1

149-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 150: Craig C. Chapman

August 24, 2009

Craig C. Chapman

Concerned Citizen of Gowanda and Buffalo

105 Fargo Avenue

Buffalo, NY 14201

Dear Ms. Bohan, As the recent severe weather in the region, and subsequent severe erosion of the banks and cliffs along the Cattaraugus Creek has made abundantly clear, the parties responsible for this mess cannot afford to take a 10,000 year approach to this problem. Failure to fully remediate this site constitutes a clear and present threat to the health of hundreds of thousands of people, in addition to the Lakes Erie and Ontario ecosystems, Niagara Falls and the economies of every community downstream from West Valley. I have been in contact with the offices of Representatives Higgins, Slaughter, Lee, and Massa, as well as Senators Schumer and Gillebrand. I will likewise be alerting the Mayors of Niagara Falls, U.S.A and Canada and the government of the Greater Toronto Region to draw this matter of paramount environmental importance to their attention. The time to sit on hands is over. It's time to act and clean up the West Valley Demonstration Project, with all speed.

Sincerely, Craig C. Chapman

||| 150-1

||| 150-1
cont'd

||| 150-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement.

DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in Appendix F of this EIS. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes," "Concerns about Potential Contamination of Water," and "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and 4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives. Chapter 4, Section 4.1.6, of this EIS also presents the results of an ecological risk assessment showing the projected long-term ecological impacts of the alternatives. The results of the human health and ecological impacts analysis imply that any impacts on the economies of communities downstream of WNYNSC would be negligible.

Commentor No. 151: Bob Catalano

August 22, 2009

Bob Catalano

7339 Erie Road

Derby, NY 14047

Recent flooding around the West Valley Nuclear Facility demonstrates how close that facility is to a disaster. A nuclear spill could contaminate the drinking waters of Buffalo and Toronto. Our Canadian neighbors should have a say in what happens here. They should be part of the discussion. Our water is their water. Our danger is their danger. A FULL cleanup at W. Valley is necessary.

151-1

151-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

Please also see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes," "Concerns about Potential Contamination of Water," and "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses. As noted in the "Questions about Long-term Erosion Modeling" Issue Summary, calibration of the erosion model uses climatology data comparable to current conditions and includes consideration of storms comparable to those that occurred in the region in August 2009.

This EIS considers the proximity of Canada in evaluating human health impacts. As explained in Chapter 4, Section 4.1.9.1, potential doses from radiological air emissions during decommissioning are evaluated for the population within 80 kilometers (50 miles) of WNYNSC, including residents of Canada. As explained in the Issue Summary for "Concerns about Potential Contamination of Water," the dose analysis evaluates impacts to the population served by downstream water treatment plants on Lake Erie and the Niagara River using conservative assumptions regarding dilution of contaminants. As a result of the dilution that would occur due to distance and mixing with large volumes of water, the impacts to people at other locations on the Great Lakes would be much less than those presented for people served by the Lake Erie and Niagara River water treatment plants.

Commentor No. 152: Diane Doster

August 23, 2009

Diane Doster

2 Harmony Circle

Orchard Park, New York 14127

I feel that only a FULL cleanup at the West Valley site is acceptable!

|| 152-1

152-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 153: David J. Schachne

August 20, 2009

David J. Schachne

409 State Street, #1

Albany, NY 12203-1013

Please provide for a FULL CLEANUP of Lake Erie so that drinking water is not effected. The nuclear putrefaction of our environment has gone on too long in this country. For decades, the public has been poisoned and sickened by an unscrupulous nuclear power industry. Enough. Please take action to correct the destruction and contamination of our environment.

153-1

153-1 DOE and NYSERDA acknowledge the commentor's concern about contamination of Lake Erie. This EIS was prepared to evaluate the environmental impacts of the alternatives for decommissioning and/or long-term stewardship of WNYNSC. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion.

Commentor No. 154: Gudrun Scott

Frank Murray
President , NYSERDA
17 Comubia Circle
Alabany, NY 12203

and

Catherine Bohan
EIS Document manager
West Valley Demonstration Project
Department of Energy
PO Box 2368
Germantown, Md 20874

Re: Draft decommissioning and/or Long term Stewardship EIS Comments on Clean up at West Valley Nuclear Waste Site

Dear Mr Murray and Ms Bohan

YES- it should be cleaned up according to option #1 and here are my reasons:

Although it is true that the radioactive waste will only be transferred to some other place and continue to be dangerous, it is better off to lay it to rest at a stable geological site. The West Valley area this month was involved in serious rainstorm that washed trucks down the road and left campers stranded in the Zoar valley while a rip flood covered them up to their necks and they had to remain there because of road washout and wait for a sheriff helicopter to pluck them out of there in the middle of the night.

What if radioactive waste was thus transported down the valley and for all we know it might have been actually happening.

We have more instability in the weather now than ever and Western New York was rained out all summer 2009 with the water that Seattle was hoping for etc. The specific newsreport of the unstable weather condition was printed in the Buffalo news on August 11,2009 "Sheriff's copter to the rescue" by Michael Beebe and Brian Meyer and you can google it to read it. Here were I am writing from in the neighboring county we experienced more than one tornado this summer.

We need jobs and the cleanup can be part of the stimulus. The nuclear industry will get a black eye if this West Valley area leaks and becomes another poster child of how the nuclear energy is unsafe and unclean so they should be contributing heavily to this cleanup - we know Exxon and others have the money and they want to go into nuclear energy- let them contribute to this cleanup.

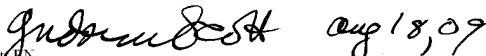
Go for option #1 and please send me a report what you decide and why.

- | | |
|--|--|
| <p>154-1</p> <p>154-2</p> <p>154-3</p> <p>154-1
cont'd</p> | <p>154-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.</p> <p>154-2 DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. There were no indications of any releases of radioactive material from WNYNSC as a result of the large rainstorms in August 2009. The potential impacts of climate change are evaluated through sensitivity analyses, but this EIS does not attempt to address extreme global-scale climate change. Although there are no reliable projections of future specific climate changes in the WNYNSC region, the groundwater dose analysis investigates the sensitivity of wetter or drier climates on the estimates of human health impacts. This includes evaluation of the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. The analysis of doses due to unmitigated erosion uses a gully advance rate associated with a climate that is wetter than current site conditions. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling are discussed in Appendix F. Please also see the Issue Summaries for "Concerns about Potential Contamination of Water" and "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.</p> <p>154-3 DOE and NYSERDA note the comment. The cumulative socioeconomic impacts of the alternatives proposed in this EIS are discussed in Chapter 4, Section 4.5.12. This EIS was prepared to evaluate the environmental impacts of the alternatives for decommissioning and/or long-term stewardship of WNYNSC, a legally required step to support a decision on a course of action. The U.S. Congress and the President are responsible for establishing funding levels for various Federal Government programs, while the New York State Legislature and the Governor are responsible for establishing funding levels for state government</p> |
|--|--|

Commentor No. 154 (cont'd): Gudrun Scott

In addition the SEQRA law requires that a DEIS have a complete plan and does not allow segmentation which is the case in this DEIS and so it should be revised.

Sincerely

 Aug 18, 09
Gudrun Scott, RN
1759 Hawk Rd
Andover NY 14806
Gudrun.Scott@gmail.com

cc: Governor David Paterson
State Capitol
Albany NY 12224

|| 154-4

154-4

programs. Implementation of the decision made in DOE's Record of Decision and NYSERDA's Findings Statement is contingent on the level of funding allocated.

The commentor is referring to the fact that the decision to clean up the site would occur in separate phases under the Phased Decisionmaking Alternative. It is NYSERDA's position that segmentation refers to the improper division of one project into multiple smaller projects to circumvent NEPA (or SEQR) requirements. NYSERDA does not believe that improper segmentation would be involved under the Phased Decisionmaking Alternative because the proposed Phase 1 actions would be independent of and would not bias actions conducted in Phase 2. In other words, the actions proposed under Phase 1 would not automatically trigger certain actions to take place under Phase 2; to the contrary, DOE and NYSERDA could opt for any alternative or combination of alternatives during Phase 2. The test for improper segmentation is whether or not projects (in this case Phase 1 and Phase 2) are interdependent. In this case, they are clearly not.

Commentor No. 155: Rosalinda Iacovitti

From: Rosalinda.lacovitti@avon.com
Sent: Thursday, August 20, 2009 8:32 AM
To: frank.murray

Subject: Cleanup of the West Valley nuclear waste site

This is a short and quick plea. Please show your support for a clean and safe drinking water supply. I urge you to approve a full cleanup of the West Valley nuclear waste site. Our environment needs everyone's help. Many Thanks.

Regards,
Rosalinda Iacovitti
AVON Products
Consumer Sciences
1 Avon Place
Suffern, New York 10910

155-1

155-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 156: Hazel Landa

From: dryland2@aol.com
Sent: Wednesday, August 19, 2009 7:13 PM
To: frank.murray
Subject: Clean-up of West Valley

Please do a complete cleanup of the West Valley nuclear waste site.
This will help to protect Lake Erie.

Hazel Landa

3837 NY Highway 2
Cropseyville, NY 12052

|| 156-1

156-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 157: C. Avery and Lia Braico

From: Avery Braico [averybraico@gmail.com]
Sent: Thursday, August 20, 2009 10:13 AM
To: frank.murray
Subject: West Valley Demonstration Project

Frank Murray, Director of NYSERDA

Please insure that the West Valley site is fully cleaned up. My wife and I are starting a family this autumn and we hope to raise our daughter in a NYS that is free of nuclear contamination.

C. Avery & Lia Braico
Lake Luzerne NY

157-1

157-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 158: Mary Herbst

From: Lee Herbst [herbstlee994@gmail.com]
Sent: Monday, August 17, 2009 4:34 PM
To: frank.murray
Subject: West Valley Nuclear Wastes

For many years now the citizens of Western New York have been asking for radioactive materials to be removed from the West Valley Demonstration Project. It is time now to prevent further contamination of our water with material that is known to be dangerous and carcinogenic. To delay this cleanup for further studies is unsafe and without conscience on the part of those making the decisions.

Thank You,
Mary Herbst

158-1

158-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative, as well as concerns about contamination of water resources and potential delays in cleaning up the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 159: Mary Steuer

August 27, 2009

**Mary Steuer
660 Evergreen
Tonawanda, NY 14150**

Hello, The FULL clean-up of West Valley is long overdue. We urge the Department to simply completely clean the site, now. Thank you.

159-1

159-1

DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 160: Frank C. Baldwin

August 29, 2009

**Frank C. Baldwin
149 Pine Tree Road
Ithaca, NY 14850**

please clean up West Valley now.

160-1

160-1

DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement.

Commentor No. 161: John V. Kim

09/02/2009 04:49 19149970946

CCEWHITEPLAINS

PAGE 01

Dear Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
U.S. Department of Energy
P.O. Box 2368
Germantown, MD 20874

Dear Ms Bohan,

I support cleanup of the West Valley nuclear waste site, the Sitewide Removal Option, which will ensure comprehensive cleanup and excavation of the entire site.

Sincerely,

J V K

John V Kim
10 Lake St Apt 3D
White Plains NY 10603

161-1

161-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 162: Brian LaLange

09/02/2005 04:49 19149970946

CCEWHITEPLAINS

PAGE 02

Dear Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
U.S. Department of Energy
P.O. Box 2368
Germantown, MD 20874

I support the Removal Option
For Cleaning up of the west
Valley Nuclear waste time.

Yours truly,

Brian LaLange

19 Court St., Lower Level
White Plains, NY
10601

162-1

162-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 163: Eymi Aquino

09/02/2009 04:49 19149970946

OCEWHITEPLAINS

PAGE 83

Dear Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
U.S. Department of Energy
P.O. Box 2368
Germanstown, MD 20874

Dear Ms. Bohan,

I am writing to support the Sitewide Removal Option, which will ensure comprehensive cleanup and excavation of the entire site, I believe this is the safest and most cost effective solution.

Eymi Aquino
210 Martine Ave. Apt 2A
White plains , NY - 10601

163-1

- 163-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and 4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives. Chapter 4, Section 4.2, of this EIS presents an evaluation of cost-benefit considerations related to the alternatives. Section 4.2.1 compares costs; Section 4.2.2 summarizes the population doses for different work elements from each alternative; and Section 4.2.3 discusses the cost-effectiveness of each decommissioning alternative.

Commentor No. 164: Steve Monroe

09/02/2009 04:49 19149970946

OCWHITEPLAINS

PAGE 84

Dear Catherine Bohan
 EIS Document Manager
 West Valley Demonstration Project
 U.S. Department of Energy
 P.O. Box 2368
 Germantown, MD 20874

Dear Ms. Bohan,

I am writing to urge you to support the Sitewide Removal Option, which will ensure comprehensive cleanup and excavation of the entire site—the safest, most ~~affordable~~ cost-effective solution.

Sincerely,
 Steve Monroe
 46 Sunset Drive
 Ossining, N.Y. 10562

~~Steve~~

*of the West Valley nuclear waste site.

164-1

164-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and 4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives. Chapter 4, Section 4.2, of this EIS presents an evaluation of cost-benefit considerations related to the alternatives. Section 4.2.1 compares costs; Section 4.2.2 summarizes the population doses for different work elements from each alternative; and Section 4.2.3 discusses the cost-effectiveness of each decommissioning alternative.

Commentor No. 165: Brian Moyer

05/02/2005 04:49 19149970946

CCWHITEPLAINS

PAGE 05

Dear Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
U.S. Department of Energy
P.O. Box 2368
Bermontown, MD 20874

Dear Ms. Bohan,

I am a resident of White Plains, NY
& HAVE MANY FRIENDS IN YOUR REGION.
I'm CONCERNED with their safety. Please
ENSURE THAT the West VALLEY NUCLEAR
Site is ~~entirely~~ excavated entirely.
I support the Statewide Removal option.

Sincerely,

Brian Moyer
325 Main St L1
White Plains, NY 10601

165-1

165-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 166: Ikenna Achilihu

09/02/2009 04:49 19149970946

CCEWHITEPLAINS

PAGE 06

~~Dear~~ Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
U.S. Department of Energy
P.O. Box 2368
Germantown, MD 20874

Dear Ms. Bohan,

I just want to let you know that I strongly urge you to support the Sitewide Removal Option which will ensure comprehensive cleanup and excavation of the entire site - which I believe is the most cost effective solution! ... Thank you!

Sincerely,

Ikenna Achilihu
415 Lawton Avenue
Hartsdale, NY 10530

166-1

166-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Chapter 4, Section 4.2, of this EIS presents an evaluation of cost-benefit considerations related to the alternatives. Section 4.2.1 compares costs; Section 4.2.2 summarizes the population doses for different work elements from each alternative; and Section 4.2.3 discusses the cost-effectiveness of each decommissioning alternative.

Commentor No. 167: Michael Aidos

05/02/2009 04:49 19149970946

COWHITEPLAINS

PAGE 07

Dear Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
U.S. Department of Energy
P.O. Box 2368
Germantown, MD 20874

Dear DOE,

As a concerned citizen,

I support a comprehensive cleanup
and excavation of the West Valley Site
now in its entirety, rather than waiting!
You should support this as well. Thank you.
Please respond ~~soon~~ in writing as to how
you will address this issue.

Sincerely Michael Aidos
955 Madison St, Apt 2
Brooklyn, NY 11221

167-1

- 167-1 DOE and NYSERDA acknowledge the commentor's preference for a prompt, comprehensive cleanup of WNYNSC. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 168: Omar Cardenas

05/02/2009 04:49 19149970946

OCEWHITEPLAINS

PAGE 08

~~Dear Catherine Bohan~~
EIS Document Manager
West Valley Demonstration Project
U.S. Department of Energy
P.O. Box 2368
Bermantown, MD 20874

Hi my name is Omar Cardenas and I want
to express my support of a ~~partial~~ comprehensive
clean up w West Valley now rather than
waitinG. (The entire Site)
83 South Regent St
Port Chester, NY, 10573
9/2/09

168-1

- 168-1 DOE and NYSERDA acknowledge the commentor's preference for a prompt, comprehensive cleanup of WNYNSC. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 169: Robert Martin

09/02/2009 04:49 19149970946

COEWHITEPLAINS

PAGE 09

Dear Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
U.S. Department of Energy
P.O. Box 2368
Germantown, MD 20874

Dear Mr. Bohan:

This letter is in support of the proposed comprehensive cleanup and excavation of the West Valley nuclear waste site. This issue is far too serious to expend only a minor effort and further study. Please do everything in your power to get this done in a complete manner.

Sincerely,



107 Nottingham Rd, F
Bedford Hills, NY 10507

169-1

169-1

DOE and NYSERDA acknowledge the commentor's preference for a prompt, comprehensive cleanup of WNYNSC. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 170: Stephen Howell

05/02/2009 04:49 19149970946

CCEWHITEPLAINS

PAGE 18

Dear Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
U.S. Department of Energy
P.O. Box 2368
Germantown, MD 20874

I support the Sitewide Removal Option
for cleaning up of the West Valley nuclear
waste site.

Stephen Howell
34 Evans Ave,
White Plains, NY 10607

170-1

170-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 171: Matthew Becker

09/02/2009 04:49 19149970945

OCEWHITEPLAINS

PAGE 11

Dear Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
U.S. Department of Energy
P.O. Box 2368
Germantown, MD 20874

I SUPPORT the Sitewide Removal
Option for Cleaning up of the west valley
nuclear waste site.

Sincerely, Matthew Becker
Matthew Becker
164 Glendale Rd
Scarsdale, NY 10583

171-1

171-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 172: Peter Maniscalco

Sep 02 09 03:07p Peter Maniscalco 631-874-4104 p.1

Peter Maniscalco
P.O. Box 104, Manorville, NY 11949 (631) 874-4104

September 2, 2009

Mr. Steven Chu
U.S. Department of Energy
Washington, DC

Dear Secretary Chu,

With regard to West Valley, please undertake a complete clean-up of this site and accomplish the task. Make the decision now for full cleanup of the West Valley Nuclear Waste Site – for the site-wide removal alternative, total waste excavation

As you may know, heavy rain and flooding eroded a wall of Buttermilk Creek causing a landslide bringing - in just one day - the Creek closer to the radioactive waste trenches.

Please oppose leaving buried waste on site. I oppose Phased Decision-Making: to delay cleanup of ~ 99% of the site's radioactivity for up to 30 years is not acceptable.

Thank you for your consideration.

Sincerely,

Peter Maniscalco

172-1

172-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative and opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in this EIS. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. In addition to the previously cited Issue Summaries, please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Finding Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length

Commentor No. 172 (cont'd): Peter Maniscalco

of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 173: Andrew Cdao

Attn: Catherine Bohan
 EIS Document Manager
 West Valley Demonstration Project
 U.S. Dept of Energy
 P.O. Box 2368
 Germantown, MD 20874

We really need you guys to re-think your proposal about the West Valley Nuclear Waste Site. Cleaning up 1% of the waste and waiting 30 years is absolutely OBSESSO. Now is the time to take action, not 30 yrs from now. I am aware of the fact that West Valley Waste Site is significantly close to the Great Lakes which I am sure you know is 20% of our planet's source of fresh water. This is not the place for 660,000 gallons of nuclear waste. Never mind the wildlife, drinking water, tourism, & fishing industries. Please re-think this proposal and get back to me as soon as possible.

Andrew Cdao
 261 Walnut Tree Hill Rd
 Shelton, CT, 06484.

TODAY

05/27/2016 02:46 FAX

173-1

- 173-1** DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup and opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

The 660,000 gallons referred to in the comment is the volume of high-level radioactive waste that was generated by the reprocessing of spent nuclear fuel from 1966 through 1972. DOE solidified this waste, resulting in 275 canisters of vitrified high-level radioactive waste. It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

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Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 173 (cont'd): Andrew Cdao

The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and 4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives. Chapter 4, Section 4.1.6, of this EIS also presents the results of an ecological risk assessment showing the projected long-term ecological impacts of the alternatives. The results of the human health and ecological impacts analysis imply that any impacts on wildlife and the economies of communities downstream of WNYNSC would be negligible.

Commentor No. 174: Astrid M. Cardona

September 2, 2009.
To: Catherine Behan:

We need to close West Valley Nuclear
Plant and we need to do it NOW!!!

The proposal of a minute 1% clean
up from 660,000 gallons of
radioactive waste is just INSULT
it is DISGUSTING to the population
of Oswego, NY

(660,000 gallons nuclear waste vs.
1% of radioactive waste "clean up"
is preposterous).

None you consider the proximity
of our major natural resources
the Great Lakes, the largest source
of fresh water in the world and the
fact they will plague with our
public health, fishing . . . ?

Stop insulting us and trying to
KILL US !!!

ASTRID M. CARDONA
1 Front St. Apt. 201
New Haven, CT 06510

002

3-401

174-1

- 174-1 DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup and opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

The 660,000 gallons referred to in the comment is the volume of high-level radioactive waste that was generated by the reprocessing of spent nuclear fuel from 1966 through 1972. DOE solidified this waste, resulting in 275 canisters of vitrified high-level radioactive waste. It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 175: Richard J. Hayden

9-2-09

To whom it may concern
 Clean up of the West Valley site
 Concerns us all! 1% over the next thirty
 years is not even worth the effort!!

Let's get serious. Our future as a
 species depends on people now, - All
 People NOW.

We cannot continue to ignore these
 huge issues. If we - all of us, act now -
 there may be still a chance to give our
 children and their children a planet that
 can still sustain life - a good life
 as we know it.

Sincerely
 [Signature]

PS - Please respond either by mail ~~or~~ by phone

Richard Hayden
 227 Mansion Rd
 Wallingford CT 06492
 Phone # [REDACTED]

175-1

- 175-1 DOE and NYSERDA acknowledge the commentor's opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

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Commentor No. 176: Allyson Dubois

ATTN: Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
U.S. Dept. of Energy
P.O. Box 2368, Germantown, MD 20874

We need to clean West Valley nuclear waste site in Ashford, NY immediately! Cleaning 1% now, then waiting another 30 years is ridiculous. This is our planet and we are responsible for our garbage and waste. "Evaluation" of this issue needs to be done now... NOT LATER. This waste is jeopardizing our wildlife, drinking water and many more HEALTH issues I know you aware of, and I am disgusted to think this can be ignored. 660,000 gallons of radioactive waste????? And people want to clean up only 1%?? In 30 years we will be buried!!! This issue is vital, and we need a NEW PLAN!!! Please respond to my concerns ASAP! Thank you, and please re-read my letter until it sinks in.

ALLYSON DUBOIS
261 Walnut Tree Hill Rd
Shefflin, CT 06484
[REDACTED]

05/27/2018 02:46 FAX

176-1

- 176-1** DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup and opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

The 660,000 gallons referred to in the comment is the volume of high-level radioactive waste that was generated by the reprocessing of spent nuclear fuel from 1966 through 1972. DOE solidified this waste, resulting in 275 canisters of vitrified high-level radioactive waste. It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 176 (cont'd): Allyson Dubois

The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and 4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives. Chapter 4, Section 4.1.6, of this EIS also presents the results of an ecological risk assessment showing the projected long-term ecological impacts of the alternatives. The results of the human health and ecological impacts analysis imply that any impacts on wildlife would be negligible.

Commentor No. 177: Carla White

ATTN: Catherine Bohan
 EIS Document Manager
 West Valley Demonstration Project
 U.S. Dept. of Energy
 P.O. Box 2368
 Germantown, MD 20874

9-2-09

I am addressing you with my highest concern about the West Valley Nuclear waste site in Ashford NY. I am personally ashamed and disturbed the you only plan on cleaning up only 1/10 of the 660,000 gallons of radioactive waste. You honestly plan on polluting our greatest fresh water source and putting all of our child in danger over the next 30 years? Then it will be recalled? What is the point of waiting? So you don't need to spend the time and effort now? We lets not put this on our children just like so many of our other problems. Please take action today so my child can have clean water and a healthy life.

Thanks for your time.

Carla White

20 Anderson ST.

Phone: 115111 4111511

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177-1

177-1 DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup and opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

The 660,000 gallons referred to in the comment is the volume of high-level radioactive waste that was generated by the reprocessing of spent nuclear fuel from 1966 through 1972. DOE solidified this waste, resulting in 275 canisters of vitrified high-level radioactive waste. It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

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Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 178: Henry Allen

Attn: Catherine Bohan
 EIS Document Manager
 West Valley Demonstration Project
 U.S. Dept. of Energy
 PO. Box 2368
 Germantown, MD 20874

9-2-09

Why do you think that cleaning only 1% of Nuclear Waste at West Valley Nuclear Waste Site? This is absurd and weak. The Great Lakes are way too vulnerable and important to mess with. They are 20% of our WORLD's fresh water supply. Do you really think it's okay to mess with that? And please make sure you don't wait 30 long years to only re-evaluate the clean up, let alone actually clean it up. The tourism is at risk, fishing and other industries will be at harm. We need to stimulate the economy, not make it worse. Please respond to my concerns as soon as possible, my health is at risk, along with everyone else's.

Concerned,
 Henry Allen

20 Anderson St.
 New Haven, CT 06511

[REDACTED]

008

05/27/2016 02:48 FAX

178-1

- 178-1** DOE and NYSERDA acknowledge the commentor's opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

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Please see the Issue Summaries for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and

Commentor No. 178 (cont'd): Henry Allen

4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives. Chapter 4, Section 4.1.6, of this EIS also presents the results of an ecological risk assessment showing the projected long-term ecological impacts of the alternatives. The results of the human health and ecological impacts analysis imply that any impacts on tourism, fishing, and other industries would be negligible.

Commentor No. 179: Chester Hughes III

9/2/09

Catherine Bohan,

I think the West Valley Nuclear Waste Facility deserves more attention than the proposed 1% cleanup. Waiting thirty-years to decide the fate of 99% of the waste is absolutely ridiculous. Being close to the Great Lakes, this facility is a huge threat to contaminating 20% of the world's fresh water supply. This is a matter of great priority. 600,000 gallons of nuclear waste is not something that should be sitting around for three decades. I am including my return address, please respond with your departments thoughts on this matter.

Chester Hughes III.

(■) ■ - ■

29 Willis St
New Haven, CT 06511

Q007

05/27/2016 02:46 Fax

179-1

- 179-1** DOE and NYSERDA acknowledge the commentor's opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

The 660,000 gallons referred to in the comment is the volume of high-level radioactive waste that was generated by the reprocessing of spent nuclear fuel from 1966 through 1972. DOE solidified this waste, resulting in 275 canisters of vitrified high-level radioactive waste. It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

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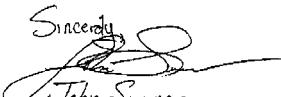
Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 180: John Sumner

9-2-09

Catherine Bahen
 EIS Document Manager
 West Valley Demonstration Project
 U.S. Dept. of Energy
 P.O. Box 2368
 Germantown, MD 20874

It has come to my attention that nuclear waste is being dumped in Ashford, NY. Being that this is incredibly close to the Great Lakes I find this absurd. It has also come to my attention that only 1% is being cleaned up, and we must wait 30 yrs for an evaluation to see if the rest is cleaned. Fresh water and nuclear waste certainly do not mix well and considering 20% of the world's fresh water comes from the Great Lakes this is UNACCEPTABLE! Obviously there is a better solution to this problem and I hope you and your department can find one. Please respond to me in writing on your next step on this issue.

Sincerely,

 John Sumner
 20 Anderson St.
 New Haven, CT 06511

180-1

This EIS was prepared to evaluate the environmental impacts of the alternatives for decommissioning and/or long-term stewardship of WNYNSC. No additional radioactive material is being generated at or brought to the site. DOE and NYSERDA acknowledge the commentor's opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

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Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 181: Kyle Phelps

Dear D.O.E

I am upset with West Valley, NY.
I demand a clean up effort on the
Nuclear Waste. Also I am very disappointed
in your lack of transparency and your
refusal to take calls.

Very Concerned
Citizen,
Kyle Phelps
~~2024 E. Genesee~~
Syracuse, NY 13210

181-1

181-1 DOE and NYSERDA acknowledge the commentor's support for cleanup of WNYNSC. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

DOE and NYSERDA provided opportunities for the public to provide input regarding this EIS for decommissioning and/or long-term stewardship of WNYNSC, as described in Section 1 of this CRD. In December 2008, DOE issued a Notice of Availability for the Revised Draft EIS in the *Federal Register* (73 FR 74160). Under New York State's SEQR, NYSERDA also issued a Notice of Acceptance of the Revised Draft EIS and Public Hearings in an Environmental Notice Bulletin for Region 9 (http://www.dec.ny.gov/enb/20081210_not9.html).

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Commentor No. 182: Kristen Pellizzari

To whom it may concern:

We need the West Valley cleaned up now! I cannot express my disappointment in your lack of transparency and refusal to take phone calls in this matter. Take the action we need now! Thank you!

Sincerely,
Kristen Pellizzari

127 South Ave
Solvay, NY 13209

182-1

182-1

DOE and NYSERDA acknowledge the commentor's desire for prompt action to cleanup WNYNSC. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement.

DOE and NYSERDA provided opportunities for the public to provide input regarding this EIS for decommissioning and/or long-term stewardship of WNYNSC, as described in Section 1 of this CRD. In December 2008, DOE issued a Notice of Availability for the Revised Draft EIS in the *Federal Register* (73 FR 74160). Under New York State's SEQR, NYSERDA also issued a Notice of Acceptance of the Revised Draft EIS and Public Hearings in an Environmental Notice Bulletin for Region 9 (http://www.dec.ny.gov/enb/20081210_not9.html).

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Commentor No. 183: Christian Bucknell

Dear Department of Energy,

Work needs to be done in order to clean up West Valley immediately! The idea to clean up 1% now and wait 30 years is as ridiculous as waiting 30 years to do the remaining 99% of spring cleaning.

Not only is your lack of action unacceptable the fact that you are not taking phone calls on this issue is a sore sign for democracy and the decency of your administration.

Take action NOW and don't let the millions of New Yorkers for whom you are responsible suffer. Please reply to let me know what you are gonna do about this.

Christian Bucknell
4434 Swissvale Dr
Mountains, NY 13104

C: ([REDACTED]) [REDACTED]

183-1

183-1 DOE and NYSERDA acknowledge the commentor's support for prompt cleanup of WNYNSC and opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

DOE and NYSERDA provided opportunities for the public to provide input regarding the EIS for decommissioning and/or long-term stewardship of the

Commentor No. 183 (cont'd): Christian Bucknell

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Commentor No. 184: Kelley Louer

Dear Department of Energy,

I would like West Valley cleaned up immediately! It is completely unacceptable to only clean up 1% and take a 30 year "lunch break" to evaluate the rest. The lack of transparency and refusal to take phone calls regarding this matter is beyond disappointing. Please respond to this letter.

Kelley Louer
453 Wescott St.
Syracuse, NY
13210

184-1

184-1 DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup and opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

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DOE and NYSERDA provided opportunities for the public to provide input regarding the EIS for decommissioning and/or long-term stewardship of WNYNSC,

Commentor No. 184 (cont'd): Kelley Louer

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Commentor No. 185: Sarah Tuttle

TO THE DEPARTMENT OF ENERGY,

WE NEED WEST VALLEY CLEANED UP NOW.
UNDER NO CIRCUMSTANCES ARE A 30 YEAR WAIT
ACCEPTABLE!

- SARAH TUTTLE
108 HADDONFIELD DR
SYRACUSE, NY 13214

REISE.REISE87@GMAIL.COM

185-1

- 185-1** DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup and opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

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Commentor No. 186: James F. Ferraro

To: Department of Energy

From: James F. Ferraro
425 Westcott St
Syracuse, NY 13210

Re: West Valley Cleanup.

As a concerned New York State Resident, I believe it is critical that we fully clean up the West Valley nuclear waste site. It is also imperative that you listen to community input and take the needs of concerned citizens.



186-1

- 186-1 DOE and NYSERDA acknowledge the commentor's support for cleanup of WNYNSC. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

DOE and NYSERDA provided opportunities for the public to provide input regarding this EIS for decommissioning and/or long-term stewardship of WNYNSC, as described in Section 1 of this CRD. In December 2008, DOE issued a Notice of Availability for the Revised Draft EIS in the Federal Register (73 FR 74160). Under New York State's SEQR, NYSERDA also issued a Notice of Acceptance of the Revised Draft EIS and Public Hearings in an Environmental Notice Bulletin for Region 9 (http://www.dec.ny.gov/enb/20081210_not9.html).

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Commentor No. 187: Thomas J. Edinger

Dear Department Of Energy,

I am disgusted by the current West Valley clean-up plan. Only cleaning one percent of the toxic waste and waiting thirty years to see what happens is frightening and unacceptable. Immediate and complete clean-up is necessary to protect public health and welfare. Your refusal to take calls and lack of transparency on this matter is appalling.

Please take action.

Thomas J. Edinger
560 Allen St.
Syracuse NY 13210

187-1

- 187-1** DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup, opposition to the Phased Decisionmaking Alternative, and support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

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The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and 4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives.

Commentor No. 187 (cont'd): Thomas J. Edinger

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Commentor No. 188: Benjamine Mason

DOE,
 PLEASE CLEAN MORE THAN
 1% OF THE WEST VALLEY WASTE SITE
 BEFORE THE NEXT THREE
 DECADES. NUCLEAR WASTE
 WILL NEVER (IN ANY OF OUR LIFE-
 TIMES) BE LESS OF A TOXIC MESS
 THAN IT IS NOW, SO PLEASE
 STOP PUTTING THE CITIZENS OF
 UPSTATE N.Y. AT RISK.

I, FOR ONE, AM DISAPPOINTED IN YOUR LACK OF
 TRANSPARENCY ON THIS ISSUE, AND YOUR NOT
 TAKING PHONE CALLS LIMITS THE ACCESSIBILITY
 OF YOUR CONSTITUENTS TO THE ISSUE.
 PLEASE REPAIR THESE POLICIES.

Thank you kindly,
Benjamine Mason

BENJAMINE MASON
 504 GREENWOOD PL
 SYRACUSE, NY 13210

188-1

188-1
cont'd

- 188-1** DOE and NYSERDA acknowledge the commentor's support for cleanup of WNYNSC. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

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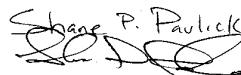
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Commentor No. 189: Shane P. Paulick

DOE —

You need to clean up West Valley Now! Cleaning up 1% and waiting 30 years to evaluate the rest is unacceptable. Clean up must happen now! Nuclear Waste sites are not healthy for human existence. Money and greed do not sustain life. It is appalling that you refuse to take phone calls regarding your blunders. Your lack of transparency shows what matters most to you. Your corporate greed and lack of consideration for human life WILL come to an end. The question is what will resonate on your conscience?

PEACE AND WELL BEING



312 Comstock Ave
Syracuse NY 13210

189-1

189-1 DOE and NYSERDA acknowledge the commentor's desire for prompt action to address cleanup of the site and opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

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DOE and NYSERDA provided opportunities for the public to provide input regarding this EIS for decommissioning and/or long-term stewardship of

Commentor No. 189 (cont'd): Shane P. Paulick

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Commentor No. 190: Joshua Ehrenfort

To the Department of Energy,

I am demanding that the NYSERDA clean up West Valley Now. Cleaning 1% and leaving the rest for later is not ~~enough~~ enough and is unacceptable. The DOE's refusal to take phone calls regarding this important matter is appalling. This administration's lack of transparency is unacceptable and needs to change. The West Valley nuclear site needs to be cleaned up now, and this administration needs to address this issue in a more timely and respectful manner.

190-1

Joshua EHRENFORT
4399 PLANTATION BLVD #9
Liverpool, NY
13090

- 190-1** DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup and opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

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DOE and NYSERDA provided opportunities for the public to provide input regarding this EIS for decommissioning and/or long-term stewardship of

Commentor No. 190 (cont'd): Joshua Ehrenpfort

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Commentor No. 191: Amy L. Chase

Dear Dept. of Energy,

My name is Amy Chase. I'm extremely disappointed in your Department's lack of transparency and refusal to take phone calls regarding the West Valley Nuclear waste clean-up. How can we know that you are going to take IMMEDIATE action on this issue if you won't even pick up the phone?

Sincerely,

Amy Chase

Amy L. Chase, A concerned citizen.

838 Ackerman Ave.

Syracuse, NY 13210

Please call and let me know what you plan to do about this. You may not be answering the phone, but I will. [REDACTED]

191-1

191-1

DOE and NYSERDA provided opportunities for the public to provide input regarding this EIS for decommissioning and/or long-term stewardship of WNYNSC, as described in Section 1 of this CRD. In December 2008, DOE issued a Notice of Availability for the Revised Draft EIS in the *Federal Register* (73 FR 74160). Under New York State's SEQR, NYSERDA also issued a Notice of Acceptance of the Revised Draft EIS and Public Hearings in an Environmental Notice Bulletin for Region 9 (http://www.dec.ny.gov/enb/20081210_not9.html).

The formal comment period was originally scheduled for 6 months (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE), but lasted 9 months, beginning on December 8, 2008, and ending on September 8, 2009. During this comment period, public hearings were held in Albany, Irving, Ashford, and Buffalo, New York. In addition, Federal agencies, state and local governmental agencies, Native American Tribal Governments, and the general public were encouraged to submit comments on the Revised Draft EIS via the U.S. mail, e-mail, a toll-free fax line, and a DOE website (<http://www.westvalleyeis.com>). DOE and NYSERDA considered all of the comments, including those received after the comment period ended, in preparing this Final EIS.

Commentor No. 192: Nikita Jolicoeur

08/02/2008 21:20 FAX 15163907160

CITIZENS CAMPAIGN

0001/001

9/2/09

Attn. Catherine Bochen
EIS Document Manager

I support the Sitewide Removal Option, we can't wait 30 yrs
We need to act and clean up now! Millions of people's health
is at risk! A full clean up is necessary and expected for the
West Valley nuclear waste site!

192-1

192-1

DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup and support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed the Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.

Nikita Jolicoeur
1310 Commodore Rd
Ukiahdale NY 11553

Commentor No. 193: Johanna Ingrao

09/02/2009 17:39 FAX 15163907180

CITIZENS CAMPAIGN

001/008

Dear Catherine Bohan,

I Johanna Ingrao support the ~~Sitewide~~
Removal option and would like to see this waste site
cleaned up. As a New Yorker I love drinking
our clean contaminant-free water and enjoy watching
all of our wildlife. Please do your best to see that
everything that the beautiful things that I love
about New York stay beautiful.

Sincerely
Johanna Ingrao

156 Cushing Ave
Williston Park NY 11596

193-1

193-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion and DOE's and NYSERDA's responses.

The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and 4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives. Chapter 4, Section 4.1.6, of this EIS also presents the results of an ecological risk assessment showing the projected long-term ecological impacts of the alternatives. The results of the human health and ecological impacts analysis imply that any impacts on wildlife would be negligible.

Commentor No. 194: Jessica Dempsey

08/02/2008 17:38 FAX 15163907160

CITIZENS CAMPAIGN

0002/006

Catherine Bolan
 EIS Document Manager
 West Valley Demonstration Project.
 US. Dept of Energy
 P. O. Box 2368
 Germantown, MD 20874.

Dear Catherine Bolan,

I'm writing you concerning the West Valley Nuclear Waste Site, letting you know I support the Sitewide Removal Option. I feel it's unacceptable to leave radioactive ~~waste~~ waste buried on-site for 30 years while deciding what to do with it. The Sitewide Removal Option ensures a comprehensive cleanup and excavation of the entire site which is the safest most cost-effective solution. Please let me know what you plan on doing for this issue.

thank you.

Jessica Dempsey
 165 Vermont Ave
 Bay Shore NY 11706

194-1

194-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and 4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives. Chapter 4, Section 4.2, of this EIS presents an evaluation of cost-benefit considerations related to the alternatives. Section 4.2.1 compares costs; Section 4.2.2 summarizes the population doses for different work elements from each alternative; and Section 4.2.3 discusses the cost-effectiveness of each decommissioning alternative.

Commentor No. 195: Shawn Frank

09/02/2008 17:40 FAX 15163907160

CITIZENS CAMPAIGN

003/008

September 2, 2009.

Attn: Catherine Bohan
 EIS Document Mgr
 West Valley Demonstration Project
 U.S. DOE, P.O. Box 23108
 Germantown, MD 20874

Dear Ms. Bohan,

I am writing to you in support of the sitewide removal option regarding the West Valley Nuclear Waste Site. The leakage of radioactive waste into the local groundwater deeply concerns me and I would like nothing more than the site being fully cleaned up so the public can be safe again. Thank you for your time in this matter.

Sincerely,

Shawn Frank
 4 W. Park Dr.
 Old Bethpage, NY 11604

195-1

195-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Chapter 3, Section 3.6.2.1, of this EIS addresses groundwater at WNYNSC that was contaminated due to past activities (for example, the North Plateau Groundwater Plume). This EIS was prepared to evaluate the environmental impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC. Under all of the action alternatives, DOE would either remove contamination sources, mitigate their impacts to groundwater, or both. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the North Plateau Groundwater Plume. Potential groundwater impacts associated with the EIS alternatives are discussed in Chapter 4, Sections 4.1.4 and 4.1.10, and Appendix H of this Final EIS.

Commentor No. 196: John S. Campo

08/02/2008 17:40 FAX 15163807160

CITIZENS CAMPAIGN

004/008

Attn: Catherine Bohan
EIS Document Manager
West Valley Demonstration Project,
U.S. Department of Energy
P.O. Box 2368
Germantown, MD 20874

Dear Ms. Bohan:

I am writing this letter in reference to the West Valley Nuclear Waste Site. I urge the Department of Energy and NYSERDA to support the Sitewide Removal Option, which will ensure comprehensive cleanup and excavation of the entire site. I firmly believe this is the safest, most cost-effective solution!

Best Regards,

John S. Campo
3 Dale Lane
Hauppauge, NY 11788

196-1 196-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 197: Megan Noonan

08/02/2009 17:40 FAX 15163807160

CITIZENS CAMPAIGN

005/006

Attn: Catherine Bohan

I Megan Noonan am writing you
to say I strongly support a
comprehensive cleanup and excavation
of the West Valley Nuclear Waste Site.
This needs to be done now,
it can not wait!

- Megan Noonan
80 Fairview Ave
Deer Park NY
11729

197-1

- 197-1 DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup and preference for comprehensive cleanup. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 198: Sharon Abel

05/02/2008 17:40 FAX 15163907160

CITIZENS CAMPAIGN

006/006

9/2/09

Catherine Bahen
EIS Document Manager
West Valley Demonstration Project
U.S. Dept. of Energy

P.O. Box 2368
Germantown, MD 20874

Dear Ms. Bahen,

I care about our Great Lakes. Although I do not live currently in Great Lakes area, I did live in Syracuse, NY. We need to fully clean up the West Valley Nuclear Waste Site now! This affects the drinking water & public health of millions of people. It sits on top of an aquifer. All water is connected. Our generations do not need to be plagued with this. It is unacceptable to even suggest cleaning up only 1%. I support the Sitewide Removal Option.

Please respond to me in writing regarding this important issue.

Sincerely,

Sharon Abel
109 S. 15th St.
Lindenhurst, NY 11757

198-1

DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup and support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses. The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and 4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 199: William P. Denison

08/02/2009 15:48 FAX 15163807160

CITIZENS CAMPAIGN

0002/021

Attention: Catherine Brown
 EIS Document Manager
 West Valley Demonstration Project
 US Department of Energy
 P.O. Box 2368
 Germantown, MD 20874

Public officials that have been put into positions of power in order to promote and protect the health of the public should not heed to be reminded to do that which is obviously correct. Leaving harmful radioactive waste in a condition that threatens the health of our citizens is a moral outrage comparable to genocide, be it indirect. Shape up, and clean up 100% of this life-threatening waste.

Sincerely,
 William P. Denison
 84 Craft Avenue
 Glen Cove, NY 11542

199-1

- 199-1** DOE and NYSERDA acknowledge the commentor's support for the full cleanup of WNYNSC. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and 4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives.

Commentor No. 200: Carolyn McKenn

09/02/2008 15:48 FAX 15163907160

CITIZENS CAMPAIGN

003/021

Sept. 2 2009

Catherine Bohan,

Support the sitewide Removal option, which will ensure comprehensive cleanup and excavation of entire site - the safest most cost-effective solution! Radioactive waste is plaguing our waters. Only 1% of this nuclear waste is being taken care of while the other 99% is left for 30 years so the 1% can be tested.

This is simply unacceptable putting residents in danger as well our great lakes is just ridiculous! Scientists recognize that over time erosion will occur and will lead to release of buried toxic waste threatening the health of our great lakes. I believe that you should take this more seriously. Our natural resources are important, not to be left and ignored.

200-1

200-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and 4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives. Chapter 4, Section 4.2, of this EIS presents an evaluation of cost-benefit considerations related to the alternatives. Section 4.2.1 compares costs; Section 4.2.2 summarizes the population doses for different work elements from each alternative; and Section 4.2.3 discusses the cost-effectiveness of each decommissioning alternative.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and

Commentor No. 200 (cont'd): Carolyn McKenn

NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

Commentor No. 201: Kyle Wilson

09/02/2008 15:48 FAX 15163907160

CITIZENS CAMPAIGN

004/021

Kyle Wilson

To The D.O.E. and N.Y.S.E.R.D.A I am happy to hear that you are cleaning up the West Valley nuclear waste Site, but one percent isn't enough, your plan fails to protect public safety and health. Waiting to see what happens is dangerous. The Site is highly susceptible to erosion, and you already knew what that leads to.

201-1

201-1 DOE and NYSERDA acknowledge the commentor's support for cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and 4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 201 (cont'd): Kyle Wilson

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

Commentor No. 202: Jordan Christensen

09/02/2008 15:48 FAX 15163907180

CITIZENS CAMPAIGN

005/021

Dear Catherine Bohon,

I am writing to you to urge ~~against~~ the DOE to support a comprehensive clean up and excavation of the West Valley nuclear waste site. It is irresponsible and negligent to leave radioactive waste near the Great Lakes where erosion can and likely will lead to the release of toxic waste into our land, air, and water. Cleaning 1% is NOT a comprehensive evaluation of possible damage and is an unacceptable solution to a large and dangerous problem. By not supporting the Statewide Removal Option and ensuring a comprehensive cleanup and excavation of the entire site, you are putting people in danger, threatening a natural resource, and not pursuing the safest and most cost-effective solution to this problem.

Thank You,

Jordan Christensen
1676 Holly St.
Baldwin, NY 11510

202-1

202-1 DOE and NYSERDA acknowledge the commentor's preference for a comprehensive cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion and DOE's and NYSERDA's response.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to

Commentor No. 202 (cont'd): Jordan Christensen

be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and 4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives. Chapter 4, Section 4.2, of this EIS presents an evaluation of cost-benefit considerations related to the alternatives. Section 4.2.1 compares costs; Section 4.2.2 summarizes the population doses for different work elements from each alternative; and Section 4.2.3 discusses the cost-effectiveness of each decommissioning alternative.

Commentor No. 203: Jason Kulczyk

09/02/2008 15:48 FAX 15163907160

CITIZENS CAMPAIGN

006/021

Catherine Bohan
 EIS Document Manager
 West Valley Demonstration Project
 US Dept. of Energy
 P.O. Box 2368
 Germantown, MD 20874

Dear Catherine Bohan,

The plan to clean up 1% of the West Valley nuclear waste site in Ashford, NY is completely irresponsible and deplorable. Just because it is a small rural town, it doesn't make those people any less important. Was 1% of the oil that spilled from the Exxon-Valdez cleaned? 1% of the aftermath of Love Canal? Does one ask their children to clean 1% of their room? If these questions aren't ridiculous enough, here's another one. Why would you clean up such a modest amount and then wait 30 years to finish the job? Cost-effectiveness? Lack of a labor force? Apathy?

None of these reasons are good enough. At what time in American history did it become acceptable to leave nuclear waste pools be? Is our government that lethargic?

Well, the People aren't. We are awake and alive and we want a clean environment to live and raise families in. Preventative measures are extremely important in healthcare (which I am supporting Obama on), which is all the more reason to tackle sites like this. This is not an issue to hedge on. "American Exceptionalism" is a phrase I hear tossed around a lot, and if it actually exists, it has to start with people treating each other with decency and with their good health in mind.

Thank you for your time and please make sure that this letter is recorded as a Public Comment. I would also appreciate a response in writing.

Sincerely,

Jason Kulczyk
 28 Bay Shore Ave.
 Bay Shore, NY11706
 (former WNY resident)

203-1

- 203-1** DOE and NYSERDA acknowledge the commentor's position. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Chapter 2, Section 2.4.3, of this EIS describes decommissioning activities under the Phased Decisionmaking Alternative and provides a discussion of the data collection, studies, and monitoring to be performed during implementation of Phase 1 and the purpose of each of these activities. The overall intent of these Phase 1 activities is to further characterize the site and to research technology developments and engineering to aid consensus decisionmaking for Phase 2. Section 2.4.3.3 explains how the additional data and studies would be used in making decisions for potential future activities. Chapter 2, Section 2.7, provides the rationale for the Preferred Alternative.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a

Commentor No. 203 (cont'd): Jason Kulczyk

result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 204: Brittany Brower Fererz

09/02/2008 15:48 FAX 15163907160

CITIZENS CAMPAIGN

0007/021

Sept 2, 2009

Department of Energy
Lauren Malone

As a concerned resident of New York
state the West Valley nuclear waste site needs to
be cleanup and evaluated immediately. While approaching
the concern to cleanup 1%, leaves the question
of the other 99% of toxic waste. The 30
year wait period is an entire generation
of ~~unborn~~ unborn kids to adults. The health
ramification of this site ~~can~~ can cause
asthma to cancer. The environmental impact
of erosion of buried toxic waste. This
waste ~~can~~ will also contaminate groundwater
that will devastate the Great Lakes, a prized
possession of New York state. These lakes
provide our source of clean drinking water
and irrigation systems for farming industries.
Please hold yourselves accountable and be
a model for the rest of the nation.
Clean up your own mess instead of saddling
taxpayers with the burden.

Thank you for your concern,
Brittany Brower Fererz
59 Arbutus Rd
11111

204-1

204-1 DOE and NYSERDA acknowledge the commentor's desire for prompt action to clean up the site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well

Commentor No. 204 (cont'd): Brittany Brower Fererz

as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

The potential human health impacts of the alternatives evaluated in this EIS, including the increased risk of developing cancer, are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and 4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives.

Commentor No. 205: Bari Jay

08/02/2008 15:48 FAX 15163907160

CITIZENS CAMPAIGN

08/08/2008

9/2/2009

To whom it may concern,
 Cleaning up the West Valley
 Nuclear waste site ~~is~~ ^{now} in a
 timely fashion is imperative
 for the safety of all NYS residents,
 as well as the future of
 environmental policy. Our
 nation, in conjunction with the
 world, is at a pivotal point in
 our history: reconciling human
 desire with human need. Consumption
 is at an all time high while
 self-imposed responsibility is
 lower than ever. The time for
 action is now. ~~Please~~ Asking ^{for cleanup} people to wait thirty years, to
 wait until they've watched
 themselves and their community
~~become~~ potentially riddled
 with toxic waste, is not only
 unacceptable, it's unfathomable.
 The evidence is abundantly clear
 that nuclear waste is toxic, apt
 to leak over time, and ~~unassessable~~,

205-1

- 205-1** DOE and NYSERDA acknowledge the commentor's desire for prompt action to address cleanup of the site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement.

Please see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and 4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives.

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 205 (cont'd): Bari Jay

08/02/2009 15:48 FAX 15162807160

CITIZENS CAMPAIGN

008/021

detrimental to the health of
our Great Lakes. We no longer
have the luxury of tomorrow —
Please do your part, on behalf
of us all, today. Clean up
West Valley.

Thank you for your ~~recent~~
urgent action,

Bari Jay
575 Dr. South
Oceanside, NY 11572

205-1
cont'd

Response side of this page intentionally left blank.

Commentor No. 206: Michael Kilmer

08/02/2009 15:49 FAX 15183807160

CITIZENS CAMPAIGN

010/021

To Whom it may concern,

Leaving radioactive waste at the West Valley Nuclear Waste Site is unacceptable. This plan fails to protect public health and the environment from radioactive waste. To clean 1% of the waste and wait 30 years is negligent. The contamination of our great lakes with radioactive waste would destroy our country's drinking water as well as our lively hood. Please ACT Now!!

yours truly,
 Michael Kilmer
 36 Berkley St.
 Valley Stream, NY.
 11581

206-1

- 206-1** DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup and opposition to leaving radioactive waste on site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 207: signature illegible

08/02/2009 15:50 FAX 15163907160 CITIZENS CAMPAIGN

Attention: Catherine Bolan
 EIS Document Manager
 West Valley Demonstration Project
 US Department of Energy
 P.O. Box 2368
 Germantown, NY 10526-2368

08/01/2009
 1 East Courtway
 Bethesda MD 20814

This plan the people have in mind is an
 excavation to a certain depth. You must and
 will support a comprehensive cleanup and
 excavation of the entire site now. This is a monstrously
 large job or you can begin steps first, for
 which there is no end. Dangerous trees is
 one percent is a problem in the future. To only clean
 future can do so much especially since you our
 must be cleaned up right away. Thank you.

207-1

- 207-1** DOE and NYSERDA acknowledge the commentor's desire for prompt action to provide comprehensive clean up and excavation of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 208: Tara Bono

03/02/2008 15:50 FAX 15163907180

CITIZENS CAMPAIGN

03/12/2008

September 2nd

Tara Bono
282 Swanson Ave
Stamford, NY 10783

Catherine Bohan,

The recently released DEIS for the clean up for the West Valley Nuclear Site severely underestimates the necessary actions imperative in cleaning up the site. Cleaning up ^{only} 1/3 of the waste is irresponsible, neglectful, and disrespects the citizens and the environment that reside in West Valley. If more action is not immediately taken, the area faces exposure to the buried toxic waste which will result in harmful and irreversible damages to the area. All of New York State supports the West Valley community in urging the DOE to include a larger scale clean-up in the EIS.

Thank you for your time. I would appreciate a response when more plans are finalized on this issue.

-Concerned,

Tara Bono

208-1

208-1

DOE and NYSERDA acknowledge the commentor's support for clean up of the WNYNSC. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 209: Aubrey Dee

09/02/2009 15:50 FAX 151638907160

CITIZENS CAMPAIGN

013/021

Attention: Catherine Bonan
 EIS Document Manager
 West Valley Demonstration Project
 US Department of Energy
 PO Box 2368
 Germantown, MD 20814

The draft environmental project that is being proposed, from my personal opinion is negligent to United States Citizens. Cleaning up only 1% of radioactivity and waiting 30 years would probably be permitted and would put citizens in the same dangers therefore not fixing the problem but prolonging it. Something needs to be done. Something more effective and why quicker actions should be taken. Not fixing this problem would only add insult to injury. As a citizen I support the Sitewide removal option, which will ensure comprehensive cleanup and excavation of the entire site the safest, most cost effective solution. Take this into consideration and support the residents of the Great Lakes.

Sincerely,
 Aubrey Dee 20
 432 Ferraris St.
 Copiague NY 11723

209-1

- 209-1** DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and 4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives. Chapter 4, Section 4.2, of this EIS presents an evaluation of cost-benefit considerations related to the alternatives. Section 4.2.1 compares costs;

Commentor No. 209 (cont'd): Aubrey Dee

Section 4.2.2 summarizes the population doses for different work elements from each alternative; and Section 4.2.3 discusses the cost-effectiveness of each decommissioning alternative.

Commentor No. 210: John Mannion

08/02/2008 15:50 FAX 15163907160

CITIZENS CAMPAIGN

014/021

9/2/09

To Catherine Bohm
 EIS Document Manager
 West Valley Demonstration Project
 US Dept. of Energy
 PO Box 2368
 Germantown, NY, 120874

I have recently become aware of the ~~the~~ cleanup plan of the West Valley nuclear waste site. In this plan only ^{1%} of the radioactivity presently, and holding the rest for 30 years, It is extremely alarming to me that you would take the easy way out in this situation and forget to take care of the ~~problem~~ of this problem. This is absolutely ~~unacceptable~~ unacceptable! This is a major problem and must be handled immediately! Please respond to me as soon as possible,

sincerely,
 John Mannion
 1034 Bay 25th St.
 Far Rockaway, NY
 11691

210-1

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 211: Damien Betner08/02/2008 15:50 FAX 15163907160
FAX 866 306 9074

CITIZENS CAMPAIGN

015/021

9/2/09

The Time is Now!

Catherine Bohan
 EIS Document Manager
 West Valley Demonstration Project
 U.S. Department of Energy
 P.O. Box 2368
 Germantown MD 20876

Leaving Radioactive Waste Buried and unattended on site is unacceptable and to even consider an alternative to cleaning it up as soon as possible is OBsurd, Incompetent and Completely Negligent on your part; so where is the Accountability!!?

30 years?! Nuclear waste is not something we can allow to fester and erode into the "eventual" spread and contamination of this Natural Environment that of us still call home... Do Not Let this great danger consume our Great Lakes.

I, as a concerned citizen, am now holding you fully responsible for approving the sitewide Removal plan to clean up the entirety of this NUCLEAR waste TRAESTY in West Valley. No Rock can be left unturned!

Do Something Now Before it becomes any more? ENVIRONMENTALLY & ECONOMICALLY TAXING. The price of clean up now will be nothing compared to the price it will be if we let things get ANY WORSE! And remember BEFORE things ever get like this again (which is inevitable) An Ounce of Prevention is worth a pound of CURE...

I would APPRECIATE any and all responses addressing these concerns and how you will delegate the mitigation... our future depends on this...

Yours truly,
 Damien Betner
 Damien Betner X

Do not take this lightly
 as I can be reached at...
 4 Braxton Court
 in Shoreham New York 11786
 ...call me for your understanding

211-1

- 211-1** DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in this EIS. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. In addition to the previously cited Issue Summaries, please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Chapter 4, Section 4.2, of this EIS presents an evaluation of cost-benefit considerations related to the alternatives. Section 4.2.1 compares costs; Section 4.2.2 summarizes the population doses for different work elements from each alternative; and Section 4.2.3 discusses the cost-effectiveness of each decommissioning alternative.

Commentor No. 212: signature illegible

08/02/2008 15:51 FAX 15163907160

CITIZENS CAMPAIGN

08/06/021

Catherine Botan

9/3/09

EIS Document Manager
WWDPPU.S. Department of Energy
P.O. Box 2368
Germantown, MD 20874

We need to ~~re~~ Approve the Sitewide Removal plan to clean up the ENTIRE nuclear waste site at West Valley. It makes no sense whatsoever to leave the waste there for another 30 years, so that it becomes more costly to maintain and then MAYBE if we decide to clean up later. Also that leaves ample time for the site to erode and eventually spread contamination to nearby environments. Not to mention the great danger to the Great Lakes.

Please Do something ~~soon~~
NOW

Concerned Citizen



212-1

DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup and preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

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Regarding the costs of cleanup, Chapter 4, Section 4.2, of this EIS presents an evaluation of cost-benefit considerations related to the alternatives. Section 4.2.1 compares costs; Section 4.2.2 summarizes the population doses for different work elements from each alternative; and Section 4.2.3 discusses the cost-effectiveness of each decommissioning alternative.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

Commentor No. 213: signature illegible

08/02/2009 15:51 FAX 15163007160

CITIZENS CAMPAIGN

0017/021

Attn: Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
US Department of Energy
PO Box 2368
Germantown, MD 20874

09/03/09

Dear Catherine Bohan,

I am extremely disturbed by the lack of care for the American people your inaction at the West Valley nuclear waste site displays. Proposing to clean up an insignificant amount of radioactive waste now and then deliberate for 30 years on whether it was a good idea - may keep immediate costs low and measures politically expedient, but at a terrible eventual cost. As you are no doubt aware, the West Valley site is an especially large risk to the cleanliness and survival of our Great Lakes and their ecologies due to erosion, which is inevitable. The cost to undo that damage will far exceed commitments to rehabilitate the site immediately. That will be borne by our children. It is time we stopped passing the buck, and set an example of environmental responsibility rather than neglect.

Sincerely and Urgently,
[Signature]
Dawn M. Thiel

213-1

- 213-1** DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after they are determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Waste" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well

Commentor No. 213 (cont'd): signature illegible

as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

Regarding the costs of cleanup, Chapter 4, Section 4.2, of this EIS presents an evaluation of cost-benefit considerations related to the alternatives. Section 4.2.1 compares costs; Section 4.2.2 summarizes the population doses for different work elements from each alternative; and Section 4.2.3 discusses the cost-effectiveness of each decommissioning alternative.

Commentor No. 214: James L. Burke

09/02/2009 15:51 FAX 15163807180

CITIZENS CAMPAIGN

018/021

Attention: Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
US Department of Energy
PO Box 2368
Germantown, MD 20874

Dear Catherine Bohan,

I am writing to you today as a concerned, angry citizen. A short while ago I discovered a curious article on the internet stating a site of nuclear waste, in West Valley, was to be cleaned up... to the extent of 1% of the total waste. I do not claim to be a nuclear physicist or even particularly intelligent, but this seems quite moronic and lazy. And to further add insult to injury, the project will wait thirty years before anyone even considers taking further action.

This is unacceptable Miss Bohan, as well as, [expulsive] [deleted] lazy. The closest example I can think of is paying my landlord 1% of my rent for the month and thinking about paying more 30 months later. Miss Bohan, please don't be lazy. Please support a clean up plan which actually cleans up the site. I certainly hope you take the time to read or listen to more than 1% of the concerned citizens' opinions on this issue.

Thank You,

James L. Burke
September 2nd, 2009
James L. Burke
11 Cherry Lane, Suite B
Port Jefferson Station, New York
11776

214-1

214-1 DOE and NYSERDA acknowledge the commentor's position. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 215: Katie L. DeLucia

03/02/2009 15:52 FAX 15163907180

CITIZENS CAMPAIGN

03/09/021

Cathrine Bohan
 EIS Document Manager
 West Valley Demonstration Project
 US Department of Energy
 PO Box 2368
 Germantown, MD 20874

September 2nd '09

I am writing in regards to the cleanup of the West Valley Nuclear Waste Site in Buffalo.

It is absolutely unacceptable to even consider leaving radioactive material buried for any length of extended time. 1% cleanup is irresponsible to future generations in America. I urge you to ~~not~~ invest in a FULL cleanup of this sensitive and dangerous site.

Scientists agree that over time erosion will cause detrimental effects to our greatest fresh water resource, The Great Lakes, which for years have sought funding for protection.

Please do right by the citizens of our country and provide for a full cleanup of this site immediately.

Please respond to my concerns in writing, and thank you for your consideration.

Sincerely,

 Katie L. DeLucia
 28 Bayshore Ave.
 Bayshore, NY 11706.

215-1

DOE It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 215 (cont'd): Katie L. DeLucia

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. Please see the Issue Summaries for “Concerns about Potential Contamination of Water,” “Questions about Long-term Erosion Modeling,” and “Conclusions of the *Synapse Report*” in Section 2 of this CRD for further discussion of these topics and DOE’s and NYSERDA’s response.

Commentor No. 216: Kathleen Maroney

09/02/2008 15:52 FAX 15183907160

CITIZENS CAMPAIGN

020/021

Attention: Catherine Bohan

9-2-69

Dear Ms. Bohan,

In regards to the West Valley nuclear waste site, it is imperative to take strong action in cleaning up this site, in its complete form. Not only will this greatly damage the health of our inexpendable Great Lakes, it will deeply hinder the health of the public.

I am urging the Doe and NYSERDA to support a statewide removal option, which will ensure comprehensive cleanup + excavation of the entire site - the safest, most cost-effective way.

Sincerely
Kathleen Maroney
Kathleen Maroney

20 November Walk
Long Beach, NY 11561

216-1

216-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and 4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives. Chapter 4, Section 4.2, of this EIS presents an evaluation of cost-benefit considerations related to the alternatives. Section 4.2.1 compares costs; Section 4.2.2 summarizes the population doses for different work elements from each alternative; and Section 4.2.3 discusses the cost-effectiveness of each decommissioning alternative.

Commentor No. 217: Katie Phillips

08/02/2009 15:52 FAX 15163907160

CITIZENS CAMPAIGN

021/021

Attention: Catherine Bohan

September 2, 2009

Dear Ms. Bohan,

I support the Sitewide Removal Option for the West Valley nuclear waste site. Only cleaning up 1% of the facility is ridiculous. I don't want to wait 30 years for the government to possibly clean up nuclear waste in my backyard and I'm sure you wouldn't either.

Sincerely,

Katie Phillips

7 Belmont Place
Hicksville, NY 11801

217-1

- 217-1** DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

**Commentor No. 218: David Kowalski,
Re-Energize Buffalo**

September 2, 2009

David Kowalski

Re-ENERGIZE BUFFALO

166 Burbank Dr.

Amherst, NY 14226

DECIDE NOW to FULLY CLEAN UP the West Valley Nuclear Waste Site! FULLY REMOVE ALL of the WASTE so it can not spread into Lake Erie, the source of drinking water for Buffalo and western New York. Re-ENERGIZE BUFFALO RenewNrg.blogspot.com

218-1

218-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 219: Matthew Roland**September 2, 2009****Matthew Roland****1011 Northwood Drive
Williamsville, NY 14221**

I urge you to do the appropriate thing and fully cleanup the West Valley Demonstration project immediately. Wasting time over 30 years to decide that 99% of the contamination must be removed is NOT acceptable. Please do the right thing and FULLY clean up the site NOW.

219-1

219-1 DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup and preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 220: Donald Nowak

September 2, 2009

**Donald Nowak
7852 Kuhn Road
West Valley, NY 14171**

The West Valley nuclear demonstration site needs a 100% clean-up, and not a solution that leaves most of the nuclear wastes on-site to threaten future generations. Recent weather events and local soil conditions have caused several landslides near the site and along the Route 219 construction area. The regions soils are unstable and subject to movement, which makes leaving residual contaminants on-site dangerous for all Western NY residents. The location of these materials jeopardizes Catt Creek and lakes Erie and Ontario; drinking water sources for millions of people. All of the nuclear waste must be removed and relocated to safer and more stable sites. The local geology and geography require a 100% clean-up.

220-1

220-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

Commentor No. 221: Mary Sullivan

September 2, 2009

**Mary Sullivan
30332 Salem Drive
Bay Village, OH 44140**

Make the decision now for full cleanup of the West Valley Nuclear Waste Site -- for the sitewide removal alternative, total waste excavation Heavy rain and flooding eroded a wall of Buttermilk Creek causing a landslide bringing the Creek closer to the radioactive waste trenches in just one day!

221-1

221-1

DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup and preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

Commentor No. 222: Robert Zywno

September 2, 2009

**Robert Zywno
94 Forest St
Naugatuck, CT 06770**

Please support the sitewide removal of the West Valley nuclear waste site. Leaving waste buried at the site threatens public health, the environment, and our economy. The site has been plagued with problems from the start, including leakage of radioactive waste in several areas. A significant underground plume of radioactive elements is spreading through groundwater. The waste site is on a plateau, which is highly susceptible to erosion. Scientists recognize that over time erosion will lead to release of buried toxic waste. The site is in the Great Lakes watershed, and waste leaks threaten drinking water, public health, wildlife, and billion dollar industries such as fishing and tourism. The safest and most cost-effective option in the long run is to excavate and clean up the entire site as soon as possible!

222-1

- 222-1** DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup and preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.
- Chapter 3, Section 3.6.2.1, of this EIS addresses groundwater at WNYNSC that was contaminated due to past activities (for example, the North Plateau Groundwater Plume). This EIS was prepared to evaluate the environmental impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC. Under all of the action alternatives, DOE would either remove contamination sources, mitigate their impacts to groundwater, or both. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the North Plateau Groundwater Plume. Potential groundwater impacts associated with the EIS alternatives are discussed in Chapter 4, Sections 4.1.4 and 4.1.10, and Appendix H of this Final EIS. Please see the Issue Summary for "Concern about Potential Contamination of Water" in Section 2 of this CRD for more discussion and DOE's and NYSERDA's response.
- DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.
- The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and 4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives. Chapter 4, Section 4.2, of this EIS presents an evaluation of cost-benefit considerations related to the alternatives. Section 4.2.1 compares costs; Section 4.2.2 summarizes the population doses for different work elements

Commentor No. 222 (cont'd): Robert Zywno

from each alternative; and Section 4.2.3 discusses the cost-effectiveness of each decommissioning alternative.

Chapter 4, Section 4.1.6, of this EIS also presents the results of an ecological risk assessment showing the projected long-term ecological impacts of the alternatives. The results of the human health and ecological impacts analysis imply that any impacts on wildlife, tourism, fishing and other industries, and the economies of communities downstream of WNYNSC would be negligible.

Commentor No. 223: Renate Bob

571 Front St.
Jamestown NY.
14701
Sept. 2, 2009

Attn:

Katherine Bohan
EIS Document Manager
West Valley Demonstration Project
U.S. Dept. of Energy
P.O. Box 2368
Bermonton, MD 20874

Dear Mrs Bohan:

As a concerned citizen of New York State, I would urge the clean-up of the nuclear waste facility at West Valley.

Thank you for your attention.

Sincerely yours,
Mrs. Renate Bob

P.S. I am against any more nuclear energy projects. To meet our future energy needs, I would stress conservation, solar and geothermal, not nuclear sources.

223-1

223-1

DOE and NYSERDA acknowledge the commentor's support for the cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

Commentor No. 224: Mary Louise Grace

53 Woodcrest Blvd.
Buffalo, New York 14223-1316
September 2, 2009

Dear Catherine,

I am writing to register my support for a full clean up at the West Valley Nuclear waste site. I am concerned about the quality of water in the Great Lakes and the availability of fresh water to present and future generations. A targeted clean up is not enough. The Great Lakes are the largest fresh water body in America and every effort should be made to protect their water quality.

Sincerely,



Mary Louise Grace

224-1

224-1

DOE and NYSERDA acknowledge the commentor's support for the full cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 225: Muriel Segal

Attention Catherine Bohan

EIS Document Manager

West Valley Demonstration Project

US Dept of Energy

PO Box 2368

Germantown, MD 20874

PLEASE!
I want a complete
cleanup of West Valley
Demos. Project

Muriel L Segal
343 Abington Ave
Buffalo NY 14223

225-1

225-1

DOE and NYSERDA acknowledge the commentor's support for the complete cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

Commentor No. 226: Kilissa Cissoko

Kilissa Cissoko

31 Hoffman Place
Buffalo, NY 14207
www.kilissa.com
716-875-1689

September 2, 2009

Attn: Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
US Department of Energy
PO Box 2368
Germantown, MD 20874

Dear Ms. Bohan,

As a longtime resident of Western New York State, I would like to voice my opinion that the West Valley Nuclear Demonstration Project should be fully cleaned up and I urge the Government to choose the Sitewide Removal Alternative.

I agree with the concerns that were thoroughly outlined by Larry Brooks in his *BuffaloRising.com* article:

This coalition of government leaders, environmental organizations, religious organizations, civic organizations, and the Seneca Nation of Indians are opposed to this approach for two major reasons. First, a state-funded study, *The Real Costs of Cleaning up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site*, concludes that leaving buried waste on site is both high risk and very expensive, costing much more in future dollars than a full cleanup now, and does not consider the extra cost if a catastrophic release occurs.

Second, and more importantly, is the geographic instability of the site. Recent heavy rain and flooding around Gowanda caused a landslide near to the site, highlighting the site's instability. For these reasons, this coalition favors the Sitewide Removal Alternative, a full and immediate cleanup of the site. 34 members of the New York State Legislature, virtually all the local Western New York delegation of the Senate and Assembly, signed and sent, in June, a letter to the Secretary of DOE and the President of NYSERDA recommending sitewide removal. U.S. Senator Charles Schumer also supports this position.

Thank you for your attention to this matter.

Sincerely,

Kilissa Cissoko
Kilissa Cissoko
Buffalo Resident

226-1

226-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

The report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, have been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for discussion of the report's issues and DOE's and NYSERDA's response.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. Please note that the erosion predictions used for the unmitigated erosion analysis are based on the assumption that storms occur more frequently than is currently estimated and include the effects of storms of greater severity than the one that occurred in the region on August 8-10, 2009. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

The letter referred to by the commentor is Commentor no. 128 in this CRD.

Commentor No. 227: Dorothy B. Cibula

September 1, 2009

To: Catherine Bohan, EIS Document Manager WVDP, US DOE
P.O. Box 2368, Germantown, MD 20874

Re: Draft EIS for West Valley Demonstration Project

I am writing to express my concern with the proposed Draft EIS at the West Valley, New York, Nuclear Waste Site. For more than 25 years, the environmental impact process has been manipulated and delayed, and now could be further delayed for perhaps another thirty years.

A considerable amount of radioactive material from an earlier leak has been found in Lake Ontario, near the mouth of the Niagara River. Millions of people rely on drinking water from Lake Ontario and the St.Lawrence River, and should not have to live with long-term concerns of radioactive leakage from a facility with a large volume of radioactive and chemical material buried in unlined trenches. The fact that the Draft EIS would clean up less than 2% of the waste on site is completely unacceptable and dangerous to the people in a wide area.

The problem of nuclear waste must be dealt with sooner, rather than later, and a solution to the problem of waste must be found before another nuclear facility is built. The entire West Valley site needs to be cleaned up for other uses for the safety of the people in the surrounding area.

Very truly yours,
Dorothy B. Cibula
 Dorothy B. Cibula
 22500 Lake Road, #105
 Rocky River, Ohio 44116
 League of Women Voters, Cleveland Area

227-1 DOE and NYSERDA acknowledge the commentor's desire for prompt action and preference for a full site cleanup. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

227-2 The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program. Please see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

**227-1
cont'd** It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 228: Angela Knisley

September 3, 2009

Dear Ms. Bohan,

If there was ever a time to act ...for the protection of the people and the environment...it is now. You have the power to protect the Great Lakes (and as a result drinking water for western New York). I urge you to please support the immediate and complete clean-up of the West Valley nuclear waste site.

You play a vital role in the stewardship of one of the greatest fresh water supplies in the world and the danger to these waters is imminent. Waiting thirty years for some type of alternate solution to this clean-up is courting an environmental disaster. There has already been some leakage of radioactive material into Buttermilk Creek – which goes into Lake Erie.

Are you aware that an area close to West Valley, Attica NY, (only 45 miles distance) experienced an earthquake on June 5, 2009? Thankfully, it was minor - but this area has a potential for more quakes. I found additional information regarding earthquakes and Western New York at this site http://mceer.buffalo.edu/infoservice/reference_services/westernNewYorkEQs.asp. However, I am certain that you have much better research information available to you.

Please use your position of authority to help the people under your protection as well as one of the most sensitive and important eco-systems in the world. Thank you for your time.

Sincerely,
Angela Knisley.
Angela Knisley

228-1

228-2

228-1 DOE and NYSERDA acknowledge the commentor's desire for prompt action to provide immediate and full cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's response.

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed the Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.

228-2 DOE and NYSERDA are aware of the earthquake. This EIS characterizes the seismicity of the Western New York region in Chapter 3, Section 3.5.

Commentor No. 229: Elaine Kellick

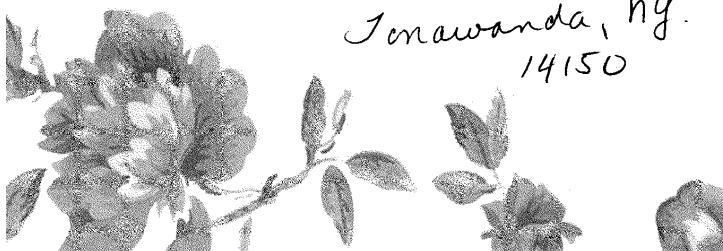


To Mrs Catherine Bohan

I am interested in a
complete clean up of the
West Valley Nuclear site.
This is important to me.

Thank you

Elaine Kellick
11 Rochelle Pk.
Tonawanda, NY.
14150



229-1

229-1

DOE and NYSERDA acknowledge the commentor's support for the complete cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 230: Jennifer Savage

Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
US Department of Energy
P.O. Box 2368
Germantown, Maryland
20874

Dear Ms. Bohan,

I am writing you about the West Valley Nuclear Waste Site to ask you for the sitewide removal alternative, total waste excavation.

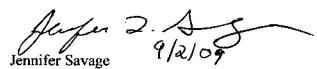
I strongly oppose leaving buried waste on site. And I also oppose Phased Decision-Making, which will delay cleanup of 99% of the site's radioactivity for up to 30 years.

1% cleanup is not enough.

This waste site is near the great lakes and could leak into them if we do not do something about it.

Thank you for your time,

Sincerely,


Jennifer Savage 9/2/09

230-1

230-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative and opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 231: Susan Bergman

EIS Document Manager
West Valley Demo Proj
US Dept of Energy
PO Box 2368
Germantown MD 20874

9/2/09

Attn: C. Bolen

Gentlemen:

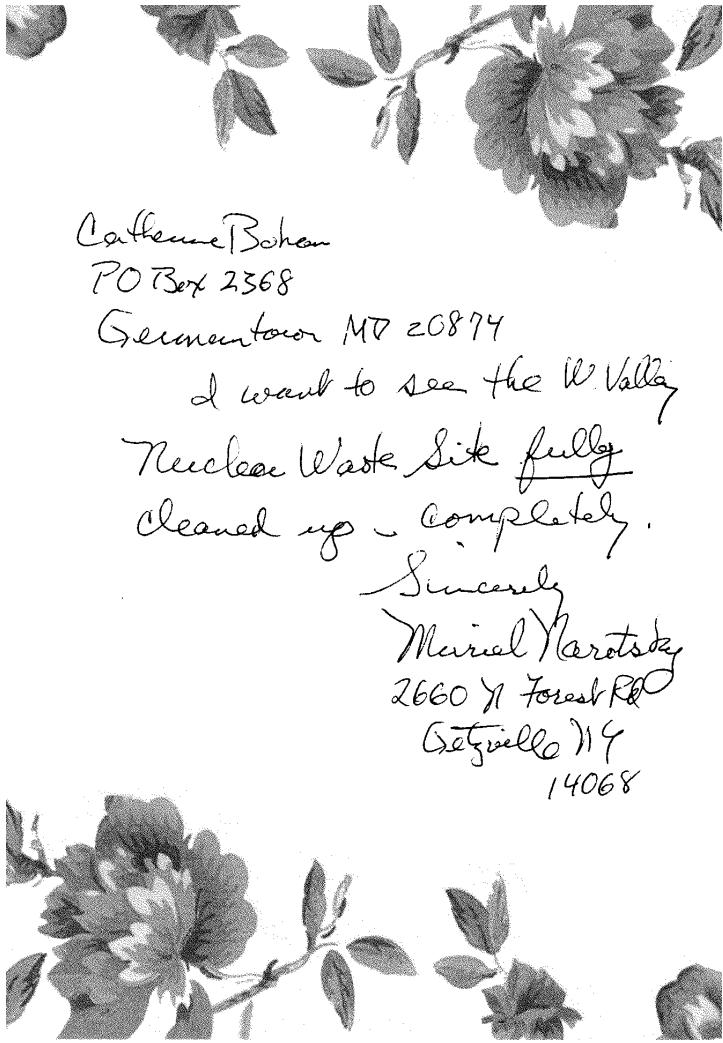
I want a complete clean-up now. This area needs attention by you to save the environment in the near future.

Susan Bergman
36 Rolling Brook
E. Amherst NY 14051

231-1

- 231-1 DOE and NYSERDA acknowledge the commentor's support for the complete cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

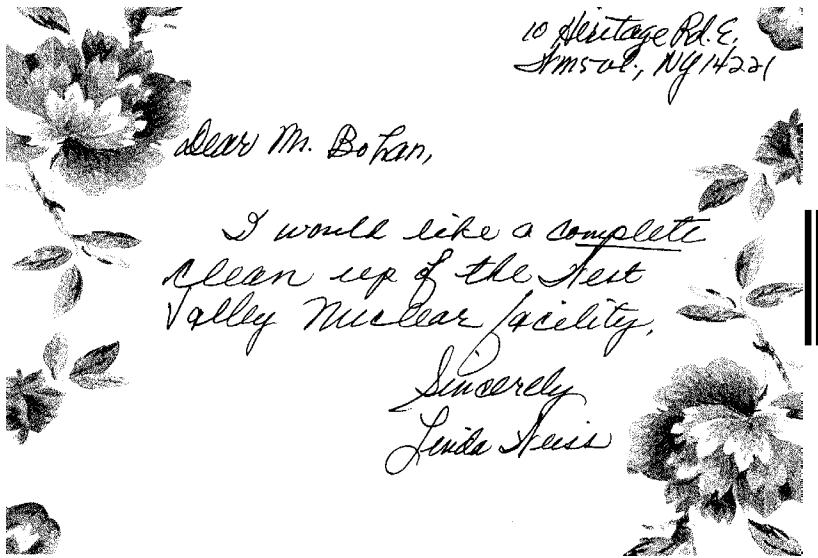
Commentor No. 232: Muriel Narotsky



232-1

- DOE and NYSERDA acknowledge the commentor's support for the full cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 233: Linda Weiss

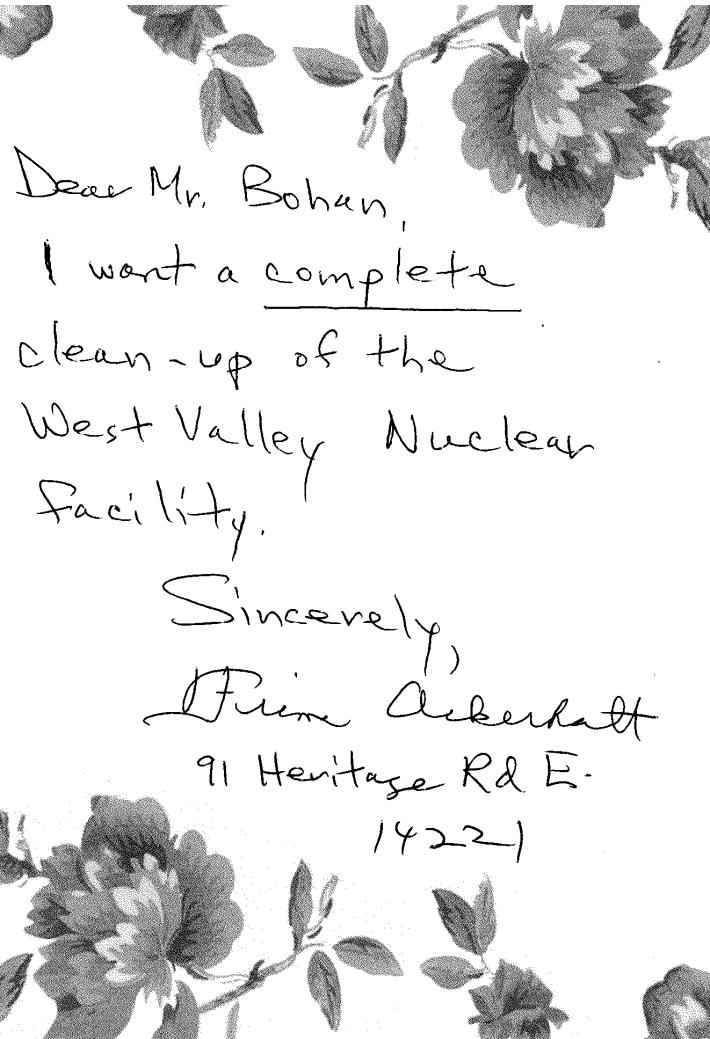


233-1

233-1

DOE and NYSERDA acknowledge the commentor's support for the complete cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 234: Firma Ackerhalt



Dear Mr. Bohan,
I want a complete
clean-up of the
West Valley Nuclear
Facility.

Sincerely,
Firma Ackerhalt
91 Heritage Rd E.
14221

234-1

- 234-1 DOE and NYSERDA acknowledge the commentor's support for the complete cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 235: Muriel Sourt

Attention Catherine Bohan

EIS Document Manager

West Valley Demonstration Project

US Dept of Energy

PO Box 2368

Germantown, MD 20874

I want a complete cleanup of
the West Valley site.
Muriel Sourt

235-1

235-1

DOE and NYSERDA acknowledge the commentor's support for the complete cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 236: Mary Jane Hayes

09/08/2009 09:21 7168749650

KENMORE MIDDLE

PAGE 01

August 7, 2009

President
Energy Research and Development Authority

Dear Mr. Murray,

I write to you as a life long resident of Buffalo, New York asking you to do a complete cleanup of the state's largest nuclear waste site, the one at West Valley. I simply wish to convey to you how profound the influence of the Niagara River and Lake Erie are to my life and to all of us in this wonderful region of the world. The leaking of nuclear wastes into the water ways here would be devastating and far, far reaching. The waste can only drain into our water ways. It seems only prudent to do a full, clean-up, not a temporary patch job. The erosion in the area of West Valley is a serious concern; recently the severe rains and extreme flooding have brought this into clear focus.

Please do not postpone the most thorough clean up. It will only be much more costly later. I live here and I care immensely. I have sent you this letter-fax because it is all I know to do as a citizen to advocate for the good of all. I am grateful for government and government agencies because I know there is so much more we can accomplish if we work as communities rather than individuals alone. The primary purpose of good government is to protect its people. Therefore, the solution to this problem lies in the hands of our government agencies. Thank you for your service. I further thank you for your anticipated actions to fully ensure the cleanup is complete in every possible way.

There is nothing more basic than safe water for all of us. I happily pay taxes for such protection.

Sincerely,

Mary Jane Hayes
53 Chatham Avenue
Buffalo, New York

236-1

236-1

DOE and NYSERDA acknowledge the commentor's desire for prompt action for the complete cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling are discussed in Appendix F.

Regarding the request not to postpone cleanup, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected. Please see the Issue Summary for "Modified Phased Decisionmaking Alternative" in Section 2 of this EIS for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 237: Edward Butler

September 4, 2009

Edward Butler

36 E. 69th St.

#1B

New York, NY 10021

I urge NYSERDA and the Department of Energy to completely clean up the West Valley nuclear waste site. A complete cleanup is essential to avoid future radioactive contamination of Lake Erie drinking water. The proposed "targeted" cleanup that would contain only 1 percent of the waste is unacceptable.

237-1

237-1

DOE and NYSERDA acknowledge the commentor's support for the complete cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

***Commentor No. 238: Edward Dassatti,
New York State Department of Environmental Conservation***

New York State Department of Environmental Conservation
Division of Solid & Hazardous Materials
Office of the Director, 9th Floor
625 Broadway, Albany, NY 12233-7250
Phone: (518) 402-6651 • Fax: (518) 402-9024
Website: www.dec.ny.gov



Alexander B. Grannis
Commissioner

SEP - 3 2009

Ms. Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
U.S. Department of Energy
P.O. Box 2368
Germantown, MD 20874

Dear Ms. Bohan:

Re: Revised Draft Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center, dated December 5, 2008

This letter responds to the U.S. Department of Energy's (DOE) and the New York State Energy Research and Development Authority's (NYSERDA) request for comments on the referenced Draft Environmental Impact Statement (DEIS). The enclosed comments are the work product of the New York State Department of Environmental Conservation's (Department) West Valley assigned and non-West Valley assigned staff. A considerable amount of Department staff time was devoted to the evaluation of this DEIS because we recognize the importance and critical nature of proper disposition of both the West Valley Demonstration Project (WVDP) and the Western New York Nuclear Service Center (WNYNSC).

In addition to our review responsibilities as a Cooperating Agency under the National Environmental Policy Act (NEPA), and as an Involved Agency under the State Environmental Quality Review Act (SEQRA), part of the basis for Department staff's evaluation was to ascertain the DEIS's utility as a support document for the Department's permitting and corrective action activities that are associated with the disposition of the WVDP and the WNYNSC. The Department's permitting activities need to be supported by a DEIS that has been prepared in accordance with the provisions of 6 NYCRR Part 617, SEQRA.

As a result of the Department's evaluation of the 2008 DEIS, we are compelled to address a few issues which are characterized as all encompassing matters that we consider most significant. These issues follow:

1. The DEIS should explain that one ideal of the Phased Decisionmaking Alternative is to work expeditiously to a final decommissioning decision, with every effort to minimize work stoppages or loss of workforce and/or funding.
2. The discussion of the ongoing assessments in Phase 1 needs to be more fully developed. At a minimum, the general anticipated focus on topics such as reducing uncertainty in erosion modeling; additional characterization of contamination levels and areas; performing regular reviews of current advancements in decommissioning procedures and processes; reviewing disposal options for currently orphaned wastes; and refining transportation dose estimates if new shipment containers, regulations, or techniques become available should be explained. The fact that this is an iterative process taking place concurrent to the Phase 1 decommissioning work needs to be clarified. Examples include, but are not limited to, the

238-1 The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

This EIS was prepared to evaluate the environmental impacts of the alternatives for decommissioning and/or long-term stewardship of WNYNSC, a legally required step to support a decision on a course of action. The U.S. Congress and the President are responsible for establishing funding levels for various Federal Government programs, while the New York State Legislature and the Governor are responsible for establishing funding levels for state government programs. Implementation of the decision made in DOE's Record of Decision and NYSERDA's Findings Statement is contingent on the level of funding allocated.

238-2 Chapter 2, Section 2.4.3, of this EIS describes decommissioning activities under the Phased Decisionmaking Alternative and provides a discussion of the data collection, studies, and monitoring to be performed during implementation of Phase 1 and the purpose of each of these activities. The overall intent of these Phase 1 activities is to further characterize the site and to research technology developments and engineering to aid consensus decisionmaking for Phase 2. Section 2.4.3.3 explains how the additional data and studies would be used in making a decision regarding potential future activities. Details of these studies and projects would be defined if the Phased Decisionmaking Alternative is selected. The intent of this EIS is to provide a description of the environmental impacts of each of the alternatives to inform the agency decisionmakers.

**Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation**

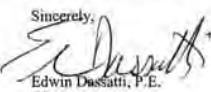
Ms. Catherine Bohan

2.

- need to revise groundwater and erosion models to reflect actual conditions (e.g., installation of groundwater flow barriers, treatment walls, etc.) versus the use of general assumptions made during development of the DEIS; strategies for monitoring and mitigating erosion; reviewing advances in exhumation technologies (both on and offsite).
3. The DEIS should provide a clearer explanation of the public participation process that will be used in determining the ongoing assessment and decision making for Phase 2. DOE and NYSERDA should explore the possibility of enhanced public participation above and beyond what regulations require during Phase 1 in order to more fully inform the public and allow their opinion to be heard.
 4. It should be stated in unequivocal language that any waste that may have to be stored on-site due to a current lack of disposal pathway will be removed from the site once disposal options become available.
 5. Given the decision by the DOE to no longer consider Yucca Mountain as the likely federal High-Level Waste Repository, the implications for possible long-term on-site storage of the vitrified High-Level Waste glass logs should be clearly spelled out. A similar explanation of the implications for the lack of disposal options for the Greater Than Class C and Non-Defense Transuranic (TRU) waste should be clearly detailed.

The Department expects this EIS process will result in a final approach to site remediation that is in the best interests of the public and environment of the State of New York. We anticipate that the enclosed comments will assist DOE and NYSERDA in developing an informative and comprehensive final environmental impact statement that will satisfy the requirements of both NEPA and SEQR.

If you have any questions regarding these comments please contact Jessie Lynch, of our Bureau of Hazardous Waste and Radiation Management, at (518) 402-8579.

Sincerely,

 Edwin Dassatti, P.E.
 Director
 Division of Solid and Hazardous Materials

Enclosures

Enclosure 1 - NYSDEC West Valley Assigned Staff DEIS Comments
 Enclosure 2 - NYSDEC Non West Valley Assigned Staff DEIS Comments

cc: B. Bower, USDOE
 P. Bembis, NYSERDA
 G. Baker, NYSDOH
 J. Reidy, USEPA Region 2
 A. Park, USEPA Region 2
 P. Giardina, USEPA Region 2
 K. McConnell, NRC

- | | |
|-------------------------|---|
| 238-2
cont'd | <p>Chapter 2, Sections 2.1 and 2.4.3.4, of this EIS have been revised to describe the involvement of the public during implementation of Phase 1 of the Phased Decisionmaking Alternative and through the Phase 2 decisionmaking process. Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until final decisions are made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.</p> <p>NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate Phase 2 decisions for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.</p> |
| 238-3 | <p>Both DOE and NYSERDA intend to ship stored waste off site as soon as disposal options and funding are available. Chapter 2, Section 2.2, of this EIS states, "DOE would dispose of low-level radioactive waste and defense-related transuranic waste generated from decontamination and decommissioning activities off site and would store the vitrified high-level radioactive waste and non-defense transuranic waste on site until a disposition decision is made and implemented."</p> |
| 238-4 | <p>The status of the Yucca Mountain project is acknowledged in Chapter 1, Section 1.6.4, this EIS, and the plan to store the vitrified high-level radioactive waste at WNYNSC is consistent with DOE's August 1999 Record of Decision for the <i>Final Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste</i> (DOE/EIS-0200-F). The implications of the potential for orphan waste are discussed in Chapter 4, Section 4.1 in this EIS.</p> |
| 238-5 | |

***Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation***

Enclosure 1
**NYSDEC West Valley Assigned Staff Comments on the
Revised Draft Environmental Impact Statement for
Decommissioning and/or Long-Term Stewardship at the
West Valley Demonstration Project and
Western New York Nuclear Service Center**

NOTE: For any Chapters/Appendices not specifically included below, the Department has no comments.

Chapter/Appendix: General comments

		Page Number	Comment
1	General		<p>Since the DEIS was issued in December 2008 there have been many changes that effect numerous portions of the DEIS. These changes range from political (e.g., change in administration), to economic (e.g., recession, American Recovery and Reinvestment Act) to technical (e.g., recent erosion events, new erosion studies, changes in waste disposition pathways).</p> <p>It is expected that the DEIS will be updated in all applicable sections to reflect these changes and that a discussion of these changes will be included.</p>
2	General		<p>Recent events which no longer make Yucca Mountain a disposal pathway for High-Level Waste should be addressed within the DEIS. The DEIS should be updated to include any changes this may cause including but not limited to cost of each alternative, dose to public, and changes in ongoing monitoring.</p> <ul style="list-style-type: none"> • At a minimum, a statement recognizing the fact that the canisters would have to remain on the site for an indefinite period of time should be placed in the DEIS.
3	General		<p>Recent Core Team interactions have discussed a myriad of changes that are being made to the DEIS. To the extent possible, DOE and NYSERDA should make every effort to address all aspects of the DEIS that have changed (e.g., erosion events, modeling, Yucca Mountain) since the start of the Public Comment Period in December 2008.</p>
4	General		<p>Apparently as a result of numerous authors for various portions of the document, several different variations of descriptive phrases for the different "areas" of the site are used interchangeably, which can lead to confusion to the reader.</p> <ul style="list-style-type: none"> • Descriptions of the various parts of the site, WNYNSC, Retained Premises, SDA, Project Premises, etc should be provided in Chapter 1 and then used consistently throughout the document.
5	General		<p>Update references within the text to the "Permeable Reactive Barrier" or "PRB" as DOE has determined that this will not be installed.</p>
6	General		<p>Within "A Summary and Guide for Stakeholders", the first paragraph under "Abstract" on the Cover Sheet lists the site as 66.4-hectare (164-acre) and bullet one of the "Brief History of the Site" text box on Page 1 lists the site as 81-hectare (200-acre). Additionally, DOE has recently transferred control of certain property back to NYSERDA for the purpose of establishing a buffer zone around the SDA. The change in size of the WVDP and Retained Premises should be addressed.</p> <ul style="list-style-type: none"> • Please update the document to reflect the change in acreage and reconcile the hectare (acreage) differences which are found throughout the document.

- 238-6** This Final EIS has been revised in response to comments received during the comment period and as a result of additional and updated environmental baseline information. This EIS was also updated to reflect events that occurred, notifications that were made regarding other NEPA documents, and changes in applicable regulatory requirements or guidance since the Revised Draft EIS was issued for public comment in December 2008. Chapter 1, Section 1.8, of this EIS summarizes the more important changes made to this Final EIS.
- 238-7** Chapter 1, Section 1.6.4, of this EIS explains the status of the Yucca Mountain Repository and the Administration's plans to evaluate alternatives for disposal of high-level radioactive waste and spent nuclear fuel. Interim storage of vitrified high-level radioactive waste at WNYNSC is consistent with DOE policy on the management of high-level radioactive waste, as stated in the DOE Record of Decision for high-level radioactive waste for the *Final Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste* (DOE/EIS-0200-F). The August 1999 Record of Decision (64 FR 46661) stated that canisters of immobilized high-level radioactive waste would be stored at the site of generation until transfer to a geologic repository. Until such time as a disposition decision is made and implemented, the high-level radioactive waste generated by WVDP activities will continue to be stored at WNYNSC in accordance with the referenced Record of Decision. This EIS has been revised to remove references to Yucca Mountain as the possible location for disposal of WVDP high-level radioactive waste and includes, where appropriate, the statement that the high-level waste canisters will be stored on site until a disposition decision is made and implemented.
- 238-8** These changes have been incorporated into the relevant sections of this EIS. In addition, a new Chapter 1, Section 1.8, has been added to identify major changes made to this EIS between issuance of the Revised Draft EIS and Final EIS.
- 238-9** This EIS has been reviewed and revised for consistency in referring to WNYNSC and the different areas. In addition, a text box has been added to Chapter 1 of this EIS to define the terms.
- 238-10** This EIS has been revised to remove references to the "Permeable Reactive Barrier."
- 238-11** The two acreages cited by the commentor are not inconsistent because they do not refer to the same property. Both the Abstract on the Cover Sheet and the "Brief History of the Site" text box on Page 1 of the *Summary and Guide for Stakeholders*

***Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation***

Enclosure 1 - NYSDEC West Valley Assigned Staff DEIS Comments

Chapter/Appendix: A Summary and Guide for Stakeholders

Comment Number	Page Number	Comment
7	A Summary and Guide for Stakeholders, Page 1; Chapter 2 and Appendix C	The seventh bullet of the "Brief History of the Site" text box state that DOE was directed to "Dispose of low-level radioactive waste and transuranic waste that is produced in the process of solidifying high-level radioactive waste." How is this accomplished if the DOE even remotely considers the Sitewide Close-In-Place Alternative? For example, the zeolite within the columns of the Supernatant Treatment System is low-level radioactive waste produced during the process of solidifying the HLW. To close the columns in place appears to be a direct violation of the West Valley Demonstration Project Act. • Please clearly define how the Sitewide Close-In-Place Alternative is compliant with the directive inherent in the Act
8	A Summary and Guide for Stakeholders, Page 1; Chapter 2 and Appendix C	The eighth bullet of the "Brief History of the Site" text box state that DOE was directed to "Decontaminate...the facilities...and the materials and hardware used in conjunction with the project." Again, how is this accomplished if the DOE even remotely considers the Sitewide Close-In-Place Alternative? For example, the four HLW tanks as well as the zeolite and the columns of the Supernatant Treatment System are all materials and hardware used in conjunction with the project. To close the tanks and columns in place appears to be a direct violation of the West Valley Demonstration Project Act. • Please clearly define how the Sitewide Close-In-Place Alternative is compliant with the directive inherent in the Act
9	Page 2	Under the second full paragraph, this DEIS is also being used to meet the DOE's obligations for a DEIS as required by the New York State Department of Environmental Conservation (NYSDEC) for DOE's Part 373/RCRA Permit Application.
10	Page 6	Under the fourth paragraph in "What Decisions Will Be Made?", DOE fails to specifically mention that they will consider all applicable State and Federal laws and regulations along with mission, policy, cost, and public input. To relegate these to "other relevant factors" would be dismissive of the importance of State and Federal laws and regulations.
11	Page 9, fourth bullet	The NYSDEC's intention behind the use of the tank drying system at the Waste Tank Farm was to dry the <u>residuals</u> already in the tank, not to add wastes from other areas and dry those in place. According to the text of the DEIS, this was DOE's only "intent" as well. • However, DOE may need to include where these intentions have changed and its desire to add liquids to the tanks for in-place drying. NYSDEC has not reached all its conclusions on what may be transferred into the Waste Tank Farm.
12	Page 13, Shaded Text Box	Again, there is a failure to include all applicable State and Federal laws and regulations along with mission, responsibility, environment, economic, and technical considerations. To relegate these to "other factors" would be dismissive of the importance of State and Federal laws and regulations.
13	Table 4	The information under "Phased Decision making Alternative (Phase 1 Only)" appears to be inaccurate and/or misleading. Since there are several removal actions taking place under Phase 1 (i.e., the lagoons, the MPPB, the source of the NPGP) the cost-effectiveness for a Phase 2 removal or in-place closure decision should be evaluated on its own merits at that time and a Supplement to this EIS should be issued for any Phase 2 decisions.

(*the Summary*) are consistent in indicating that WNYNSC is 1,352 hectares (3,340 acres). The 66.4 hectares (164 acres) specified in the Abstract refers to the Project Premises while the 81 hectares (200 acres) indicated in the text box includes both the Project Premises and the State-Licensed Disposal Area. However, the bullet in the text box has been revised to reduce the potential for confusion. Because the land transfer is not complete, this EIS has not been revised to reflect this change.

- 238-12** As stated in Chapter 1, Section 1.3, of this EIS, the West Valley Demonstration Project Act requires DOE to decontaminate and decommission the waste storage tanks and facilities used in the solidification of high-level radioactive waste, as well as any material and hardware used in connection with WVDP, in accordance with such requirements as NRC may prescribe. NRC has issued the Decommissioning Criteria for WVDP (the NRC Policy Statement of February 2002) based on the License Termination Rule for the NRC-regulated part of WNYNSC (10 CFR Part 20, Subpart E). It is DOE's position that it can be demonstrated that the EIS decommissioning alternatives, including the Sitewide Close-In-Place Alternative, comply with the NRC decommissioning criteria.
- 238-13**
- 238-14**
- 238-15** This discussion can be found in Chapter 1, Section 1.3, of this EIS, which states: "NYSDEC is also an involved agency under SEQR with respect to permitting actions at the SDA and with respect to any approvals NYSDEC would issue for WVDP or WNYNSC under Part 373/RCRA regulations."
- 238-16**
- 238-17**
- 238-14** The text has been revised to specifically mention regulatory requirements as a factor in agency decisionmaking.
- 238-15** The text in Section 2 of the Summary of this EIS, as well as in Chapter 2, Section 2.3.1, has been revised to clarify that the tank and vault drying system for the Waste Tank Farm is intended to dry the contents of all of the waste storage tanks, not just 8D-1 and 8D-2.
- 238-16** Regulatory requirements will be added to the list of factors to be considered.
- 238-17** The cost-benefit analysis presented in Chapter 4, Section 4.2, of this EIS and the information from that analysis that is included in the Summary is for the entire alternative. If one were to perform the analysis for only Phase 1, it is expected that the cost per avoided person-rem would be comparable to or higher than that for the Sitewide Removal Alternative.

***Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation***

Enclosure 1 - NYSDEC West Valley Assigned Staff DEIS Comments

Chapter/Appendix: Chapter 1

Comment Number	Page Number	Comment
14	Page 1-1, Shaded Box	This box fails to mention SEQRA. The DEIS itself states that the EIS was scoped by NYSERDA and DOE in simultaneous notices on March 13, 2003. Since the notices were published in the Environmental Notice Bulletin and the Federal Register, it appears that the EIS was scoped under and is subject to both NEPA and SEQRA for different aspects.
15	Page 1-1, Section 1.1	Chapter 1 states that the Project Premises is 164 acres while it is listed as 200acres in the "Brief History of the Site" text box on Page 1 of the "Guide to Stakeholders". • Please review and clarify the acreage of the Project Premises.
16	Page 1-3, RCRA Background	The last line of the second paragraph states that Corrective Measures Studies (CMSs) were required for six WVDP SWMUs and that NYSERDA was preparing a CMS for the SDA. The SDA SWMUs (referred to as the SDA) are not a part of the WVDP. • Please reconcile the information regarding the five WVDP and one NYSERDA CMSs required pursuant to the Consent Order.
17	Page 1-3, RCRA Background	Updates should be made to the fifth paragraph. The NYSDEC did send a letter to Mr. Robert Warther, USDOE dated February 3, 2005. The letter stated that the application was deemed incomplete and that an EIS, as well as other items, was required. At the time, the NYSDEC intended to commence its technical review. However, the NYSDEC's review of the 2005 and 2008 PDEISs, its participation in the Core Team and the on-going work at the site has taken precedence. • A revised Part 373/RCRA permit application needs to be submitted to update the facility information and changes. DOE should update the text to reflect the events following submittal of the application in December 2004 as well as the July 2010 submittal date for the revised Part 373/RCRA application.
18	Page 1-8, Section 1.3	Within the last sentence of first paragraph under " <i>New York State Department of Environmental Conservation</i> ", DOE needs to address that the NYSDEC has responsibility with respect to any permits issued under Part 373/RCRA as well.
19	Page 1-8, Section 1.3	Within the second paragraph under " <i>New York State Department of Environmental Conservation</i> ", DOE needs to address that the WVDP is also regulated by NYSDEC for hazardous and mixed low-level radioactive waste pursuant to the Part 370 series.
20	Page 1-8, Section 1.3	Within " <i>New York State Department of Environmental Conservation</i> ", DOE should include information regarding the 3008(h) Consent Order, as was included in paragraph two of " <i>U.S. Environmental Protection Agency</i> ".
21	Page 1-9, Section 1.3	Within " <i>Regulatory Compliance Processes</i> ", there are two concerns in the fourth paragraph. One, NYSDEC has already required a supporting EIS for the WVDP Part 373/RCRA permit application in February 2005 and is using this EIS to fulfill that requirement. Secondly, nothing analyzed in the DEIS is outside "the scope of the Part 373/RCRA permit application" since NYSERDA owns the entire site and it is the NYSDEC's determination as to what regulatory vehicles and how many are used to ensure compliance with the Part 373/RCRA regulations by both the WVDP and WNYNSC sites.
22	Page 1-10	Suggest that footnote be revised to read: "SEQRA specifies that the assessment of environmental impacts should include the growth inducing aspects of a proposed action." Saying that SEQRA specifies that the assessment should be focused on growth inducement is not correct.
23	Page 1-10, Section 1.3 and Section 1.5	In the first full paragraph of Section 1.3 on this page and in the second paragraph of Section 1.5, DOE should be advised that EPA may at any time exercise their right to perform a RCRA review of the DEIS, with or without NYSDEC. Additionally, NYSDEC may, at any time, request their assistance with either the DEIS or any other reviews/needs for either of the sites.

- 238-18** The referenced text box provides an overview of some of the information included in Chapter 1. The text box does not include details about any of the identified topics. NEPA is included only to indicate that one of the topics covered in Chapter 1 is "the relationship of this document to other NEPA documentation." SEQRA is mentioned throughout Chapter 1 as appropriate, including in Section 1.3, "Purpose and Need for Agency Action."
- 238-19** This EIS has been revised to consistently report the size of the Project Premises and WNYNSC. A text box has been added to Chapter 1 to explain these terms, including acreage.
- 238-20** The text in Chapter 1, Section 1.1, of this EIS has been revised to reflect the correct number of WVDP and NYSERDA Solid Waste Management Units (SWMUs).
- 238-21** This discussion has been revised to include the requested information.
- 238-22** The text has been revised to include NYSDEC's responsibilities for permitting and approvals under Part 373/RCRA.
- 238-23** The text in Chapter 1, Section 1.3, states the information requested in this comment.
- 238-24** This paragraph has been inserted as requested.
- 238-25** Changes have been made to this paragraph to clarify NYSDEC's need for and ability to use this EIS to support its RCRA decision with respect to WNYNSC.
- 238-26** The text has been revised as suggested.
- 238-27** DOE and NYSERDA note this comment.
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**Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation**

Enclosure 1 - NYSDEC West Valley Assigned Staff DEIS Comments

Chapter/Appendix: Chapter 2

Comment Number	Page Number	Comment
24	General	While the document has made tremendous changes to include the necessary hazardous waste Part 373/RCRA information and regulations, there are still areas that are lacking. These include but are not limited to: failure to include whether or not there is hazardous waste/constituents contamination in all of the facilities/units listed under each of the WMA descriptions; failure to include in the descriptions when a unit is subject to RCRA closure or CA regulation (e.g., where CMSSs are required, NDA "decommissioning" is also subject to CA requirements); failure to include in their descriptions that each of the alternatives (e.g., Close-in-place, Phased Decisionmaking) are also subject to Part 373/RCRA when actions are taken.
25	Page 2-1, Section 2.1, Bullet 3	This bullet is misleading as it portrays Phase 1 as lasting only 8 years. It should be stated that Phase 1 will continue until Phase 2 is implemented which can take up to 30 years.
26	Page 2-1	The alternatives section does a good job of describing the reasonable alternatives included in the document and provides a sufficient level of detail to permit a comparative assessment by the reader of the alternatives under consideration.
27	Page 2-2	Waste Classifications Used in the DEIS: A comprehensive description of "Defense Waste" and "Non-Defense Waste", "Defense Determination", and the implications for site waste disposal options should be included in the text box on page 2-2, and a brief description included in the Glossary, for clarification.
28	Page 2-5, Section 2.3.1	The bullet at the bottom of the page only makes reference to Solid Waste Management Units (SWMUs) not to Interim Status Units. Also the reference to "RCRA Closure" could be misconstrued. The NYSDEC understands that you are referring to all unit closures and corrective actions when using this term but within the RCRA-regulated community "RCRA Closure" is specific to the requirement to implement approved closure plans for any Interim Status or permitted operating units.
29	Page 2-5, Section 2.3	Description of WMA 11 does not include scrap metal landfill
30	Page 2-7, Figure 2-3	Figure shows WMA 12 as reservoirs but does not reference "the balance of the site" including roads and parking lots. • Figure should be modified to reflect extent of WMA12.
31	Page 2-8, Figure 2-4	This figure needs to be updated. The Interim Waste Storage Facility foundation in WMA-7 has been removed, it is almost impossible to see Lagoon 1 in WMA 2 (unless you know where to look), and the DOE has recently determined that no Permeable Reactive Barrier will be placed in WMA-4.
32	Page 2-9, Figure 2-5	These figures show the extent of North Plateau Groundwater Plume but no date is given for reference.
33	Page 2-10, Table 2-1 and Page 2-16, Section 2.3.2.1, Paragraph two	The information for WMA-1 lists that the Contact Size-Reduction Facility (including the Master Slave Manipulator Repair Shop) as being demolished to grade with the foundations/slab/pads remaining with the RCRA status being "RCRA Interim Status Unit, subject to RCRA Closure". While the status is correct, NYSDEC understood that this IS unit was not going to be clean closed until the MPPB was removed. • Please provide clarification of DOE's intent for this unit. Should this listing actually be in Table 2-2? Any changes included herein should also be included in Chapter 4 and Appendix C, as may be necessary.
34	Page 2-10, Table 2-1	The information for WMA-5 lists the Waste Packaging Area with the RCRA status being "Clean-closed under RCRA Interim Status". • Is this unit part of Lag Storage Addition #4? Please clarify this in the table.

- 238-28** Text has been added to Chapter 2, Section 2.3.2, of this EIS stating, "Any radiological or hazardous chemical contamination that is known or assumed to be present is noted in each description of a WMA." Tables 2-1 and 2-2 and their associated table notes provide an assumption for each Waste Management Area (WMA) if radiological or hazardous contamination is present, as well as notes if a facility is subject to RCRA closure or Corrective Action regulation. Chapter 3 and Appendix C of this EIS further describe radiological and hazardous contamination, whether measured or assumed. A footnote has been added to Sections 2.4.1.1, 2.4.2.1, and 2.4.3.1 stating, "Decommissioning actions would be performed in accordance with applicable Part 373/RCRA requirements."
- To the extent that RCRA applies to a given facility or area, RCRA requirements would be satisfied during decommissioning of that facility or area.
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- The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected. The text describing the Phased Decisionmaking Alternative in Chapter 2, Section 2.1, was modified to clarify aspects of the alternative.
- Footnote 1 in Chapter 2, Section 2.3.1, of this EIS describes the meaning of defense waste and its impact on disposal options. The text box in Section 2.4 states that, for the purposes of transportation analysis, it is assumed all transuranic waste would be shipped to the Waste Isolation Pilot Plant, regardless of whether or not it is defense waste.
- The text in Chapter 2, Section 2.3.1, of this EIS has been revised to state: "...which includes a number of SWMUs identified during the RCRA facility assessments and RCRA Interim Status Units that continue to be managed toward RCRA closure. The anticipated status at the EIS starting point with respect to addressing these units according to RCRA requirements..."

***Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation***

Enclosure 1 - NYSDEC West Valley Assigned Staff DEIS Comments

Comment Number	Page Number	Comment
35	Page 2-10, Table 2-1	The information provided in Footnote "a" is incorrect. The Old Sewage Treatment Plant was not an Interim Status unit and was not "RCRA clean-closed". It is a SWMU that based on the RFI was determined to have "no further action". • Please correct this inaccuracy.
36	Page 2-11, Section 2.3.1, Bullet 3	The liquids from Tank 8D-2 would be process to remove Cesium-137, most of the other radionuclides would remain in the liquids. Even after evaporation these radionuclides would continue to pose hazard to the environment.
37	Page 2-11, Section 2.3.1	The third bullet on this page refers to treated Tank 8D-4 liquids being evaporated in Tank 8D-2. NYSDEC understands that recent DOE changes to Liquid Waste Management have these liquids being solidified and sent off-site for disposal. Additionally, DOE has discussed transferring other liquids into Tank 8D-2 for evaporation. While Tank 8D-2 does have tank treatment status under the Part A application, it does not currently have status as an evaporator. While the NYSDEC anticipates that evaporation will be used to dry tank heels, the addition of treated liquids to the tank for evaporation is still under discussion and review by NYSDEC and the Core Team. These discussions need to be completed prior to this action.
38	Page 2-12, Section 2.3.1	The first bullet on this page refers to the "Permeable Reactive Barrier" that the DOE has recently determined will not be implemented. • Please update the text to include this change and add any information consistent with any future plans the DOE may have for this area.
39	Page 2-12, Table 2-2	The NYSDEC has the following comments on this table WMA-1, Plant Office Building – With what chemical(s) was the subsurface soil contaminated? • WMA-2 – Please include information on any hazardous chemical contamination. • WMA-3, Tanks 8D-1 – 8D-4 – Please clarify the EIS starting point. The tanks currently have residual heels and DOE has expressed a desire to add liquid to the tanks for evaporation. How would this be considered "emptied" if additionally wastes are added? Especially since the evaporative process would not be complete by 2011. See also Page 2-20, Section 2.3.2.3, Paragraph two. WMA-3, Supernatant Treatment System – Please include information regarding the hazardous chemical contamination. WMA-4, CDDL – Please include information regarding the hazardous chemical contamination. • WMA-5 – Please include information regarding the hazardous chemical contamination. • WMA-6 – The Equalization Basin and Tank and the Sewage Treatment Plant are subject to corrective action in addition to the CWA. WMA-8, Mixed Waste Storage Facility – Under the Mixed Waste Conditional Exemption regulation (6 NYCRR Part 374-1.9), this unit is no longer subject to Interim Status closure. Even so, NYSERDA has expressed their desire to close this unit under the RCRA Interim Status requirements. Pending further determination, the unit should be listed as a SWMU. North Plateau Groundwater Plume – While the NYSDEC has not required action on the NPGP, it should not be construed that the NYSDEC believes that the unit is not subject to regulation. We are currently in the process of reviewing the results of the NPGP RCRA Characterization.
40	Page 2-12, Table 2-2	Rail Spur is listed in Table 2-2 operable and contaminated in WMA6 but Inactive and not contaminated in WMA 12. • This discrepancy should be addressed.
41	Page 2-22 Section 2.3.2.5	The last line of the third paragraph states that the Remote-Handled Waste Facility is "permitted as a mixed low-level radioactive waste treatment and storage containment building". This unit is not permitted but has Interim Status. • Please revise the text accordingly.

- 238-32 While the Scrap Material Landfill is in WMA 11, the name of WMA 11 is Bulk Storage Warehouse and Hydrofracture Test Well Area.
- 238-33 WMA 12 is everything not labeled WMA 11 or shaded as the Project Premises in this figure. Throughout all figures depicting WMAs in this EIS, the areas that are not of interest are shaded. In addition, the number of roads and parking lots and the scale of the figure make labeling roads and parking lots impractical.
- 238-34 Figure 2-4 has been revised to remove the Permeable Reactive Barrier and the Interim Waste Storage Facility foundation and to make Lagoon 1 more noticeable.
- 238-35 Chapter 2, Figure 2-4 and Chapter 3, Figure 3-24, of this Final EIS have been revised to add a reference to the *Facility Description and Methodology Report* (WSMS 2009). In addition, the text associated with Figure 3-24 of this Final EIS has been modified to state that the figure reflects data as recent as 2007. Appendix C, Section C.2.13, also has been revised to state that the plume boundary on the figure represents the boundary of the 10-picocuries-per-liter gross beta concentration in groundwater as of 2007.
- 238-36 As used in the second paragraph of Appendix C, Section C.2.1, "removed to grade" is taken to mean the same thing as "removed to floor slab." The Contact-Size Reduction Facility will have been removed to its floor slab at the starting point of this EIS. This action does not require the prior issuance of the DOE Record of Decision for this EIS.
- 238-37 The Waste Packaging Area and Container Sorting and Packaging Facility as Part of Lag Storage Addition 4 were removed from Table 2-1. These facilities are located inside Lag Storage Addition 4.
- 238-38 Footnote "a" to Chapter 2, Table 2-1, of this EIS has been revised as follows: "The Interim Waste Storage Facility and pad located in WMA 7 has been RCRA clean-closed and the Old Sewage Treatment Plant in WMA 6 has been removed, these are not listed in the table because there is no remaining foundation to be removed."
- 238-39 The text in Chapter 2, Section 2.3.2.3, of this EIS acknowledges that the tanks will contain radiological and hazardous constituents. Appendix C, Section C.2.3.1, provides the radionuclide and chemical contamination inventory estimates, which are taken into consideration when developing the impacts summarized in Chapter 4.
- 238-40
- 238-41
- 238-42
- 238-43
- 238-44

***Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation***

Enclosure 1 - NYSDEC West Valley Assigned Staff DEIS Comments

Comment Number	Page Number	Comment
42	Page 2-24, Section 2.3.2.7	The third paragraph should contain information regarding the NDA cap and slurry wall that were placed at the NDA as an Interim Measure under the 3008(h) Consent Order.
43	Page 2-27, Section 2.3.2.11	Waste Management Area 11: The decision by NYSERDA to exhume the Scrap Material Landfill should be incorporated.
44	Page 2-29, Section 2.4	The "Decommissioning Activities" subsections for each alternative should include that for any regulated unit (be it an operating unit or a SWMU) all decommissioning actions are subject to State and Federal RCRA regulations. The NYSDEC RCRA staff understands the usage of "decommissioning" to encompass any act of closure or corrective action as this DEIS is also being used in support of the WVDP's Part 373/RCRA Permit Application. If this is not the case the entire DEIS will need to be revised to distinguish between these two actions. Keep in mind that NYSDEC can at any time request EPA assistance with any RCRA aspect of the site, thereby possibly requiring a NEPA EIS for RCRA actions.
45	Figures 2-6, 2-7, 2-8 and 2-9	All of these fail to include "Annual Environmental Monitoring" as an activity of the alternative for its duration or in perpetuity as may be required. This may or may not be in addition to "Long-Term Monitoring and Maintenance".
46	Page 2-37, Section 2.4.2.1	Under the first bullet, DOE fails to include that the NDA specifically due to its SWMU status, and in actuality the site as a whole, are subject to the current 3008(h) Consent Order and future Part 373/RCRA permitting and regulation by the NYSDEC. Again, the NYSDEC RCRA staff understands the usage of "decommissioning" to encompass any act of closure or corrective action as this DEIS is being used in support of the WVDP's Part 373/RCRA Permit Application. If this is not the case the entire DEIS will need to be revised to distinguish between these two actions. Keep in mind that NYSDEC can at any time request EPA assistance with any RCRA aspect of the site, thereby possibly requiring a NEPA EIS for RCRA actions. Similar situations occur within Sections 2.4.1.1, 2.4.3.1 and 2.4.4.1. • Please review each of these sections carefully and revise the text of said sections accordingly.
47	Page 2-44	The narrative for WMA-7 and WMA -8 refer to a "30-year ongoing assessment period", while there is mention of ongoing studies and analysis of data gathered during decommissioning activities there is no list of specific studies or assessments that would be conducted during this time period or how this information would be used.
48	Page 2-45, Section 2.4.3.1	The first bullet under "Evaluations to Determine the Phase 2 Approach" should include residual hazardous contamination as well as the radioactivity.
49	Page 2-45, Section 2.4.3.1	Within the second paragraph under "Evaluations to Determine the Phase 2 Approach", the intention of this alternative is to have evaluations at intervals no greater than 5 years long <u>not</u> at "approximately 5-year intervals". Additionally, NYSDEC reiterates its intent to include annual assessments for new technologies within the Part 373 permits for the sites.
50	Page 2-47, Figure 2-8	This figure should include a line for "NDA Geomembrane Replacement". Additionally the Annual Environmental Monitoring should start at Year Zero.
51	Page 2-51, Section 2.6.1.1	Any release of land should include NYSDEC since this action would be subject to our approval and release from the Part A Applications or the Part 373 Permits.
52	Page 2-57, Section 2.6.1.5	Under Footnote 3 it is an understatement to say that the estimates are conservative. It is inconceivable that DOE would ship only one railcar with waste per train. The use of this assumption gives the appearance of being disingenuous and an attempt to skew the transportation impacts presented in Table 2-3 to make sitewide removal appear impossible due to the dangers associated with transportation. For the majority of the wastes on-site, this scenario is unreasonable. NYSDEC would anticipate that most waste (e.g., contaminated soils) would have several railcars per train. • Please provide a clear explanation of DOE's intention for waste shipments.

- 238-40** The text in Chapter 2, Section 2.3.1, of this EIS has been modified to state that treated Tank 8D-4 liquids would be solidified and shipped off site for disposal. DOE acknowledges that this action is under review by NYSDEC and the Core Team.
- 238-45**
- 238-41** The text throughout this EIS has been revised to remove mention of the permeable reactive barrier.
- 238-46**
- 238-47**
- 238-42** Descriptions of any hazardous chemical contamination found at WNYNSC are located in Chapter 3, Section 3.3.2, of this EIS. The cited references in Chapter 3 contain more specific information regarding measured concentrations of contaminants. Chapter 2, Table 2-2, has been revised to clarify that the EIS starting point for WMA 3 is that the tanks are isolated with remaining contamination in a dry form. A decision has yet to be made about whether or not any other liquids would be transferred to WMA 3 for treatment. Regarding the equalization basin and tank in WMA 6, identifying them as SWMUs indicates they are subject to corrective action; therefore, footnote a of Table 2-2 has been revised to state that, "SWMUs implies that a unit is subject to corrective action." The language in Appendix C, Section C.3.1.8.1, of this EIS has been modified to reflect the language suggested by NYSDEC's comment. As such, the first sentence in this section is being changed to "Tanks T-1, T-2, T-3, and associated equipment in the Mixed Waste Storage Facility would be size reduced and disposed of at an approved offsite landfill." The language in the rest of the section remains unchanged. A footnote has been added to Table 2-2 in Chapter 2 of this EIS to reflect that the unit will be closed under the RCRA Interim Status requirements. Regarding the North Plateau Groundwater Plume, nowhere in the EIS does DOE imply that it is not subject to regulation.
- 238-48**
- 238-49**
- 238-50**
- 238-51**
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- 238-43** The text in Chapter 2, Table 2-2, has been corrected to show that the railroad spur is operable at the starting point of this EIS.
- 238-53**
- 238-54**
- 238-44** This language has been corrected in this Final EIS.
- 238-45** Chapter 2, Section 2.3.2.7, and Appendix C, Section C.2.7, of this EIS have been revised to include information regarding the upgradient barrier wall and geomembrane cover associated with the NDA.
- 238-55**
- 238-46** Chapter 2, Section 2.3.2.11, of this EIS correctly describes the Scrap Material Landfill in regards to the starting point of this EIS. The removal of the landfill is evaluated as part of the Sitewide Removal Alternative; therefore, if a decision

**Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation**

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Comment Number	Page Number	Comment
53	Page 2-60, Table 2-5	Column Three entitled "Phased Decisionmaking Alternative (Phase 1 Only)" is supposed to contain the discounted cost per avoided person-rem for Phase 1 of the alternative. The Sitewide Alternatives already give the bounding cost numbers, that information does not need to be reiterated. In order to truly compare cost, the discounted cost information for the bounding alternatives to Phase 1, this information should be calculated and presented herein.
54	Page 2-60, Section 2.6.4	Based on the NYSDEC comment above regarding the disingenuousness of the transportation impacts in section 2.6.1.5, the first bullet should be re-evaluated. Additionally, if the Latent Cancer Fatality (LCF) is less than one person for each alternative it appears that each alternative should have a maximum LCF of one person (rounding to the nearest whole number), making them essentially the same. • Please provide a clear explanation of why the numbers are not rounded to reflect a "whole" person.
55	Page 2-60, Section 2.6.4	The text of the third bullet regarding the total impacts of Phase 2, Sitewide Close-In-Place, is confusing. Since certain facilities and contamination would be removed under Phase 1, wouldn't the total impacts of Phase 2 Close-In-Place be less than, but bounded by, the Sitewide Close-in-Place Alternative?
56	Page 2-61, Section 2.7, Bullet 3	The narrative states that "Phase 1 of the Phased Decision Making Alternative allows for up to 30 years for collection and analysis of data and information..."; however the DEIS does not include any discussion on what specific studies will be performed nor does it address when or how the decision to proceed with Phase 2 will be made.

Chapter/Appendix: Chapter 3

Comment Number	Page Number	Comment
57	General	There are several areas within this chapter where the documentation referred to is anywhere from three years to 20, or even 30, years old. Most of the cited reference information appears to be five to ten years old. • Please use the most current documentation for review of and input to all impacts.
58	Page 3-7, Section 3.1.2	The second paragraph discusses the NDA being a "maintained, grassed area" then mentions installation of the NDA cap in 2008. This could be misconstrued that the cap is under a grassy area. This information should be updated.
59	Page 3-8, Section 3.2.1	It is uncertain why the references for National Grid and Niagara Mohawk, in the first sentence, are reversed. If DOE was going to provide the most current information, it would have made more sense to state that National Grid was formerly Niagara Mohawk.
60	Page 3-31, Cesium Prong, Paragraph 2	Narrative states that an offsite study has been conducted but it is unclear whether the study was outside the WVDP or the WNYSC. A better description of the location of the study should be provided.
61	Page 3-51, Section 3.6.1.1, Paragraph 1	The last sentence states that sampling was scheduled for 2007. Was this sampling completed and if so why wasn't the data included?
62	Page 3-53, Table 3-10	Table presents surface water exceeding of background but not DOE DCGs for sample points downstream of Franks Creek. The narrative however describes several other surface water sampling points which exceed both which are not displayed in a tabular format. It would be easier to interpret data if it is all displayed in a similar format.
63	Page 3-92, Section 3.11.3	Please provide an explanation of the statement "available information is insufficient for a meaningful estimate of impacts" in paragraph two.

to remove the landfill is made as part of NYSERDA's Findings Statement, the projected impacts would be available to support that decision.

- 238-47** To the extent that RCRA applies to a given facility or area, RCRA requirements would be satisfied during decommissioning of that facility or area.
- 238-48** Text associated with Chapter 2, Figures 2-6, 2-7, and 2-8, of this EIS, has been revised to acknowledge that annual environmental monitoring would take place for the duration of the alternative.
- 238-49** The RCRA status of facilities that are to be removed by the starting point of this EIS is given in Chapter 2, Table 2-1, of this EIS. The RCRA status of the facilities standing at the starting point of this EIS is given in Table 2-2. NDA structures in WMA 7 are identified as SWMUs for which Corrective Measures Studies (CMSs) are being prepared. Table note "a" for Table 2-2 states that, "SWMU implies that a unit is subject to corrective action." To further clarify that RCRA requirements will be met during decommissioning actions, a footnote has been added to the discussion of decommissioning actions in Sections 2.4.1.1, 2.4.2.1, and 2.4.3.1 to indicate that decommissioning actions will be performed in accordance with applicable Part 373/RCRA requirements. This footnote has not been added to Section 2.4.4.1 because there would be no decommissioning actions under the No Action Alternative.
- 238-50** Please see the response to Comment no. 238-2 for a discussion of the ongoing studies that would take place if the Phased Decisionmaking Alternative were selected.
- 238-51** This text has been revised and the comment no longer applies.
- 238-52** The text has been revised to reflect the revised description of the Preferred Alternative and would involve more frequent reviews than stated in the Revised Draft EIS.
- 238-53** For the Phased Decisionmaking Alternative, it is assumed that the NDA geomembrane will not be replaced during Phase 1. The SDA membrane is older, and it is assumed that it would be replaced during Phase 1. Text associated with Chapter 2, Figure 2-8, of this EIS has been revised to acknowledge that annual environmental monitoring would be conducted for the duration of the alternative.
- 238-54** A sentence has been added to Chapter 2, Section 2.6.1.1, of this EIS to indicate that release of land under all alternatives would be subject to meeting all regulatory requirements, including those promulgated by NRC, EPA, and NYSDEC.

**Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation**

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Comment Number	Page Number	Comment
64	Page 3-93, Section 3.11.3	The second full paragraph fails to mention that these hazardous chemicals are products not wastes. This is confusing for any individual who is not familiar with these regulations versus the Part 373/RCRA regulations.
65	Page 3-96, Sections 3.11.5.1 and 3.11.5.2	Please specify which of these releases contained hazardous waste and/or constituents and what chemicals were involved.
66	Page 3-101, Section 3.11.5.3	Please provide information as to which specific lines are referred to in "Underground Lines that Carried High-Activity Liquid," who the lines where installed by and when they were installed.
67	Page 3-102, Section 3.11.5.3	In "Other Underground Lines" the results of groundwater monitoring or subsurface soil samples should not be used to assume the integrity of underground lines. These are not all inclusive and may miss contamination. Lines should be integrity tested on a regular basis if they are not double walled, have some type of leak detection and/or are not in a pipe trench with or without leak detection and/or chemical resistant coatings.
68	Page 3-105, Section 3.13.1	Please provide detailed information in regards to the statement in the last paragraph on this page that "Hazardous and mixed low-level radioactive wastes are...disposed on site."
69	Page 3-105, Section 3.13.1	The first full paragraph of this page refers to the scheduled decontamination, demolition and removal of the CPC-WSA by 2010. According to discussions regarding the closure of Interim Status units at the site, the CPC-WSA was not scheduled to be closed for five to seven more years. • Please provide a current status for the closure of the unit.
70	Page 109, Table 3-20	While it is understood that waste would be generated during the Interim End State which would end in 2011 it is unclear what wastes would be generated after this time period that would not be covered by the EIS.

Chapter/Appendix: Chapter 4

Comment Number	Page Number	Comment
71	Page 4-4, Table 4-1	For the Sitewide Close-In-Place Alternative, please provide the amount of time necessary for the decay of the Cesium Prong and nonsource area of the NPGP. Additionally provide an estimate herein of when the 1,118 hectares of land would be available for release for unrestricted use.
72	Page 4-5, Section 4.1.1.2	The "Visual Resources" paragraph states that the North and South Plateau caps would be rock covered. This could inhibit replacement/repair of said caps. Has consideration been given to the RCRA regulations for repair/replacement of geomembrane layers in caps at certain intervals and have these costs been included in the long-term monitoring and maintenance costs for true cost benefit comparison?
73	Page 4-11, Table 4-3	For more accurate cost comparisons of utility use, DOE should include the total use of each utility per year of decommissioning as well as the total use. On an annual basis the utility uses for the three action alternatives are similar with Sitewide Close-in-Place having the highest utility use during its action phase. Total utility use for each utility after decommissioning should also be included. The total for each utility after decommissioning appears to be highest for the Sitewide Close-In-Place Alternative.
74	Page 4-15, Section 4.1.2.2	Does this DEIS include the utility usage that would be necessary for replacement of the North and South Plateau caps? If not, DOE should update the EIS to include this information prior to final issuance.
75	Page 4-88, Section 4.11.2	In addition to the mixed low-level radioactive waste referred to on Page 4-95, hazardous wastes would also need to be treated to meet any associated RCRA land disposal restriction treatment standards prior to disposal.

- 238-55** The transportation analysis for each alternative uses a per-railcar, one-waste-railcar-per-train basis. This approach is widely used for NEPA documents and makes use of available accident statistics (which are given on a per-railcar basis). No published literature is available that provides appropriate statistics to determine nonradiological accident risk on a per-train basis. The rail accident rate is proportional to the number of rail cars; this means that, if the number of waste railcars per train is increased, thereby increasing the risk associated with that train, the number of rail shipments decreases by the same number. When conducting decommissioning activities, DOE may ship one waste railcar per train or more than one railcar per train, depending on operational considerations at the time the waste is scheduled to be shipped. It should be noted, however, that no more than about 10 railcars could leave the site at any one time due to the length of rail spurs on site. Given that rail impacts are presented on a one-waste-railcar-per-train basis for all of the alternatives, the relative difference in impacts among alternatives can be considered. For rail transport, the nonradiological impacts for the Sitewide Removal Alternative are about 10 times greater than those for the Phased Decisionmaking Alternative and about 100 times greater than those for the Sitewide Close-In-Place Alternative. This is primarily because much more waste would be transported under the Sitewide Removal Alternative than under the other alternatives. Because the 10 fatalities for truck-only transport or 15 fatalities for rail-only transport estimated for the Sitewide Removal Alternative using this approach may be an overestimate, Appendix J, Section J.11, of this EIS has been expanded to better explain the uncertainty associated with these calculations. In addition, the following sentence has been added to Section J.6.2: "In the years of moving radioactive and hazardous materials, DOE has not had a single fatality related to the hazardous or radioactive material cargo."
- 238-56** Table 4-54 in Chapter 4 of the Revised Draft EIS presents the discounted cost per avoided person-rem for the three decommissioning alternatives and the No Action Alternative. In the case of the Phased Decisionmaking Alternative, costs cover both Phase 1 and Phase 2 and are bounded by the costs of the Sitewide Removal Alternative (if the Phase 2 decision is to remove the remaining waste and facilities) and the costs of the Close-In-Place Alternative (if the Phase 2 decision is in-place closure of the remaining waste and facilities). In this Final EIS, the phrase "Phase 1 only" has been removed from the title of the Phased Decisionmaking column of this table, which appears as Table 4-54, "Cost/Benefit Comparative Assessment."
- 238-67**
- 238-68**
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- 238-74**
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- 238-76**
- 238-77**

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Comment Number	Page Number	Comment
76	Page 4-90 to 91, Table 4-45 and Page 4-94, Table 4-47	Please provide an explanation for why the summary numbers for Packaged Waste from Site Monitoring and Maintenance or Long-Term Stewardship do not match the comparison numbers in table 4-47.
77	Page 4-92 to 93, Table 4-46	Please provide the placement for footnote "b".
78	Page 4-99, Section 4.1.12	It is inconceivable that DOE would ever ship only one railcar with waste per train. The use of this assumption appears disingenuous and as an attempt to skew the transportation impacts presented herein to make sitewide removal appear impossible due to the dangers associated with transportation.
79	Page 4-114, Table 4-53	Column Three entitled "Phased Decisionmaking Alternative (Phase 1 Only)" is supposed to contain the discounted cost per avoided person-rem for Phase 1 of the alternative. The Sitewide Alternatives already give the bounding cost numbers, that information does not need to be reiterated. In order to truly compare cost, the information for the bounding alternative to Phase 1, this information should be calculated and presented herein.
80	Page 4-115, Table 4-54	Please revisit the placement of footnotes "a" and "b" as they do not appear to be accurate. Additionally, please provide the time period for the effective annual costs for monitoring and maintenance (M&M) or long-term stewardship. As Tables 4-55 and 4-56 (footnotes b and e and footnote b, respectively) refer to 1000-year periods for dose and M&M, it would seem that 1000 years of M&M or long-term stewardship costs should be included. At the least, DOE should include the costs until "loss of institutional controls" at 100 years.
81	Page 4-143, Section 4.6.3.1	If the Phase 2 decision is to perform "sitewide removal" after up to 30 years, would that alternative then be considered the longest active phase of the alternatives? Also, please provide detailed justification for how restoring the land to its original state as opposed to placing a cap, and possibly rocks, provides a greater impact to the wetlands.
82	Page 4-143, Section 4.6.3.2	DOE fails to mention that monitoring and maintenance would need to be performed in perpetuity following the "short term...of significant onsite decommissioning activities". Again, NYSDEC stresses that close in place is not a viable option without a variance from the State and Federal RCRA regulations.
83	Page 4-144, Section 4.6.3.3	The second section of this paragraph is misleading and possibly inaccurate. Will it take the full eight years to construct the building and move the logs? How is that possible if the MPPB is to be removed within those eight years? Also the intent of the two phases is to allow for the studies to be performed almost from the beginning, not eight years later. DOE should already be trying to determine the types of studies necessary and their implementation so that this can happen as quickly as possible after the issuance of the Record of Decision.

Chapter/Appendix: Chapter 5

Comment Number	Page Number	Comment
84	Page 5-9, Section 5.2	The last sentence under " Administrative Order On Consent (RCRA 3008(h)) " should be revised to state that CMSs were required.
85	Page 5-15, Section 5.5	Within the description of " Resource Conservation....Parts 370 to 374, 376 " it should be mentioned that NYS has all the rights and authorities of the Federal regulations for which they are authorized and that NYS' regulations may be more stringent than the federal regulations. Nowhere in this text does it mention that NYS has been given the lead for all RCRA related activities at the site. At a minimum, this section should include the same level of detail as its counterpart under Section 5.2 was provided.
86	Page 5-20, Table 5-1	Be advised that the NYSDEC is working on a replacement document for TAGM 4046. All corrective action work will have to meet the soil cleanup levels in this new document. This information should be revised accordingly.

- 238-78** See the response to Comment no. 238-55 for an explanation of the approach used to calculate nonradiological accident impacts. Chapter 2, Section 2.6.4, of this EIS has been revised to provide more detail to support the conclusions about the alternatives. In this case, far more waste is transported off site under this alternative than any of the other alternatives. Regarding the comment about latent cancer fatalities (LCFs), an LCF of 0.1 represents a risk of developing a latent cancer fatality, and a policy of rounding to the nearest whole number would reduce the ability to communicate differences in risks among alternatives. For example, LCFs of 0.1 and 0.00001 both could be rounded to 1, but to do so would be misleading. An LCF of 0.1 indicates a risk of 1 cancer fatality in a population of 10, while an LCF of 0.00001 indicates a risk of 1 cancer fatality in a population of 100,000. Therefore, the two calculated risks are not equivalent; the second risk is in fact ten thousand times lower than the first.
- 238-79**
- 238-80**
- 238-56
cont'd**
- 238-58** The text in Chapter 2, Section 2.6.4, of this EIS was revised to state that impacts would be similar to those for the Sitewide Close-In-Place Alternative.
- 238-81**
- 238-59** Please see the response to Comment no. 238-2 for a discussion of the ongoing studies that would take place if the Phased Decisionmaking Alternative were selected.
- 238-82**
- 238-60** DOE used the most current and relevant reference documentation available. In some instances, especially for the description of the geology and seismology, older reports provided the most comprehensive description possible. Geologic characterization activities have occurred over many years, and the information that was obtained over time typically builds on, but does not replace, what was previously developed. If more recent information was available that replaced information from older documentation, the more recent information was cited.
- 238-84**
- 238-61** Chapter 3, Section 3.1.2, of this EIS has been revised to state that both the NDA and SDA have a geomembrane cover and are sloped to provide drainage. The text stating that the NDA is a maintained, grassed area has been removed.
- 238-85**
- 238-62** The text in Chapter 3, Section 3.2.1, of this Final EIS has been modified.
- 238-86**
- 238-63** The cited paragraph was revised in this Final EIS to state that the study conducted between 1993 and 1995 was performed in an area that is both on and off the WNYNSC site.
- 238-87**
- 238-64** Sampling data collected and analyzed in 2008 were not available for the Revised Draft EIS. The *2008 Annual Site Environmental Report* was issued after the

***Commentor No. 238 (cont'd): Edward Dassatti,
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Chapter/Appendix: Chapter 8

	Page Number	Comment
87	General	DOE may want to consider prefacing this chapter to state that the definitions used herein are not consistent with the definitions within the Part 373/RCRA regulations due to need to show impacts and NOT compliance.
88	General	For any definition that references the federal RCRA regulations, DOE should include the reference to the State regulations that parallels said reference.
89	Page 8-3	The definition of "characteristic waste" should include a reference to the state regulations (6 NYCRR 371.3) that parallels the reference to the federal regulations.
90	Page 8-4	The definitions relating to disposal, disposal area and disposal facility are extremely generic and do not appear to relate to hazardous waste management under either the state or federal RCRA program. Again, DOE could alleviate public and regulator's concerns by prefacing the chapter as mentioned in the general comment above.
91	Page 8-5	In the definition of an EIS the citations to Environmental Conservation Law are not correct. They should read "Section 3-0301(1)(b), 3-0301(2)(m) and ..."
92	Page 8-6	"Hazardous constituent" is more than what is referred to under OSHA. It is recommended that the word "waste" be added and that the definition for "hazardous waste constituent" found under 6 NYCRR 370.2(b)(87) be incorporated.
93	Page 8-6	Be advised that unlike the definition of "Hazardous waste" in the federal regulations, New York State regulates certain PCBs as hazardous wastes.
94	Page 8-8	As regards DOE's definition of "interim status facility (under RCRA)". <ul style="list-style-type: none">• First, neither "hazardous waste management facility" nor "treatment, storage or disposal facility" are defined elsewhere.• Second, there needs to be references to NYS regulations.• Third, the Part A notification allows a facility to continue operation in accordance with Interim Status standards under BOTH the RCRA and the NYS regulations, it is NOT considered a permit.• Lastly, the facility must either close a facility under interim status or show that they filed protectively; they cannot just "withdraw" their interim status.
95	Page 8-9	The definition of "mixed low-level radioactive waste" should include reference to NYS regulations as well. Unlike the federal regulations, New York State regulates certain PCBs as hazardous wastes.
96	Page 8-10	The definition of "polychlorinated biphenyls" should note that certain PCBs are hazardous waste in NYS and should reference the definition of hazardous waste in 6NYCRR 371.3.
97	Page 8-13	The definition of "solid waste" should include reference to NYS regulations as well.
98	Page 8-14	The definitions relating to "storage" and "storage facility" are extremely generic as relates to hazardous waste management under either the state or federal program. Again, DOE could alleviate public and regulator concerns by prefacing the chapter as mentioned in the general comment above. At a minimum, the word "mixed" should be used in place of "radioactive". "Storage" is specifically defined and does not distinguish between greater than and less than 90 days in NYS regulations. This distinction determines whether or not a facility needs a permit or interim status.
99	Page 8-14	Suggest that the definition of State Environmental Quality Review Act be revised to read: "A law promulgated ... that requires that all state and local agencies determine whether the actions they directly undertake, fund or approve may have a significant impact on the environment and, if it is determined that the action may have a significant adverse impact, prepare or require the preparation an environmental impact statement."

Revised Draft EIS was completed. Chapter 3, Section 3.6.1.1, of this Final EIS has been updated to reflect the 2008 data contained in the *2008 Annual Site Environmental Report*.

- 238-65** The reason that Table 3-10 is highlighted in Chapter 3, Section 3.6.1.1, of this EIS is that it addresses the main drainage point of the Project Premises. While all of the information in the section is relevant, the radionuclide concentrations measured at the main drainage point are the most pertinent when compared with the background radiation ranges and DOE Derived Concentration Guides.
- 238-66** The text of Chapter 3, Section 3.11.3, of this EIS was modified to state: "... available individual monitoring information is insufficient for a meaningful estimate of individual worker impacts." As the text after this phrase indicates, the safety strategy adopted by DOE and the Occupational Safety and Health Administration (OSHA) to protect workers from the impacts of hazardous chemicals is to keep the workplace as free as possible from recognized hazards that either cause or are likely to cause illness or physical harm. Impacts to workers are therefore expected to be low. Workers are not routinely monitored for exposure to chemicals unless a problem is known to exist. Unlike radiological hazards, simple technologies are not generally available for routine monitoring of workers for exposure to most hazardous chemicals. Therefore, impacts to specific individuals cannot be calculated or otherwise substantiated, but are expected to be low because routine exposures would meet DOE and OSHA standards and guidelines.
- 238-67** The fourth paragraph of Chapter 3, Section 3.11.3, of this EIS was modified to refer to temporary storage of certain hazardous process chemicals.
- 238-68** The text was modified to refer back to Chapter 3, Section 3.11.5.1, of this EIS, which refers to a spill from Line 7P-170-2-C and failure of Line 7P-160. Information regarding who installed the lines and when they were installed is not required to conduct the impact analysis.
- Many or most of the leaks had both radioactive and hazardous constituents, but the principal environmental threat is the radioactive component. Since most of the spills involved liquids, they were often nitric acid-based, but could have other chemical parameters. There are more details on each of the specific spills in the reports referenced for each spill. Details of each spill, including the radioactive and chemical constituents, were used in developing the impact assessments.

**Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation**

Enclosure 1 - NYSDEC West Valley Assigned Staff DEIS Comments

Chapter/Appendix: Appendix C

Comment Number	Page Number	Comment
100	General	While the document has made tremendous changes to include the necessary hazardous waste Part 373/RCRA information and regulations, there are still areas that are lacking. These include but are not limited to: failure to include whether or not there is hazardous waste/constituents contamination in all of the facilities/units listed under each of the WMA descriptions; failure to include the descriptions where a unit is subject to RCRA closure or CA regulation (e.g., where CMSs are required, NDA "decommissioning" is also subject to CA requirements); failure to include in their descriptions that each of the alternatives (e.g., Close-in-place, Phased Decisionmaking) are also subject to Part 373/RCRA when actions are taken; failure to provide chemical concentrations (in ppm or mg/kg) as opposed a total inventory (in kg).
101	Page C-1, Section C.2.1	The second paragraph mentions that the Contact-Size Reduction Facility (CSRF) will have been removed to grade at the starting point of the EIS. Is this accurate? The NYSDEC understood that the CSRF was part of the Main Plant Process Building (MPPB) and its Comprehensive Closure Plan. It was understood that as such the CSRF could not be removed until such time as a Record of Decision (ROD) was issued for the DEIS. • Please clarify this misunderstanding and assure that the DEIS contains accurate information.
102	Page C-14, Section C.2.3	The fourth sentence of the introductory paragraph states that Tanks 8D-1 and 8D-2 will be dry at the "starting point" of the EIS. The "starting point" is expected to be accomplished by 2011. • Please explain how this is possible? The NYSDEC's understanding of this system is that once installed it would take a several years (approximately 3 or 4) to dry the residuals that already reside in the tanks. This does not seem possible since 1) the system will not be installed until early 2010 and 2) DOE has stated within the Liquid Waste Management Plan that they would like to transfer additional liquids from the Main Plant Process Building into these tanks. Please address this situation within the references of this appendix as well as the other chapters or appendices that reference the Tank Drying System.
103	Page C-49, Section C.3.1.1.1	Relocation of the High-Level Radioactive Waste Canisters: If there is a defined lifespan to the commercial dry cask storage systems under consideration, the DEIS should acknowledge this and describe how the casks would be replaced, tested for approval for continued use, etc. At present there are no obvious plans in place to address this need, which has arisen since release of the DEIS due to the withdrawal of Yucca Mountain from consideration for permanent disposal of HLRW.
104	Page C-55, Section C.3.1.1.8 and Page C-57, Section C.3.1.1.9	The fifth and sixth paragraphs under "Removal of Contaminated Soil and Groundwater" and the second paragraph under Section C.3.1.1.9 make reference to reuse of the soils if they are less than the DCGLs for unrestricted release. DOE would also have to demonstrate to NYSDEC that these soils do not contain hazardous waste/constituent contamination prior to reuse.
105	Page C-57, Section C.3.1.1.9	The first paragraph states "Confirmatory sampling for constituents of concern would be performed, and remedial actions would be based on the results." This sentence fails to take into account whether these confirmatory samples are for Solid Waste Management Units or for Interim Status Operating Units. The requirements for soil cleanup objectives (i.e., chemical concentrations remaining) vary depending on the unit's status. DOE has failed to make this distinction clear for both the regulator and the public or to give it due justice.
106	Page C-79, Section C.3.1.8.1	Under the Mixed Waste Conditional Exemption regulation (6 NYCRR Part 374-1.9), the Mixed Waste Storage Facility is no longer subject to Interim Status closure. Even so, NYSERDA has expressed their desire to close this unit under the RCRA Interim Status requirements. Pending further determination, the unit should be listed as a SWMU.
107	Page C-89, Table C-28 and Section C.3.1.13.2	While the NYSDEC has not required action on the NPGP, it should not be construed that the NYSDEC believes that the unit is not subject to regulation. We are currently in the process of reviewing the results of the NPGP RCRA Characterization.

- 238-101** 238-69 Operational practices such as integrity-testing or use of leak detection equipment for other underground tanks (i.e., tanks not associated with management of high-level radioactive waste) may or may not have been performed; however, if these practices were conducted, the resulting data were not available for this analysis. Given the lack of operational data, the integrity of these underground tanks must be inferred based on the factors listed in Chapter 3, Section 3.11.5.3, of this EIS.
- 238-102** 238-70 Please note that the statement is, "Hazardous and mixed low-level radioactive wastes are packaged, treated (neutralized), and disposed of on site; packaged and treated on site and disposed of off site; or packaged on site and treated and disposed of off site." Hazardous and mixed low-level radioactive wastes treated and disposed of on site include various aqueous liquid wastes that can be treated by the Low-Level Radioactive Waste Facility and discharged through the associated permitted outfall. These waste streams are described in the WNYNSC Site Treatment Plan.
- 238-103** 238-71 The Chemical Process Cell Waste Storage Area (CPC-WSA) was addressed in the *Environmental Assessment for the Decontamination, Demolition, and Removal of Certain Facilities at the West Valley Demonstration Project*, DOE/EA-1552. Page 7 of this Environmental Assessment (EA) states that the 36 facilities listed in the EA (including the CPC-WSA) would be demolished and removed over a 4-year period ending on December 31, 2010. For the purposes of the analysis, the CPC-WSA would be closed at the starting point of this EIS.
- 238-104** 238-72 Table 3-20 shows the estimated waste volumes that would not be covered by this EIS. Wastes generated during Interim End State activities are covered by the *Environmental Assessment for the Decontamination, Demolition, and Removal of Certain Facilities at the West Valley Demonstration Project*, DOE/EA-1552; and the *West Valley Demonstration Project Waste Management Environmental Impact Statement*, DOE/EIS-0337. A portion of these waste volumes may be generated after 2011 if Interim End State activities slip beyond 2011. Wastes generated after the completion of the Interim End State activities are covered by the impacts analyses for the alternatives in this EIS.
- 238-105** 238-73 Chapter 4, Table 4-1, in this EIS was corrected to eliminate reference to decay of the nonsource area of the North Plateau Groundwater Plume, which would be retained under the Sitewide Close-In-Place Alternative and would not be included with the projected 1,118 hectares of released land. No estimate is made in the Final EIS for decay of radioactive contamination in either the North Plateau Groundwater Plume or the Cesium Prong. Assuming the Sitewide Close-In-Place

***Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation***

Enclosure 1 - NYSDEC West Valley Assigned Staff DEIS Comments

Comment Number	Page Number	Comment
108	Page C-91, Section C.3.2	While DOE does mention that certain buildings will be removed to grade to eliminate maintenance cost, they fail to mention that monitoring and maintenance would need to be performed in perpetuity under a Part 373/RCRA Post-Closure Permit. Again, NYSDEC stresses that close in place is not a viable option without a variance from the State and Federal RCRA regulations.
109	Page C-130, Section C.4.1	Interim Storage Facility: An updated description of the DOE plan to use currently available commercially dry cask storage technology to store the vitrified logs on-site should be included. The fact that these systems are designed to withstand high forces from seismic activity and will be designed to withstand anticipated atmospheric or erosional impacts should be included.

Chapter/Appendix: Appendix E

Comment Number	Page Number	Comment
110	Page E-77, Section E.4.2.1	Historical Conditions and Phased Decisionmaking Alternative – The discussion of how the NDA facility is modeled, with the interim measures installed in 2008, is unclear and limited. Modeling for the ongoing assessment period, should it occur, must take into account the existing cap and slurry wall; how this is taken into account, especially with the offered recharge estimates, is not clear. Further data collection and updating of the model should continue.

Chapter/Appendix: Appendix F

Comment Number	Page Number	Comment
111	General	In light of the very recent occurrences of erosional events, both large and small scale, in the vicinity of and at the site (Route 219 erosion/slumping on Cattaraugus Creek, Erdman Brook knickpoint and Frank's Creek knickpoint advancement, respectively, Buttermilk Creek slide reactivation), how is the modeling of erosion at the site to be updated/expanded upon, during the ongoing assessment period? It would appear the real-time events of interest and consequence must be included, and a process in place, to allow for any performance assessment to be accurate, to allow for a decision to be made that is representative. Focus for continued erosion monitoring should not be simply data necessary for model truthing and calibration, but how real-time events are affecting the facilities in question, and whether decision-making must include a long-term model (for anything other than decommissioning performance assessment).
112	Page F-6, Section F.2	Summary of Site Erosion Measurements “Observation of other geomorphic processes, including meandering and knickpoint advance, provides perspective but no additional quantitative information for erosion rate estimates.” • Please clarify this statement, especially in light of recent (2009) erosional events and observations (e.g. Erdman Brook knickpoint advancement, Buttermilk Creek slide reactivation).
113	Page F-8, Figure F-5 and Page F-9, Table F-1	North and South Plateau Gully Locations – These figures/tables need to be updated to show recent changes in the knickpoint location along Erdman Brook, relative to the V-to-U-shaped valley transition.
114	Page F-53, F.3.2.5	Calibration: Discussion and Interpretation – “It is also likely that gully extension in this environment is limited by vegetation growth, which can effectively impose a large erosion threshold on the landscape in hollows and ephemeral channels.” This statement needs further explanation/exploration in light of rapid advancement of knickpoints in the vicinity of the SDA along Erdman Brook. These “small perturbations” are of importance for understanding actual impacts to the site in the near-term.

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Alternative is selected for implementation, the projected timing for decay of radioactive contamination in the affected lands of the Cesium Prong to a point where these lands would be eligible for release would depend on the decision made on the allowable contamination levels for release (e.g., DCGLs). This decision would be made through development of an approved *Phase I Decommissioning Plan*. Because levels of contamination in the Cesium Prong vary spatially and with depth, the timing for contamination decay and land release in particular portions of the Cesium Prong could also vary. Additional site investigation could be needed to more precisely define contamination levels and variations.

The conceptual design for the engineered caps for the Sitewide Close-In-Place Alternative is considered to be representative of conservative designs that were developed consistent with NRC guidance, which addresses a performance period of 1,000 years. NRC guidance was followed for this EIS because the radionuclide inventory (including long-lived radionuclides) was considered to represent the major risk. (Note that the results of the long-term performance assessment in Chapter 4, Section 4.1.10, of this EIS show that risks from possible release and transport of radionuclides from the WMAs are much larger than those from possible release and transport of hazardous materials.) The projected costs and other impacts associated with long-term stewardship under the Sitewide Close-In-Place Alternative include an annual cap maintenance program that assumes annual replacement of 3 percent of the rocks covering the caps (or 100 percent replacement in 30 years). This assumption is believed to be both representative of the types of maintenance activities that may be required over the long term and reasonable, considering the conceptual nature of the cap design. In the event that the Sitewide Close-In-Place Alternative is selected for implementation, DOE would refine the design of the engineered caps as needed to fully accommodate all requirements as they are determined to be applicable.

The average utility use during decommissioning was added to the Chapter 4, Table 4-3, of this EIS. In this table, utility use after decommissioning is presented for each alternative as an annual value. The text for Chapter 4, Section 4.1.2, includes information for each alternative about the time frames for post-decommissioning long-term stewardship or monitoring and maintenance.

As stated in the response to Comment no. 238-74, the projected utility use and other impacts associated with long-term stewardship under the Sitewide Close-In-Place Alternative account for an annual cap maintenance program that assumes annual replacement of 3 percent of the rocks covering the caps (or 100 percent replacement

***Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation***

Enclosure 1 - NYSDEC West Valley Assigned Staff DEIS Comments

Chapter/Appendix: Appendix J

Comment Number	Page Number	Comment
115	General	This appendix fails to provide any information regarding the risks of transporting non-radiological waste (i.e., hazardous waste) or a justification for their exclusion.
116	Page J-10, Section J.4.2	<p>It is inconceivable that DOE would ever ship only one railcar with waste per train. The use of this assumption appears disingenuous and as an attempt to skew the transportation impacts presented herein to make sitewide removal appear impossible due to the dangers associated with transportation. While it is recognized that the DEIS does state that the risk per train would increase proportionally based on the number of cars/train, the narrative and subsequent tables are misleading as they give the appearance of only one car/train being transported. It is understood that there will be instances where a single car will be transported per train due to radiological considerations and shipping regulations, but it is expected that the majority of the waste, particularly the contaminated soils, may be transported in trains containing dozens of railcars.</p> <ul style="list-style-type: none"> • Please provide a clear explanation of DOE's intention for waste shipments.

Chapter/Appendix: Appendix L

Comment Number	Page Number	Comment
117	Page L-1, First Bullet	In 1978 the State Industrial Hazardous Waste Management Act established the NYS hazardous waste management program by providing regulatory authority to control the transfer, storage and disposal of hazardous waste.
118	Page L-2, Section L.1	Under paragraph two, in-place closure (management) is not typically allowed for container and/or tank storage and/or treatment units. It is usually reserved for land disposal units.

Chapter/Appendix: Appendix M

Comment Number	Page Number	Comment
119	Page M-3, Section M.2.1	Floodplains – In light of recent storm events (August 2009), perhaps reaching the 100-year flood level, and subsequent observed storm damage in the vicinity of the site (i.e. Fox Valley Road washout), this section should be updated.
120	Page M-3, Section M.2.1. Paragraph 4	"The flood inundation area for the 100-year storm (see Figure M-4) show that no existing facilities are in the 100-year floodplain." Figure M-4 does not include the water reservoirs and dams, which were impacted by August 2009 storms. This discussion and Figure should be updated to include the southern facilities.

in 30 years). This assumption is believed to be both representative of the types of maintenance activities that may be required over the long term and reasonable, considering the conceptual nature of the cap design.

238-116
238-77 The third paragraph of Chapter 4, Section 4.1.11.2, of this EIS states that hazardous waste would be shipped off site to permitted commercial recycling, treatment, and disposal facilities. A sentence was added to indicate that treatment would be performed before disposal to meet RCRA land disposal restriction standards.

**238-55
cont'd**
238-78 The waste volumes listed in Chapter 4, Tables 4-45 and 4-47 (now Tables 4-46 and 4-48) are consistent at the bottom line. As stated in both tables, the indicated totals may not add due to rounding.

238-79 The footnote citation was corrected for Chapter 4, Table 4-46 (now Table 4-47), of this EIS.

238-117
238-80 As stated in the response to Comment no. 238-55, the transportation analysis for each alternative uses a per-railcar, one-waste-railcar-per-train basis. This approach is widely used in NEPA documents and makes use of available accident statistics (which are given on a per-railcar basis). No published literature is available that provides appropriate statistics to determine nonradiological accident risk on a per-train basis. The rail accident rate is proportional to the number of rail cars; this means that, if the number of waste railcars per train is increased, thereby increasing the risk associated with that train, the number of rail shipments decreases by the same number. Thus, the overall risk of transporting the waste for the alternative would not change.

238-118
238-119
238-120 Given that rail impacts are presented on a one-waste-railcar-per-train basis for all the alternatives, the relative difference in impacts among alternatives can be considered. For rail transport, the nonradiological impacts for the Sitewide Removal Alternative are about 10 times greater than those for the Phased Decisionmaking Alternative and about 100 times greater than those for the Sitewide Close-In-Place Alternative. This is primarily because much more waste would be transported under the Sitewide Removal Alternative than under the other alternatives. Because the 10 fatalities for truck-only transport or 15 fatalities for rail-only transport estimated for the Sitewide Removal Alternative using this approach may be an overestimate, Appendix J, Section J.11, of this EIS has been expanded to better explain the uncertainty associated with these calculations. In addition, the following sentence has been added to Section J.6.2: "In the years of

***Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation***

Enclosure 2

**NYSDEC Non West Valley Assigned Staff Comments on the
Revised Draft Environmental Impact Statement for
Decommissioning and/or Long-Term Stewardship at the
West Valley Demonstration Project and
Western New York Nuclear Service Center**

NOTE: For any Chapters/Appendices not specifically included below, the Department has no comments.

Book: General Comments

- 6NYCRR Part 750, State Pollutant Discharge Elimination System Permits, Subpart 2.11 outlines Closure Requirements for Disposal System. These requirements shall be complied with for closure of any disposal system

Book: A Summary and Guide for Stakeholders

- Inside of Front Cover: "Cathern" Bohan should be Catherine.
- Cover Sheet, *Location*: West Valley is a mailing zip code and an unincorporated hamlet; the location is the Town of Ashford.
- Page 9, bullet #2: Should some type of handling facility be left in place so that emergencies can be dealt with quickly and effectively? Didn't understand this.
- Page 9, bullet #5: Why is one called a wall and the other a barrier? Are there functional differences that are described later?
- Page 9, bullet #5: Is there the potential for these wall/barriers to be removed in the future as technology advances? Can there be a catastrophic failure that would require action in real time and present the need for handling facilities that have already been removed?
- Page 9, bullet #6: What is the percentage? Why is there a differentiation between non-defense and defense waste? Are there different regulations determining how they are to be handled? Are they the same substances? Are they processed the same way to the same end result?
- Page 12, General Comment: Has there been a review of the failure to come to agreement on cleanup responsibility of the plume and the resultant expansion of the plume? There should be a discussion about what steps will be taken to avert such a circumstance in the future.
- Page 13, bullet #1: What is orphan waste, its composition and the reason that it is called that?

moving radioactive and hazardous materials, DOE has not had a single fatality related to the hazardous or radioactive material cargo."

- 238-81** Chapter 4, Table 4-54 and its footnotes, were revised in this Final EIS to reflect a range in possible costs for Greater-Than-Class C waste disposal and a range in possible real discount rates. Monitoring and maintenance or long-term term stewardship costs for the present value analysis for this table were analyzed over a period of 100 years.
- 238-82** The first sentence of Chapter 4, Section 4.6.3.1, of this EIS has been edited. The projected impacts to wetlands as part of implementation of the Sitewide Removal Alternative are discussed in Section 4.1.6.1, and the text in Section 4.6.3.1 has been revised to refer the reader to that section.
- 238-83** Chapter 4, Section 4.6.3.2, of this EIS has been revised to note the implementation of a long-term stewardship program under this alternative.
- 238-84** The text in Chapter 4, Section 4.6.3.3, of this EIS has been edited for consistency with the description of the Phased Decisionmaking Alternative in Chapter 2, Section 2.4.3.
- 238-85** This text in Chapter 5, Section 5.2, of this EIS states that, "The Consent Order also requires Conservative Measures Studies to be performed, if necessary, to evaluate selection of remedial alternatives for some of the SWMUs at WNYNSC."
- 238-86** EPA, not NYSDEC, has the lead with respect to RCRA 3008(h) activities. The text in Chapter 5, Section 5.5, of this EIS has not been changed.
- 238-87** No change to this EIS is necessary. The agencies would comply with the standards that are applicable at the time that the actions are undertaken.
- 238-88** DOE and NYSERDA note the commentor's statement regarding Chapter 8 of this EIS. Chapter 8 is provided as an aid to help the reader understand the terms as they are used in this EIS.
- 238-89** DOE and NYSERDA note the commentor's statement regarding Chapter 8 of this EIS. Chapter 8 is provided as an aid to help the reader understand the terms as they are used in this EIS. References to New York State Regulations have been added where appropriate.

***Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation***

<p>Enclosure 2 - NYSDEC Non West Valley Assigned Staff DEIS Comments</p> <ul style="list-style-type: none">• Page 13, bullet #2: There should be a discussion somewhere in the document as to the result of failure to accept responsibility for the plume and its expansion due to that failure to come to agreement.• Page 14, Table 1, Row: NRC-licensed Disposal Area (NDA), Column: Sitewide Close-In-Place – If this is done, how hard would it be to remove if a decision is made later to remove it?• Page 14, Table 1, Footnote ^a: Is the restrictive time frame given in the document?• Page 18, Socioeconomics, paragraph 1: It depends on the number of man hours needed and the pay grades of those workers needed, not necessarily the duration of the work.• Page 18, Socioeconomics, paragraph 2: What happens if it is determined that the present day acceptable levels of contamination are discovered to be too high?• Page 18, Socioeconomics, paragraph 2: Is it reasonable to say that there would be no need for anyone? Is it possible that there might still be a need to do some minimal monitoring no matter what?• Page 18, Socioeconomics, paragraph 3: How far into the future does this hold? At some point there is going to be a change. Is the reviewer missing the point that the EIS is only looking a certain distance into the future?• Page 20, Waste Management, paragraph 2: Where does orphan, defense and non-defense waste fit into the list? Should there be a matrix showing relationships?• Page 20, Waste Management, paragraph 5: Is this the smallest volume of the alternatives? If so, just say it.• Page 20, General Disposal Options orange graphic, last paragraph: Should it say with regulations existing at the time of disposal or most restrictive?• Page 27, Long-term Impacts, last word: ("later") – Later than what? Aren't there impacts beyond peak annual dose? When is the predicted peak annual dose?• Page 28, The Sitewide Close-In-Place Alternative: With the failure of institutional controls, are there problems with small doses to very large populations through contamination of Erie County public water supplies which get water from Lake Erie?• Page 30, bullet #1: Orphan waste?• Page 30, bullet #2: But might ultimately have the most risk of contaminating and affecting the most land/water and people.• Page 31, bullet #1, end of line 3: What does "source terms" mean?	<p>238-90 DOE and NYSERDA note the commentor's statement. The definition of "characteristic waste" has been revised to include reference to 6 New York Code of Rules and Regulations (NYCRR) section 371.3.</p> <p>238-91 DOE and NYSERDA note the commentor's statement regarding Chapter 8 of this EIS. Chapter 8 is provided as an aid to help the reader understand the terms as they are used in this EIS.</p> <p>238-92 DOE and NYSERDA note the commentor's statement regarding the references to the Environmental Conservation Law 3-0301 subsections. The Final EIS has been revised to reflect the change from uppercase notation to lowercase notation.</p> <p>238-93 DOE and NYSERDA note the commentor's statement regarding Chapter 8 of this EIS. The definition for "hazardous constituent" references 40 CFR Part 261, Appendix VII and VIII, not OSHA. The definition has been revised to include reference to New York State hazardous waste management regulations.</p> <p>238-94 DOE and NYSERDA note the commentor's statement. The "hazardous constituent" definition has been revised to add that "hazardous waste constituent" means a constituent under state regulation 6 NYCRR that caused the New York State commissioner to list the hazardous waste in section 371.4 of this Title, or a constituent listed in section 371.3(e). This EIS uses the term "hazardous constituent" to encompass both the EPA and New York State definitions.</p> <p>238-95 DOE and NYSERDA note the commentor's statement regarding the wording associated with the "permit" of the interim status and "withdrawal" of the interim status. The interim status facility definition (under RCRA) has been revised to state, "...These facilities have been issued an interim status and are temporarily allowed to operate..."; in addition, the end of definition has been revised to state, "...until certification of final closure or, if the facility is subject to post-closure requirements, until post-closure responsibilities are fulfilled," to be more consistent with 40 CFR 265.1 and 6 NYCRR 370.</p> <p>238-96 DOE and NYSERDA note the commentor's statement. The definition for "mixed low-level waste" has been revised to include the New York State regulations.</p> <p>238-97 DOE and NYSERDA note the commentor's statement. The definition for PCBs (polychlorinated biphenyls) has been revised to add the statement: "Certain polychlorinated biphenyls are designated as hazardous waste according to 6 NYCRR 371.3."</p>
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***Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation***

Enclosure 2 - NYSDEC Non West Valley Assigned Staff DEIS Comments

- Page 31, bullet #1, starting on line 9: What is trying to be said here?
- Page 33, Human health: Our understanding and research in the future may alter how specific levels of exposure are viewed. Is this uncertainty considered? Is not considering decay rates enough? Typically, scientific study has indicated that acceptable levels yesterday are too high today.
- Page 34, Long-term human health: Should changes to risks due to increased knowledge of the effects of exposures or the discovered increased risk from "combinations of contaminants" be included?
- Page 34, photo: Include the purpose of the pipes in the photo description.
- Page 40, Appendix E: What does "near-field flow" mean?
- Page 40, Appendix H: Change "assessment results" to "assessment model results".
- Page 47, cesium: Is it still the most electropositive element known? If so, say it.
- Page 47, collective dose: So if you were exposed to things from different sources, the information wouldn't specify the sum total of all exposures and the total dose wouldn't be described anywhere?
- **Page 47: Should there be a description for defense waste (and/or non-defense waste)? Are both types of waste at West Valley? Are they treated differently in procedure, processing or degree of processing based upon their origin, although they are the same contaminant?
- Page 48, hydrofracture: In western New York hydrofracturing is associated with development of oil and natural gas wells.
- Page 48: Should there be a description for non-defense waste (and/or defense waste)? (See comment** above.)
- Page 48, permeability: Add "or gasses" after "The rate at which liquids . . ." Also, should this include contaminants that do not dissolve in water?

Book: *Chapter 1: Introduction and Purpose and Need for Agency Action*

- Page 1-1 to 1-2, last line on pg. 1-1: "The SDA received waste from offsite locations..." Was it the same type of waste? Commercial? Primary waste or waste generated by cleanup operations or both?

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- 238-98** DOE and NYSERDA note the commentor's statement. A reference to 6 NYCRR 360 has been added to the definition of "solid waste."
- 238-99** DOE and NYSERDA note the commentor's statement. Chapter 8 is provided as an aid to help the reader understand the terms as they are used in this EIS.
- 238-100** DOE and NYSERDA note the commentor's statement. The definition for the "State Environmental Quality Review Act" in Chapter 8 has been revised to state, "A law promulgated by the State of New York, and prescribed by 6 New York Code of Rules and Regulations (NYCRR) Part 617 that requires that all state and local agencies determine whether the actions they directly undertake, fund or approve may have a significant impact on the environment and, if it is determined that the action may have a significant adverse impact, prepare or require the preparation an environmental impact statement," as indicated in 6 NYCRR 671.1(c).
- 238-101** Text has been added to Chapter 2, Section 2.3.2, of this EIS stating that, "Any radiological or hazardous chemical contamination that is known or assumed to be present is noted in each description of a WMA." Tables 2-1 and 2-2 and associated table notes provide an assumption for each WMA if radiological or hazardous contamination is present, as well as notes if a facility is subject to RCRA closure or Corrective Action regulation. In addition, a footnote has been added to Sections 2.4.1.1, 2.4.2.1, and 2.4.3.1 stating, "Decommissioning actions would be performed in accordance with applicable Part 373/RCRA requirements." A total inventory of chemical contaminants in kilograms is required for the impact analysis. Chemical concentrations are not used in the impact analysis and, therefore, are not included. Chapter 3 and Appendix C of this EIS further describe radiological and hazardous contamination, whether measured or assumed.
- 238-102** As used in the second paragraph of Appendix C, Section C.2.1, of this EIS, "removed to grade" is taken to mean the same thing as "removed to floor slab." The Contact-Size Reduction Facility will have been removed to its floor slab by the starting point of this EIS. This action does not require the prior issuance of the DOE Record of Decision and NYSERDA Findings Statement for this EIS.
- 238-103** Chapter 2, Section 2.3.1, of this EIS was revised to state that further drying of the tanks is not expected to be completed until approximately 2015, by which time the Interim End State for the tanks will have been achieved. Following completion of vitrification operations, the underground storage tanks were emptied to the maximum extent practical. As a result of tank flushing operations, most of the remaining contamination is solid or fixed. DOE is installing a tank and vault drying

***Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation***

Enclosure 2 - NYSDEC Non West Valley Assigned Staff DEIS Comments

- Page 1-10, footnote 1, 1st sentence: "SEQR specifies that the assessment of environmental impacts focuses on the growth-inducing aspects of a Proposed Action." SEQR does not focus on growth-inducing aspects of a proposal.
- Page 1-15, Section 1.6.11, last sentence: *What does "Quality Services" mean?*
- Page 1-16, Section 1.7.2, 4th sentence: "A formal public hearing was conducted in three meetings on August 6, 1996, in West Valley, New York, to receive oral comments." West Valley is an un-incorporated hamlet which is shown on some maps. The project is in the town of Ashford.
- Page 1-18, 5th bullet: Relationship between DOE and NYSERDA. Why can't disagreements and responsibility be a topic for discussion, especially if disagreement causes delay and results in such things as the migration of the plume because there was a disagreement about responsibility?

Book: *Chapter 2*

- Page 2-1, Section 2.1 Introduction stated that "The Phased Decisionmaking Alternative (The Preferred Alternative), under which there would be an initial (Phase 1) 8-year period of removal actions for all facilities except.....and Construction and Demolition Debris Landfill." It should be pointed out that stormwater discharges from construction activity should follow requirements outlined in the most recent version of the "General Permit for Stormwater Discharges from Construction Activity." Current version of this General Permit No. is GP-0-08-001. This is also applied to Page 2-46, Section 2.4.3.2 New Construction and any other section related to this issue.

Under this Section, it is further stated that "During a period of up to 30 years, DOE and NYSERDA would conduct a variety of activities intended to expand the information available to support later additional decommissioning decision making (Phase 2) for those facilities and areas not address in Phase 1." It is not clear whether within 30 years, the decommissioning for those facilities and area not addressed Phase 1 would be completed or not. If not, what is the proposed schedule for completion of decommissioning. Page 2-47, Figure 2-8 extends to a period of 70 years, but no activities shown beyond 30 years.

- Page 2-2, Section 2.1: HLW or HLRW - What about $\frac{1}{2}$ lives of these substances? What is the relationship to transuranic wastes?

1st paragraph: "Such term" - Shouldn't it be "such terms include"

LLRW - Are the criteria for classification given somewhere in terms of $\frac{1}{2}$ life, concentration or some other qualifier?

Greater than class C - Is it possible to give concentration limits in this document?

system to solidify the moisture remaining in the tanks. The tank and vault drying operations are being conducted as part of achieving the interim end state, which is the authorized starting point for the analysis in this EIS.

DOE has not made a final decision on whether to transfer liquids from the Main Plant Process Building to WMA 3, but will communicate with NYSDEC as plans are developed. None of the options being considered by DOE would result in increases in the inventory of those radionuclides that dominate the long-term performance assessment results in this EIS.

238-154 Wording has been added to Appendix C, Section C.4.1, of this EIS to state that the design life of the dry cask storage system is 50 years. Any required replacement of the dry casks would be addressed as the need develops. Procedures that adhere to all applicable regulations would be developed before any replacement activities were initiated.

238-155 None of the excavated soil would be used as backfill. The wording in the cited paragraphs in Appendix C, Sections C.3.1.1.8 and C.3.1.1.9, of this EIS has been changed to eliminate mention of using this soil as backfill.

238-156 Appendix C, Section C.3.1.1.9, of this EIS has been revised to add a sentence at the end of the subject paragraph indicating that these actions would also address RCRA requirements, as applicable.

238-157 The language in Appendix C, Section C.3.1.8.1, of this EIS has been modified to reflect the language suggested by NYSDEC's comment. The first sentence in this section has been changed to, "Tanks T-1, T-2, T-3, and associated equipment in the Mixed Waste Storage Facility would be size-reduced and disposed of at an approved offsite landfill." The language in the rest of the section remains unchanged. A footnote has been added to Table 2-2 in Chapter 2 of this EIS to reflect that the unit will be closed under the RCRA Interim Status requirements.

238-158 DOE acknowledges this comment and is awaiting NYSDEC's review of the results of the North Plateau Groundwater Plume RCRA Characterization.

238-159 The descriptions of the alternatives presented in Chapter 2, Section 2.4, of this EIS, have been revised to state that monitoring would be performed during decommissioning and, for those alternatives where waste remains on site, would continue after decommissioning.

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- C & D debris - Can it have greater than background levels of radioactivity?
- Page 2-3, Section 2.2, 1st paragraph: Does not tell where the "Waste Classifications" text box can be found. What page is it on?
 - 2nd paragraph: Is the same type of radioactive material handled the same way even if part is from the Defense Department and the other part is non-defense material? Or are the two different types "chemically" mutually exclusive?
 - Page 2-3, Section 2.3: Direction & Distance from Buffalo - Straight line distance between the two is about 24.5 miles at their nearest points. Direction is south southwest.
 - Cattaraugus Creek mouth is 23.3 miles southwest of Buffalo at its nearest point.
 - Page 2-5, Section 2.3, bullet: WMA 11 - add Scrap Material Landfill to bullet.
 - Page 2-7: Hydrofracture test well area part of WMA 11. Same for scrap material landfill and bulk storage warehouse. See title of fig 2-3. Add WMA 11 to labeling on figure for Hydro frac and warehouse as did for the landfill.
 - Page 2-11, 2nd bullet, 1st sentence: "An upgradient slurry/barrier wall will be installed and a geomembrane cover will be placed over the NDA as part of the NDA groundwater infiltration mitigation measures." The term "mitigation" is again used in a way that is not very descriptive. Much more meaning would be imparted if prevent or reduce were used.
 - 3rd bullet: "cesium-137 inventory" The inventory contaminates the absorbent media. How much liquid will be left as a percentage? Why won't the media absorb all the liquid?
 - Page 2-12, 1st bullet: What is the difference between a treatment wall and a reactive barrier?
 - Page 2-21, Section 2.3.2.3, 2nd paragraph: "Most of the residual contamination in this building is in the two HEPA filters, which could contain as much as 7.5 curies of cesium-137 and much smaller activities of other radionuclides." Activities?
 - If defense waste was part of the reason for contamination of equipment does that mean the equipment is handled as defense waste?
 - Page 2-21, 7th paragraph: Is the Con-Ed Building, itself contaminated, or is the equipment contaminated or both?
 - Page 2-26, Section 2.3.2.9: Drum cell - contaminated or not? Why would anything be assumed?
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- 238-110 Additional text has been added to Appendix C, Section C.4.1, of this EIS to state that the design would be patterned after facilities that comply with 10 CFR 72, "Licensing requirements for the independent storage of spent nuclear fuel, high-level radioactive waste, and reactor-related greater than Class C waste." The text has been also revised to state that the facility would be designed to withstand natural and manmade events such as seismic activity or atmospheric phenomena.
- 238-111 Appendix E, Section E.4.2 (South Plateau), of this EIS has been revised to present the discussion of historical conditions in a separate subsection. Modeling does take into account the cap and slurry wall. The revised text clarifies this point. A decision about future modeling will be made by DOE and NYSERDA.
- 238-112 The erosion modeling does include consideration of storm events of the type that occurred in August 2009. Further refinement of the erosion model would require the collection of site-specific storm and erosion data over multiple years to capture the integrated effects of multiple specific storms of varying severity. A decision about future erosion studies will be made by DOE and NYSERDA.
- 238-113 The sentence is intended to point out that additional quantitative information does not exist in a form that would support the long-term erosion modeling required for this EIS.
- 238-114 The figure was intended to show the general, not the exact, location of erosion features. Further refinement of the erosion model would require collection of site-specific storm and erosion data over multiple years.
- 238-115 In the revision of Appendix F for the Final EIS, the sentence identified by the commentor was deleted. The revised text in Section F.3.1.2 acknowledges that small perturbations of initial conditions can lead to differences in simulated drainage pathways.
- 238-116 The purpose of Appendix J is to determine the radiological impacts from transporting radioactive wastes and the nonradiological impacts (traffic fatalities) of transporting all materials and wastes, including the transportation of hazardous waste. Impacts from the hazardous waste cargo that could occur in an accident if the cargo were released are not analyzed in Appendix J. Hazardous waste would not be shipped in sufficient quantities to warrant specific analysis of this scenario.
- 238-117 The text in Appendix L of this EIS has been revised to include this information.
- 238-118 The text in Appendix L of this EIS has been revised to include this information.

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- Page 2-27, Section 2.3.2.11: If the environmental assessment done previously is not included in this document then it should be stated where it can be found/obtained.
- 2nd paragraph: "This waste material was radiologically surveyed, decontaminated as necessary, and released for unrestricted use before it was buried in the trench." Released for unrestricted use? Please explain. Is there a reason that recycling of scrap metals such as aluminum cannot occur?
- Page 2-27, Section 2.3.2.12, 1st paragraph: "...contaminated sediments resulting from regulated releases." So these releases were scheduled and planned? There needs to be a better explanation.
- 2nd paragraph: The North Reservoir has a pump house to regulate the water level?
- Page 2-28, Section 2.3.2.13: North Plateau Groundwater Plume - The inability of the two agencies to reach agreement is the reason for the size of the plume. This should be stated explicitly. Somewhere in the document there should be a discussion of future contamination possibilities due to the inability of agencies to agree on something in the future.
- Page 2-29, Section 2.3.2.14: "The cesium prong is the result of uncontrolled releases..."; What does that mean? Was it equipment failure, human error or what?
- Page 2-29 Section 2.4, 1st bullet: "environmental media"? Not in the glossary. How do you decontaminate soils?

"This alternative would generate waste for which there is currently no offsite disposal location..." Generating waste implies more waste than before. Is the document trying to say, "*Under the sitewide removal option some waste could not be shipped since there is no place to ship it.*"?

Last sentence: "bounding alternative" ?? Please rephrase.
- Page 2-30, Text Box: Is there defense waste at West Valley?

General question; what is low level radioactive waste comprised of? And for other types? Or is there no good answer?

Text Boxes should be labeled in a format like figures.
- Page 2-32, Section 2.4.1.1: "environmental media"; different words please.
- Page 2-33, Section 2.4.1.1, 1st bullet: What is the waste that will be generated during the work? Equipment, soil, water, chemicals?

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| 238-171 | 238-119 Comment noted. Estimates of the 100-year floodplain are based on many years of meteorological data, including data on large storm events like that of August 2009. The estimate of the 100-year floodplain was not changed in response to this single event. |
| 238-172 | 238-120 Comment noted. This EIS focuses on the floodplain as it might affect the central part of the site where the radioactive and hazardous materials are located. The floodplain analysis does not include the area of the reservoirs. |
| 238-173 | 238-121 This regulation, 6 NYCRR Part 740, is included in Chapter 5 of this EIS, which is a discussion of applicable regulations. |
| 238-174 | 238-122 West Valley is used correctly as the location of WNYNSC. |
| 238-175 | 238-123 Appendix C, Section C.2.1, of this EIS provides more detail regarding the status of the facilities in WMA 1 at the starting point of this EIS. Except for the high-level radioactive waste canisters, no radioactive waste would be left in the Main Plant Process Building, or Vitrification Facility that would require special handling facilities. The bullet on page 9 of the Summary states that, for the high-level radioactive waste canisters, areas and systems that support their storage would remain in place. This would include any necessary emergency response systems that would be needed to manage the canisters. No change has been made to the Summary. |
| 238-176 | 238-124 The permeable reactive barrier will not be installed and the description has been removed from this Final EIS. The permeable treatment wall is described in Appendix C, Section C.2.13.2, of this EIS. It is possible to remove the wall, and it would be removed under the Sitewide Removal Alternative. If a new technology that would be more effective at treating and managing the North Plateau Groundwater Plume becomes available, DOE would then consider whether the permeable treatment wall would need to be removed to allow use of the new technology. The permeable treatment wall cannot catastrophically fail because it is located in the ground. If the wall did crack, allowing untreated groundwater to flow through, DOE would conduct appropriate measures to ensure the plume continued being effectively managed and treated. No current facilities are required for management of the permeable treatment wall. No change has been made to the Summary. |
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| | 238-125 The Glossary in the Summary has been revised to define the term "defense waste." The definition for transuranic waste found in the Summary text box describing |

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<p>Enclosure 2 - NYSDEC Non West Valley Assigned Staff DEIS Comments</p> <ul style="list-style-type: none"> • Page 2-33, Section 2.4.1.1, 4th bullet: What will be done to “remediate” surface soil and sediment. Will the radioactivity be “removed” from the soil or will the contaminated soil/sediment be separated and removed for disposal at a different location? • Page 2-33, Section 2.4.1.1, WMA 1, 1st paragraph: What part of the building is contaminated? Knowing that might then explain how it is decontaminated. 2nd paragraph: What does “completely removed” mean? Everything taken from the site? 3rd paragraph, last sentence: What about contaminated subsoil? If subsoil is contaminated does that mean they are leaving it? Why isn’t “environmental media” which seems to mean anything that is not man-made used? WMA 2: 1st paragraph, Lagoons completely removed from the site? The contaminated materials can be removed and the excavations filled. WMA 4: What about contaminated subsoil? WMA 5: No mention of soil or subsoil. Why not say “all contaminated environmental media”? • Page 2-35, Section 2.4.1.2, New Construction: Includes “A Leachate Treatment Facility to process contaminated leachate from the NDA and SDA.” The SPDES modification application for the proposed discharge from the proposed leachate treatment facility should be submitted to the Region 9 - DEP office for processing. After this permit modification issued, the design engineering report and plans and specifications for the leachate treatment facility should be submitted to Bureau of Water Permits and Region 9 office for review and approval prior to construction. Also see Page 2-64, Section 2.8.2.2 and Appendix C, Page C-138 Leachate treatment facility. The applicant should be familiar with 6NYCRR Part 750, SPDES Permit and Technical and Guidance Series (TOGS) 1.2.1. Industrial Permit Writing in dealing with point source discharges to the water of the state. • Page 2-38, Section 2.4.2.1, WMA 1: Large boulders may serve as an intrusion barrier, but won’t do much for stopping erosion. The boulders may also help to concentrate surface water runoff to specific points (between the boulders) and actually increase the erosion potential. • Page 2-39 Section 2.4.2.1, WMA 3, last sentence: Large boulders may serve as an intrusion barrier, but won’t do much for stopping erosion. See comment above. • Page 2-39, Section 2.4.2.1, WMA 12: There will have to be a downstream end of the excavating and ripraping. It is this nick point where erosion will start almost immediately. Do the plans identify maintenance of artificial stream channels as a cost? 	<p>238-185</p> <p>238-186</p> <p>238-187</p> <p>238-188</p> <p>238-189</p> <p>238-190</p> <p>238-191</p> <p>238-192</p> <p>238-193</p> <p>238-194</p> <p>waste types has been revised to state that transuranic waste may be considered defense or non-defense waste. Transuranic non-defense and defense wastes exhibit the same radiological characteristics, but are different in origin, as explained in Chapter 2, Section 2.3.1, of this EIS. Currently there is no disposition option available for transuranic non-defense waste; however, transuranic defense waste can be disposed of at the Waste Isolation Pilot Plant in New Mexico. A DOE defense determination would be required to determine whether the waste should be classified as defense or non-defense waste.</p> <p>238-126 DOE and NYSERDA have engaged in settlement discussions, limited to issues of cost allocation, related to the December 18, 2006, legal action filed by NYSERDA.</p> <p>238-127 The Glossary in the Summary has been revised to define the term “orphan waste” as “waste that cannot currently be disposed of in an established or planned permanent disposal facility because the path forward for treatment and disposal has not yet been defined. Non-defense transuranic waste, Greater-Than-Class C waste, and commercial Class B and Class C wastes are current examples of WNYNSC orphan waste.”</p> <p>238-128 DOE and NYSERDA have engaged in settlement discussions, limited to issues of cost allocation, related to the December 18, 2006, legal action filed by NYSERDA.</p> <p>238-129 The impact of removing a multi-layered cap from the NDA was not analyzed in this EIS. However, this EIS does analyze removal of the existing geomembrane cover, leachate transfer line, and contents of the NDA as part of the Sitewide Removal Alternative. Refer to Chapter 4 for a discussion of the impacts related to this alternative. No change has been made to the Summary.</p> <p>238-130 The timeframe for completing Phase 1 of the Phased Decisionmaking Alternative is defined in Chapter 2, Section 2.4. The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision</p>
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New York State Department of Environmental Conservation***

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- Page 2-40, Section 2.4.2.2, Last bullet: How do you construct an erosion control structure around a creek? Poor wording; needs to be explained better.
- Page 2-43, Section 2.4.3.1, last bullet: Removal is determined by depth rather than radioactivity? Once you have opened a hole why not remove the contamination in the bottom of it? What happens if the material below 2 feet is really "hot"?
- Page 2-45, Last Paragraph - States, "The final decision on the Phase 2 decommissioning and long-term management approach would be made within 30 years of the date of issue of the Phase 1 ROD. As new information becomes available during Phase 1, DOE would conduct appropriate NEPA review." From this statement, it seems there is no ending date set for the completion of Phase 2 decommissioning. What would be the reasonable schedule for completion of decommissioning?
- Page 2-46, Section 2.4.3.3, Last paragraph: Is there space to store this "unanticipated" waste?
- Page 2-51, Section 2.6.1, Last sentence: "This approach was performed in such a way that did not bias the comparison of alternatives." Suggested change: This approach was performed in order to attempt to remove bias from the comparison of alternatives.
- Page 2-59, Section 2.6.2, last paragraph: What would be the exposure to everyone drinking public water taken from Lake Erie? If nothing else at least there should be a statement that dilution would be such that there would be nothing measurable above background levels. This may have been addressed later in the document.
- Page 2-62, Section 2.8.1.4, 1st paragraph: "Atlantic Compact" should be explained.

Book: *Chapter 3*

- Page 3-6, Section 3.1.1, 2nd full paragraph: What is an "acreage lot"? Do they mean a small parcel separated from a large parcel to construct a single family residence?
- Page 3-12, Section 3.3.1.1, First paragraph: Elevations are discussed without reference to a datum which is a standard notation. Ex. International Great Lakes Datum (IGLD) 1985
- Figure 3-7: The figure shows orientation of the cross section as west to east. The orientation should be the same as Figure 3-6. The cross section is shown as extending beyond Buttermilk Creek on Figure 3-8 while the cross section itself stops at the creek. This discrepancy should be resolved.
- Figure 3-9: It would be better if the horizontal scales of the cross sections were the same, making it easier to compare.

and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected. A change has been made to the Summary to reflect this new Phase 1 timeframe.

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| 238-195 | 238-131 The elevated employment levels projected for the Sitewide Removal Alternative would be similar to those for the other two decommissioning alternatives, but would last for a far longer period of time (i.e., 60 years as opposed to 7 to 8 years). Thus, the product of the average employment level with the number of employment years would be largest under the Sitewide Removal Alternative. This paragraph was edited in the Summary for this Final EIS. |
| 238-196 | 238-132 The primary purpose of this EIS is to provide sufficient information and analysis to enable decisionmakers to choose an appropriate alternative for decommissioning. Should the Sitewide Removal Alternative be chosen for implementation, specific decommissioning requirements such as allowable contamination levels would be determined for that alternative by the appropriate regulatory agencies. |
| 238-197 | 238-133 Under the Sitewide Removal Alternative, WNYNSC would be decontaminated to the point that the site could be unconditionally released. If the property could be unconditionally released, then it is a reasonable assumption for this EIS to assume there would be no need for post-decommissioning monitoring and maintenance activities. |
| 238-198 | 238-134 Based on the estimates of site employment under the alternatives, as well as currently available information about employment in Erie and Cattaraugus Counties, there would be no projected impact on the economies of the local and regional areas surrounding WNYNSC. The peak employment level under any of the alternatives is 350 persons, which is only about 0.07 percent of the current employment level in the region of interest. |
| 238-199 | 238-135 The list in the indicated paragraph refers to the different types of waste that are projected to be generated under the Sitewide Removal Alternative. The term "orphan waste" does not refer to a different type of waste, but to the lack of a disposal path for some wastes. The terms "defense" and "non-defense" are used in the context of transuranic waste. These terms don't signify different types of transuranic wastes, but instead pertain to whether transuranic waste may be legally determined to be eligible for disposal in the Waste Isolation Pilot Plant. Such a determination has not yet been made for the transuranic wastes projected to be generated under some of the alternatives considered in this EIS. As a result, and because disposal capacity may be available in the future for wastes that currently |
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New York State Department of Environmental Conservation**

Enclosure 2 - NYSDEC Non West Valley Assigned Staff DEIS Comments

- Page 3-21, Section 3.3.1.1: Kent Recessional Sequence - "The basal lacustrine sediments were deposited in glacial lakes that formed as glaciers that blocked the northward drainage of streams." **238-206**
 - Sand and gravel was later deposited from deltas formed where streams entered the glacial lakes forming deltas and along the floodplains of streams that formed during ice-free episodes **238-207**
 - Page 3-28, Section 3.3.1.3: There are three types of mineral resources; sand and gravel come from the glaciers, oil mostly from the upper Devonian and gas mostly from the lower Silurian period. **238-208**
 - Mineral district has no meaning in New York State. It is a western term. If the document is trying to identify the location of the resource, it would be more appropriate to use county names. **238-209**
 - Page 3-29, Section 3.3.1: Soil contamination – Give an explanation of an operational incident. Is it limited to human errors? **238-210**
 - 2nd paragraph: The primary constituents areas of radiologically contaminated soil are cesium-137 contamination associated with the Cesium Prong area; soils affected by the North Plateau strontium-90 groundwater plume; and radiologically contaminated soil associated with Lagoons 1 through 5 and the Solvent Dike (WMA 2). This needs work. The primary areas (which are locations) can't be a chemical. **238-211**
 - Page 3-30, 1st paragraph: "The low level chemical detections are consistent with anthropogenic human activity and the industrial nature of the site." **238-212**
 - Page 3-30, last paragraph: "Metals concentrations in RCRA facility investigation soil samples from these facility areas slightly exceed background or Technical and Administrative Guidance Memorandum 4046 criteria." Slightly? By what amount? **238-213**
 - Page 3-31: Cesium Prong - "Uncontrolled airborne releases from the Main Plant Process Building ventilation system filters in 1968 released contaminated material through a 60-meter (200-foot) high plant stack" How many releases were there? Why did the releases happen? Mechanical failure? Human failure? **238-214**
 - Page 3-36, 2nd paragraph: the slump blocks are shown in figure 3-16 not 3-15 (two places in paragraph) **238-215**
 - Page 3-48, Figure 3-18 The delineation of a state wetland is typically valid for three years. Part of the process of issuing any NYS Wetland Permits would be verification of the wetland boundary. The document refers to the wetland as a Class IV. DEC never officially determined the classification of the wetland. **238-216**
- lack it, DOE believes that inclusion of the suggested matrix could be confusing to many readers.
- 238-136** The Sitewide Close-In-Place Alternative is projected to generate the smallest quantity of waste among the three decommissioning alternatives. The word "lowest" rather than "third largest" was used for this Final EIS.
- 238-137** All wastes would be disposed of in accordance with current waste acceptance criteria and appropriate permits or licenses. Disposal site waste acceptance criteria and permit or license requirements would be consistent with and derived from the statutory requirements and regulations applicable to the disposal site at the time of disposal.
- 238-138** The reference is to later than 10,000 years in the future. There would be some impacts beyond peak annual dose. The times that peak annual doses may occur in the future were assessed and are presented as part of the analysis discussed in detail in Chapter 4, Section 4.1.10, of this EIS.
- 238-139** The potential long-term impacts to Lake Erie and Niagara River water users were addressed in Chapter 4, Section 4.1.10, of this EIS, assuming scenarios where institutional controls are assumed to continue and where institutional controls are assumed to be lost after 100 years. An unmitigated erosion scenario was also considered. These impacts are summarized in the revised Table 3 in the Summary for this Final EIS.
- 238-140** "Orphan waste" is defined in the Summary Glossary.
- 238-141** The Sitewide Removal Alternative transfers significant amounts of waste and contamination from WNYNSC to other disposal sites in other states. The long-term impacts associated with these disposal facilities are not assessed in this EIS. As a result, and because the locations for disposal of all waste are not known at this time, it would be premature to state that the Sitewide Close-In-Place Alternative, where a significant amount of waste and contamination is retained at WNYNSC, ultimately would have the most risk of contaminating and affecting the most land/water and people.
- 238-142** "Source term" is defined in the Glossary in the Summary. The second indicated sentence was edited for the Summary for this Final EIS.
- 238-143** Future research may change the current understanding of the risks associated with radiation exposure and of radiation protection requirements and practices.

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- Page 3-49, Section 3.6.1, 2nd paragraph, 2nd to last sentence, “*Other than In addition to* the two water supply reservoirs and wastewater treatment lagoons in WMA 2, several small ponds are located across the WNYNSC including former borrow pits (Northern Borrow Pits) located in the northeast corner of the Project Premises (WVNS 2004a, WVNS and URS 2005).”
 - Page 3-54, 2nd full paragraph: What are the implications for the general public at the first point accessible given the radiation levels?
 - Page 3-54, 3rd full paragraph: No mention is made of testing for radioactivity?
 - Page 3-54, Section 3.6.1.2, 1st paragraph: Several of the discharged radionuclides, particularly cobalt-60, strontium-90, cesium-134, and cesium-137, have an affinity to become chemically soaked attached to silt and accumulate in the streambeds.
- The writer should acknowledge that over time all of the contaminated sediments will leave the site and end up in Cattaraugus Creek and Lake Erie. There have been discussions regarding the removal of the Springville Dam which would then allow a more continuous movement of sediment down the creek. At issue is the sediment behind the dam.
- What does the contamination level of the sediment behind the dam mean? Does the sediment have to be removed to a disposal location or does current regulation allow it to stay in place? Is DOE responsible for removing the sediment?
- Page 3-58, 2nd paragraph: How often is the groundwater pumped to maintain the elevation? If the French drain discharge was plugged what is happening to groundwater elevation and flow?
 - Page 3-60, 1st paragraph: Please explain the different types of “biointrusions”.
 - Page 3-60, 2nd paragraph: “Models for the South Plateau developed by Prudic (Prudic 1986) and by Bergeron (Bergeron and Bugliosi 1988) support only moderate lateral movement through the weathered till until flow become directed downward into the unweathered Lavery till.” “flow becomes” or “flows become”
 - Page 3-60, 2nd paragraph: “Using these models as a starting point, Kool and Wu (Kool and Wu 1991) examined how changes in the hydraulic conductivity, vertical anisotropy and horizontal anisotropy in the hydraulic conductivity can impact flow through the weathered Lavery till.” Anisotropy, different values along different axes; in this case the vertical and horizontal axes. A hard word to use. Suggested change, “Using these models as a starting point, Kool and Wu (Kool and Wu 1991) examined how anisotropic characteristics in hydraulic conductivity impacted flow through the weathered Lavery till.” Are they also trying to say that hydraulic conductivity was not constant on any particular axis? The use of the word anisotropism tends to indicate there is one value on a specific axis. If this is not the case the word should be removed and others used.

- However, there is no scientific basis to presume that any such changes would result in either increased or reduced risks. Therefore, it is speculative to include the issue in the discussion of incomplete or unavailable information.
- 238-217 238-144 As discussed in the response to Comment no. 238-147, DOE believes that there is no scientific basis to presume that future research may result in either increased or reduced risks associated with radiation exposure. Regarding combination of contaminants, note that the analysis of long-term impacts in Chapter 4, Section 4.1.10, of this EIS indicates that projected long-term risks are dominated by the radioactive rather than the chemical composition of the waste and contamination at WNYNSC. Therefore, it is unlikely that the risks that might be associated with a combination of contaminants would alter the conclusions of the current analysis. For this reason, and because of the speculative nature of the issue, it was not included in the list of major elements of incomplete or unavailable information.
- 238-218 238-221 238-145 The “pipes” in the photo are steel bollards that protect a monitoring station and culvert from debris that may be washed down the Creek. No change has been made to the photo caption.
- 238-219 238-222 238-146 “Near-field flow” refers to the flow of groundwater in the vicinity of the source of contamination being considered.
- 238-220 238-223 238-147 The phrase “performance assessment results” is common terminology for long-term analyses of waste management sites and has been retained.
- 238-221 238-224 238-148 The definition of cesium is believed sufficient as written. The intent is to provide the average reader with an understanding of the subject without describing it in great detail. Please note that this is a Summary and, as such, contains summary-level information, including the definitions in the Glossary. This EIS contains more detail for all subjects included in the Summary, including the Glossary.
- 238-222 238-225 238-149 As indicated in the Glossary in the Summary, a collective dose is the sum of individual doses received in a given period of time by a specified population from exposure to a specified source of radiation. The analysis in this EIS addresses collective doses to workers and populations resulting from implementing each of the alternatives considered (e.g., see Chapter 4, Sections 4.1.9, 4.1.10, and 4.1.12). This EIS also addresses cumulative radiation doses—doses that persons could receive in the region from other significant radiation sources than background radiation (see Section 4.5.13). These additional possible radiation sources are believed to be minimal.

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- Page 3-61, Bedrock Unit: "Wells completing in this zone yield 40 to 60 liters per minute (10.6 to 15.9 gallons per minute) and corresponds to the regional bedrock aquifer." What does "completing" mean? Do they mean wells drawing water from the weathered bedrock?
- Page 3-63, North Plateau Groundwater Contamination, Figure 3-22: There should be a date on the figure.

Have they gone back and checked to see if the figure was accurate based upon later investigations?
- Page 3-64, figure 3-23: the separate panels should have the elevations reversed. It would be easier to read.
- Page 3-65: What justification was there for reducing the frequency of monitoring?
- Page 3-66, 1st sentence: "In November 1995, a groundwater recovery system was installed to mitigate the movement of strontium-90 contamination in groundwater in the western lobe of the plume and reduce groundwater seepage northeast of the Main Plant Process Building."

As previously noted, the reader believes the use of the word mitigate in this context should be changed to more explicit. Reduce the expansion or stop the expansion is the way to describe if that is what is being done.
- Page 3-68, last paragraph: "A trench system was previously constructed along the northeast and northwest sides of the NDA to collect groundwater that was potentially contaminated with a mixture of n-dodecane and tributyl phosphate."
- Page 3-69, 1st paragraph: "Gross beta and tritium concentrations in samples from location WNNDATR, a sump at the lowest point of the interceptor trench, and from downgradient well 909 screened in the Lavery till continued to be elevated with respect to background monitoring locations on the South Plateau." Is the well "screened" to the entire till unit or does it only provide access to a small portion of the till unit?
- Page 3-70, Section 3.7.1, 2nd paragraph: The difference in elevation between Lake Erie and WNYNSC is not 1,310 feet. Lake Erie's Mean High Water Level is 573.4 IGLD 1985 datum, WNYNSC is at 1,400 feet (the document does not use a datum reference which is a flaw) according to the document. Even allowing for the use of different datums the elevation difference stated is wrong by approximately 483 feet. The correct difference is 827 feet +/-.
- Page 3-74, 2nd paragraph: "The following emissions sources are monitored on a continuous basis for radionuclides: the Main Plant Process Building ventilation stack; the former vitrification heating; ventilation and air conditioning system; the 01-14 building

- 238-227 238-150 A definition of "defense waste" was added to the Glossary in the Summary. In addition, the Waste Types text box in the Summary and the Waste Classifications text box in Chapter 2 of this EIS were edited to note that transuranic waste may be considered defense or non-defense waste depending on the origins of the waste. An explanation of defense vs. non-defense waste is provided in footnote 1 of Chapter 2, Section 2.3.1.
- 238-228 238-151 DOE and NYSERDA note the comment. The use of the word "hydrofracture" appears only as a proper name and is not intended to connote specific activities relevant to this EIS. Therefore, the definition has been deleted from the Glossary.
- 238-229 238-152 The term "or gasses" was added to the definition of "permeability" in the Glossary in the Summary and in Chapter 8 of this Final EIS. The question of nondissolving contaminants does not appear to be directly germane to the definition and was not included.
- 238-230 238-153 As described in Appendix C, Section C.2.8, of this EIS, from 1963 to 1975, offsite wastes were received for burial in the SDA from special purpose reactors, commercial power reactors, nuclear fuel cycle facilities, institutions, isotope production, and industries.
- 238-231 238-154 The text has been changed from "focus on" to "to include," consistent with the commentator's suggested language in Comment no. 238-26.
- 238-232 238-155 The term "Quality Services" has been deleted from the sentence because it was not necessary for understanding the discussion.
- 238-233 238-156 DOE began the Core Team process in November 2006 with the agencies involved in preparation of this EIS to work toward resolution of technical issues that were impeding progress of the document. NYSERDA agreed to join this process in March 2007. Since that time, DOE and NYSERDA have worked cooperatively to advance the NEPA process for WNYNSC. In parallel, DOE and NYSERDA have engaged in settlement discussions, limited to issues of cost allocation, related to the December 18, 2006, legal action filed by NYSERDA.
- 238-234 238-157 Chapter 5, Section 5.5, of this EIS states that construction activities impacting 0.4 hectare (1 acre) or more require an State Pollutant Discharge Elimination System construction permit. No further clarification in this EIS is required.
- 238-235 238-158 The specific activities for Phase 2 decommissioning actions are not known; therefore a schedule for Phase 2 cannot be developed and shown in Chapter 2,

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| <p>ventilation stack; the supernatant treatment system ventilation stack; and the Remote-Handled Waste Facility (WVNS and URS 2007).” “the former vitrification heating;” What is that supposed to mean? Should the semi-colon at the end be taken out?</p> <ul style="list-style-type: none"> • Page 3-76, Section 3.8.2, 3rd full paragraph: “The state also regulates work within a 30.5-meter (100-foot) buffer zone adjacent area around designated freshwater wetlands.” • Page 3-91, Maximum Dose: What criteria were used for the max dose to an offsite individual? Is the person presumed to be at their location 24 hours per day or did going to work get included in the calculation? If so what about a “stay at home”? Is there a potential for bio-accumulation? If so was it taken into account? • Page 3-91, Waterborne Releases: Where would the person be who received the max dose? Was bio-accumulation taken into account? Why are these water releases allowed? Is there a way to treat the water and reduce the rates? Seems like a lot of radiation to release over another 30 years. And what about all that has been released already. • Page 3-92: “Figures 3-30 and 3-31 show the calculated annual dose to the hypothetical maximally exposed individual and the collective dose to the population respectively over the last 10 years. The overall radioactivity represented by these data confirms the continued inconsequential addition to the natural background radiation dose that the individuals and population around the WNYNSC receive from site activities.” <p>“inconsequential” is a very subjective word. Find other words that say at the present time we don’t think there is any impact.</p> <ul style="list-style-type: none"> • Page 3-94, 4th paragraph: “This is the only underground petroleum storage tank currently in use at the site.” Are there any tanks <u>not</u> currently in use? • Page 3-95, Section 3.11.4, 2nd paragraph: Average doses are just numbers. When you start averaging in zeros it quickly starts to hide the high doses. What were the highest doses? Report the top 10% of doses. Is there a graph somewhere showing the doses, a histogram or something? <p>What does “contractor’s daily limit of 100 millirem” mean? Is that for one person or everyone that works for a contractor?</p> <ul style="list-style-type: none"> • Page 3-96, Section 3.11.5.1: Over what period of time is it believed that the release of radioactive nitric acid spill occurred? • Page 3-103, Section 3.12, Environmental Justice: Why is Canada discussed in this section? Is there a federal requirement? Or NY State requirement? • Page 3-110, Remote Handled Waste Facility: It is to be dismantled in 2011. So in two to three years there will no longer be a need for it? | <p>238-236
<i>cont'd</i></p> <p>238-237</p> <p>238-238</p> <p>238-239</p> <p>238-240</p> <p>238-241</p> <p>238-242</p> <p>238-243</p> <p>238-244</p> <p>238-245</p> <p>Figure 2-8, of this EIS. Note that the description of the Phased Decisionmaking Alternative has been revised. The facilities not addressed in the Phase 1 description would not be decommissioned until a Phase 2 decision is made; a Phase 2 decision would be made as soon as practicable during Phase 1.</p> <p>238-159 The half-lives of the particular mixtures of high-level radioactive waste is not known. The heat load and radiation level outside the high-level radioactive waste canisters are known and would be accounted for in the design of the Interim Storage Facility (as presented in Appendix C, Section C.4.1, of this EIS). The difference between high-level waste and transuranic waste is defined in the Chapter 2 text box titled, “Waste Classifications Used in this EIS.”</p> <p>The text has been revised to state, “This waste includes...”</p> <p>In general, low-level radioactive waste is classified by what it is not. As stated in the definition, the different classes of low-level radioactive waste are defined in 10 CFR 61.55. The classification of this waste is based on curie concentrations of certain radionuclides and other factors.</p> <p>The criteria for determining whether or not a waste is Greater-Than-Class C are found in 10 CFR 61.55. In general, there are no upper-level concentration limits for Greater-Than-Class C waste.</p> <p>Construction and demolition debris are assumed to have no greater than background levels of radioactivity.</p> <p>238-160 The text was modified to refer to the text box in Chapter 2, Section 2.2, of this EIS.</p> <p>238-161 In general, the same type of radioactive material is managed the same way prior to disposal, regardless of origin. The different waste types are defined in Chapter 2, Section 2.1, of this EIS and again in the Glossary. Transuranic waste is waste (regardless of who generated it or how it was generated) that is not classified as high-level radioactive waste and contains more than 100 nanocuries per gram of alpha-emitting transuranic isotopes with half lives greater than 20 years. Transuranic waste that is generated by defense-related activities can be disposed of at the Waste Isolation Pilot Plant, as discussed in the footnote in Section 2.3.1, but transuranic waste generated from non-defense-related activities currently has no disposal option.</p> <p>238-162 The distance and direction are approximate and are measured from downtown Buffalo, New York.</p> |
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- Page 3-111, Section 3.13.2: "The emphasis on good business practices, source reduction, and recycling minimizes the generation of low-level radioactive waste, mixed low-level radioactive waste, hazardous waste, industrial wastes, and sanitary wastes, such as paper, wood, and scrap metal."
 - Sanitary waste is not paper, wood or scrap metal. Sanitary waste would be more accurately described as municipal solid waste or putrescible waste.
 - Book: *Chapter 4*
 - 4-1, "Impacts of less significance": Geology and soils should be listed in the section of great significance.
 - Page 4-4, Table 4-1, Land Disturbance: Even if the Close-in-Place alternative were chosen, the Cesium prong and the groundwater plume should not be allowed to expand, or leave the site through surface runoff, erosion and/or groundwater movement.
 - Page 4-15, 4.1.2.2, 5th paragraph: "Almost all of the waste shipments and construction material deliveries for this alternative would occur over the first 7 years of the implementation period when most decommissioning would take place, and reflect the need for large quantities of soil, sand, gravel, and other materials for NDA and SDA stabilization." The context of the part of the sentence that "other materials" is used in, would lead one to think that other materials is a natural product. Other materials could mean a lot of things. It could be anything from heavy boulders to straw, to silt fencing, to tire chips to slag from a steel plant. Please clarify.
 - Page 4-19, 4.1.3.1: "The greatest requirements are for soil, concrete, clay, ~~sand~~ sand and gravel."
 - Page 4-22, 3rd paragraph: "The impacts of fuel, oil, or lubricant spills could be ~~mitigated~~ minimized by keeping the equipment in good repair and conducting maintenance operations in areas designed for such operations."
 - Page 4-23, 2nd paragraph: This paragraph says "Area excavations would be backfilled with clean soils and graded to restore the area to a natural appearance that approximates natural conditions for the site. Over the long term, implementation of the Sitewide Close-In-Place Alternative would have a positive impact on groundwater quality." It is however in 4.1.4.1 Sitewide Removal Alternative
 - Page 4-23, 4.1.4.2, 3rd paragraph: "**Surface Water Flow and Quality** - The impacts of fuel, oil, or lubricant spills would be ~~mitigated~~ minimized by keeping the equipment in good repair and conducting maintenance operations in areas designed for such operations."
- 238-246 238-163 While the Scrap Material Landfill is located in WMA 11, the name of WMA 11 is Bulk Storage Warehouse and Hydrofracture Test Well Area.
- 238-247 238-164 The labeling was not added to the Hydrofracture Test Well Area or Bulk Storage Warehouse to try to differentiate them from the Scrap Material Landfill because they are not in the scope of this EIS.
- 238-248 238-165 The measures are not restricted to groundwater. The cap is related to surface water. In this case, the term "mitigation" is part of a name for certain actions.
- 238-249 238-166 The third bullet was revised. The phrase indicating that liquids would be sent to Tank 8D-2 and evaporated was deleted and replaced with a description that the treated liquid would be solidified and shipped off site for disposal. To clarify the process, the liquid from Tank 8D-4 is to be run through a medium that is designed to adsorb the cesium from the liquid. The amount of cesium in the liquid after treatment is determined by the equilibrium cesium distribution between the zeolite adsorbent and the contacting liquid. Although most of the cesium would be removed, the treated liquid would still be contaminated and therefore would be solidified and sent off site for disposal.
- 238-250 238-167 The reactive barrier will not be installed and has been removed from the text throughout this EIS.
- 238-251 238-168 The term "activity" describes the decay rate of a radionuclide and is measured in curies.
Yes, equipment contaminated by defense waste would be handled as defense waste.
- 238-252 238-169 The sentence says the majority of the radiological inventory is in the piping and equipment; therefore, some inventory is on the building itself.
- 238-253 238-170 As stated in the text, from reviewing the operational history of the Drum Cell, there is no reason to think that it is contaminated. Therefore, waste generated from its decommissioning would not be expected to be contaminated.
Final characterization of the Drum Cell for waste disposal has yet to be conducted. If there is some minor surface contamination, it might be removed prior to disposal so that the demolition debris can be disposed of as construction and demolition debris.
- 238-171 The environmental assessment is listed as a reference in Chapter 7 of this EIS. The references are all publicly available.

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<p>Enclosure 2 - NYSDEC Non West Valley Assigned Staff DEIS Comments</p> <ul style="list-style-type: none"> • Page 4-24, 2nd paragraph: "The Hazard Index for releases from other facilities was at least two orders of magnitude lower (see Appendix H, Table H-32, of this EIS). This analysis suggests that there would be no serious long-term impact to Cattaraugus Creek water quality under the Sitewide Close-In-Place Alternative." But the releases would be two orders of magnitude greater. Doesn't that mean that something is wrong here? • Page 4-24, 4.1.4.3, 2nd paragraph: "Surface Water Flow and Quality - The impacts of fuel, oil, or lubricant spills would be mitigated minimized by keeping the equipment in good repair and conducting maintenance operations in areas designed for such operations." • Page 4-32, 4.1.5.3, 2nd paragraph: "EPA guidelines identify a 24-hour exposure level of 70 decibels or lower as the level of environmental noise that will prevent any measurable hearing loss over a lifetime. Likewise, levels of 55 decibels outdoors and 45 decibels indoors (<u>or lower</u>) are identified as preventing activity interference and annoyance." • Page 4-33, 2nd paragraph: "During Phase 2, similar heavy diesel construction equipment operation would be expected. The duration of these activities would be expected to be <u>bounded by the same duration as</u> of the Sitewide Removal Alternative." • Page 4-33, 3rd paragraph: "This noise would be barely audible above background sound levels in the area. Noise from this activity and other construction-type activities would occur during daytime hours and would not be a source of annoyance to nearby residents." It cannot be stated "what will be an annoyance". It could be said that the impact will be minimal, but the writers have no way of knowing what will be an annoyance. Someone could be working nights, sleeping during the day, have their windows open and find even minimal noise very annoying. • Page 4-34, Table 4-9: The table states that there will be, "No impacts to Federal or State-listed endangered, threatened, or candidate species." <p>This statement is made without caveat for Site-wide Removal Alternative, Site Wide Close-in-Place Alternative or Phased Decision-making Alternative Phase 1 and Phase 2. A categorical statement such as this cannot be made. It implies something of which no one can be certain because it can not be proven. For example, the Northern Harrier, Circus cyaneus is a NYS threatened species that has been recorded in the area. All that can be said is that every effort will be made to avoid any significant impacts to those species.</p> <p>The 2008 NYS Breeding Bird Atlas has surveyed this area. The project site falls within Block 1970A and a list of species for the site is provided (see attachment). Of a total of 87 species, there are 29 species which are recorded as Possible Breeding, 16 Probable Breeding, and 42 Confirmed Breeding.</p> <p>There will be inevitable disturbance to bird species that will occur through complete removal of the forest trees, and shrub layer. The primary way to minimize this damage,</p>	<p>238-172 The waste material was released for either burial as sanitary waste or construction and demolition debris, or for resale. The waste was eventually buried in the scrap material landfill. The recycling of waste materials would occur based on DOE procedures and practices, but for the purpose of analysis for this EIS, it is assumed waste materials are not recycled.</p> <p>238-173 Regulated releases are those releases that occurred under a regulatory permit. The term has been replaced with "permitted."</p> <p>238-174 As stated, "It has a control structure and pumphouse to regulate the water level."</p> <p>238-175 This EIS was prepared to evaluate the environmental impacts of alternatives for the decommissioning and/or long-term stewardship of WNYNSC, including the North Plateau Groundwater Plume and its source. The history and current monitoring of the North Plateau Groundwater Plume are addressed in Chapter 3, Section 3.6.2.1, of this EIS. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the plume. Under any of the action alternatives, DOE would take actions to remove or mitigate the impacts of the plume. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement if the Phased Decisionmaking Alternative is selected.</p> <p>238-176 Incidents of uncontrolled airborne releases are discussed in more detail in Chapter 3, Section 3.11.5.1, of this EIS. The specific incident cited occurred when a high-efficiency particulate air filter in the main ventilation system failed and part of the filter media was drawn into the blower, cut into pieces, and discharged out through the main stack.</p> <p>238-177 Chapter 2, Section 2.4, of this EIS has been revised to state that, under the Sitewide Removal Alternative, contaminated soil, sediment, and water would be removed.</p> <p>238-178 This sentence refers to waste disposed of in the NDA and SDA. If it is dug up, it is being "generated" because now it has to be actively managed. The sentence is correct as is.</p> <p>238-179 The Sitewide Removal Alternative causes impacts that reflect removal of all contamination and waste from the site such that the whole site can be released for unrestricted use. The last sentence was revised to indicate that the Sitewide Removal Alternative represents one end of the spectrum of alternatives evaluated in this EIS.</p>
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- especially to nesting and breeding resident birds, is to conduct the removal activities beginning no earlier than August 1. Most birds breed throughout May and June, and late-nesters and fledglings require undisturbed habitat throughout July. It is probable that August clearing activities will cause the least impact to resident species.
- However, migration begins in August, and from August through October, birds will be using the forest as a migratory stopover site. There will be no one season where the habitat is unused by wildlife, especially birds. However, in order to minimize the damage caused by clearing activities work should begin no sooner than August 1, and should be completed, or halted by March 15, when spring migrants return to breed.
 - Page 4-34, 1st paragraph, Terrestrial Resources: "Wildlife in adjacent habitat could be disturbed by noise and increased human presence, which could cause some animals to temporarily move from the area, while others ~~would adapt~~ are more tolerant of human activities. Proper maintenance of equipment and restricting workers to the work zone would help ~~mitigate~~ minimize this impact."
 - Page 4-35, 1st paragraph: What is the depth of topsoil currently in the Cesium Prong? How much contaminated soil will be removed? Will there still be enough top soil to allow vegetation to grow?
 - Page 4-35, 1st full paragraph: "Prior to land-clearing operations, the areas to be disturbed would be surveyed for nests of migratory birds in accordance with the Migratory Bird Treaty Act. It might be necessary to undertake clearing operations prior to or after the breeding season to mitigate impacts to migratory birds."
- (This is essentially what we have just explained in the above commentary). Specific dates are necessary, which we have provided in previous comments, but this period of non-disturbance should be March 15-August 1. It is incumbent that specific breeding bird surveys be done by a qualified consultant in order that all known listed species are detected, and a list of all breeding birds is produced. Additionally, bird species using this area as stopover habitat during migration should be listed. Due to the Breeding Bird Atlas, we are aware of what species of birds can be expected, but a current survey should be provided by the applicant.
- Page 4-35, 2nd paragraph: "Impacts of clearing operations associated with the remediation of the undisturbed portion of the Cesium Prong would include the loss of less mobile species (e.g., mice, rabbits, snakes, and squirrels), as well as displacement of other more mobile species (e.g., birds and large mammals)." The statement identifies the loss of less mobile species. This is a very conservative statement. Some of those populations may be reduced, but it is unlikely that they will be eliminated.
 - Page 4-35, 2nd paragraph: "It might be necessary to undertake clearing operations prior to or after the breeding season to ~~minimize~~ mitigate impacts to migratory birds. Indirect impacts to wildlife from increased presence of humans and noise could also disturb animals in adjacent habitat. Upon restoration of the site, it would once again be available
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cont'd
- 238-180 A determination has yet to be made on whether or not transuranic waste at WNYNSC is defense waste.
- 238-181 Low-level radioactive waste can be any solid or liquid that has a level of radioactivity as defined by regulations. This waste can be in the form of wastewater, personal protective equipment, process equipment, soils and sediments, demolition debris, and many others.
- 238-182 Text boxes are typically given a title at the top of the text box and are not numerically ordered like tables or figures.
- 238-183 The term was replaced with "soils and sediments."
- 238-184 Equipment, soil, water and chemicals are some examples of wastes generated during the work.
- 238-185 The term "remediated" was replaced with "removed for offsite disposal."
- 238-186 Additional information regarding the contamination of the buildings in WMA 1 can be found in Appendix C of this EIS.
- 238-187 The facilities and foundations would be dismantled with all material shipped off site for disposal. The sentence is correct as is.
- 238-188 Chapter 2, Section 2.4.1.1, WMA 1, 3rd paragraph, states that subsurface soil would be removed as necessary to meet Derived Concentration Guideline Levels. There is no differentiation between subsurface soil and "subsoil." The term "environmental media" was replaced in Chapter 2 by more specific terms or deleted, as appropriate.
- 238-189 Details on how the lagoons would be removed are provided in Appendix C of this EIS.
- 238-190 All contaminated soils not meeting Derived Concentration Guideline Levels would be removed. There is no differentiation between soils and subsoils.
- 238-191 Chapter 2, Section 2.4.1.1, of this EIS was revised to state that contaminated soil, sediment, and groundwater in the area would be removed until Derived Concentration Guideline Levels supporting unrestricted release have been met.
- 238-192 The procedure for obtaining approval for discharges from the leachate treatment facility is acknowledged, but these details are not necessary for an EIS.
- ||| 238-260
- 238-182 Text boxes are typically given a title at the top of the text box and are not numerically ordered like tables or figures.
- 238-183 The term was replaced with "soils and sediments."
- 238-184 Equipment, soil, water and chemicals are some examples of wastes generated during the work.
- 238-185 The term "remediated" was replaced with "removed for offsite disposal."
- 238-186 Additional information regarding the contamination of the buildings in WMA 1 can be found in Appendix C of this EIS.
- 238-187 The facilities and foundations would be dismantled with all material shipped off site for disposal. The sentence is correct as is.
- 238-188 Chapter 2, Section 2.4.1.1, WMA 1, 3rd paragraph, states that subsurface soil would be removed as necessary to meet Derived Concentration Guideline Levels. There is no differentiation between subsurface soil and "subsoil." The term "environmental media" was replaced in Chapter 2 by more specific terms or deleted, as appropriate.
- 238-189 Details on how the lagoons would be removed are provided in Appendix C of this EIS.
- 238-190 All contaminated soils not meeting Derived Concentration Guideline Levels would be removed. There is no differentiation between soils and subsoils.
- 238-191 Chapter 2, Section 2.4.1.1, of this EIS was revised to state that contaminated soil, sediment, and groundwater in the area would be removed until Derived Concentration Guideline Levels supporting unrestricted release have been met.
- 238-192 The procedure for obtaining approval for discharges from the leachate treatment facility is acknowledged, but these details are not necessary for an EIS.
- ||| 238-261
- 238-182 Text boxes are typically given a title at the top of the text box and are not numerically ordered like tables or figures.
- 238-183 The term was replaced with "soils and sediments."
- 238-184 Equipment, soil, water and chemicals are some examples of wastes generated during the work.
- 238-185 The term "remediated" was replaced with "removed for offsite disposal."
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- to wildlife." The habitat would be changed by the clearing operations so that there would likely be different species with different population sizes. Open fields would not be suitable habitat for squirrels or nesting habitat for most non-ground nesting small birds. Birds such as the Henslow Sparrow and the Short Eared Owl may find it to be suitable nesting habitat where it was not before.
- Page 4-36, 2nd paragraph: "Mitigation, including Appropriate erosion controls, would be installed and best management practices would be implemented to minimize soil erosion and sedimentation. As with the dams and reservoirs, specific requirements for fish management would be developed as part of the approval process prior to any actions taking place."
 - Page 4-36, 4.1.6.1, Threatened and Endangered Species: No Federal or State threatened, endangered, or candidate species have been found to reside on the WNYNSC Site (see Chapter 3, Section 3.8.4) thus, there would be no impact to any listed species from the Sitewide Removal Alternative."
- How often has the site been surveyed and when was the last time the site was surveyed? This survey should be provided so that DEC biologists can examine it. Once again, it is somewhat false to state that because no listed species were seen during surveys that they are not present. Cooper's Hawk and Sharp-shinned Hawks are fairly regular denizens of wooded areas, and are both listed as state species of special concern. Northern Harriers have been recorded by the Breeding Bird Atlas as occurring in this block of habitat, and they are threatened. The best that can be said is that impact to all species will be minimized by judicious choice of the period when clearing will occur.
- Page 4-39, 1st paragraph: "On the basis of this screening analysis, it is concluded that long-term releases from the Sitewide Close-In-Place Alternative (assuming no unmitigated erosion) would not result in long-term ecological consequences." Prepositional phrases don't belong at the start of sentences. Same comment about the use of the term mitigation.
- It has been concluded, on the basis of this screening analysis, that long-term releases from the Sitewide Close-In-Place Alternative (assuming active erosion control continues to take place) would not result in long-term ecological consequences.*
- Page 4-39, 4.1.6.3, 1st paragraph: Why do new temporary facilities have to be built? Should explain somewhere in the document why. Did not notice anything in document that explains the reason(s).
 - Page 4-40, last two paragraphs: This is the correct way to talk about impacts rather than use the word "mitigate".
- "These factors, plus the implementation of a site soil erosion and sediment control plan, would minimize potential indirect impacts to the Appalachian tiger beetle and cobblestone tiger beetle."
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- 238-193 The possible effects from placing boulders around the edge of the cap would be factored into the final design of the cap.
- 238-194 The design of the erosion controls will take potential erosion around the controls into account. Costs analyzed for this EIS do take into account the maintenance of erosion control measures.
- 238-195 The phrase was modified to state "...along creeks."
- 238-196 The depth of any excavation of contaminated soil would be limited to 0.5 meter (2 feet) to limit the scope of the Phased Decisionmaking Alternative and to avoid excavating into deeper contamination sources such as the North Plateau Groundwater Plume. If it is determined that additional contamination lies deeper in the subsurface, additional characterization would be considered as part of Phase 1 activities. In general, contamination levels have been found to decrease with increasing depth except for areas over the plume. If a highly radioactive area is encountered during excavation, then a course of action would be decided upon at that time.
- 238-197 A schedule for completion of Phase 2 decommissioning would depend on the Phase 2 activities selected.
- 238-198 Under the Phased Decisionmaking Alternative, if orphan waste were to be generated, it would be a small volume and could be stored in a facility such as Lag Storage Area 4.
- 238-199 Text was changed to state, "This approach was performed in a manner intended to avoid bias in the comparison of alternatives."
- 238-200 DOE did not attempt to estimate exposures to everyone drinking public water taken from all Lake Erie drinking water systems. Such an attempt would be speculative and would not add meaningful information contributing to a decision among decommissioning alternatives. However, this EIS does address possible impacts to receptors using water from drinking water systems that were near the confluence of Cattaraugus Creek with Lake Erie. Information about projected impacts on drinking water is provided in the "Concerns about Potential Contamination of Water" Issue Summary in Section 2 of this CRD.
- 238-201 Text was added to define the states comprising the Atlantic Interstate Low-Level Radioactive Waste Compact.

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- "If Phase 2 activities are similar to those undertaken under the Sitewide Close-In-Place Alternative, potential impacts to these two species would be minimized through the implementation of the site erosion and the sediment control plan (see Section 4.1.6.2.)"
- Page 4-41, Historic Resources: "The possibility to ~~unearth~~ of ~~unearthing~~ previously undetected sites is greater near the banks of streams and rivers, where previous inhabitants tended to establish settlements."
 - Page 4-52, Table 4-15: "Doses are peak annual doses coincident with one-time replacement of the permeable treatment wall, if necessary, and include doses conservatively projected from releases from WMAs that are not removed or closed-in-place during Phase 1 actions." Add "s"
 - Page 4-52, Maximum Exposed Individual: Have any studies been done in the Cattaraugus Reservation with the Seneca Nation of Indians to determine cancer rates?
 - Page 4-63, Top of page: "for the No Action Alternative. The peak annual dose to reasonably foreseeable offsite individuals due to ~~unmitigated uncontrolled~~ erosion would be in the range of about 60 to 130 millirem for both alternatives."
 - Page 4-96, 3rd paragraph: The volume of high level radioactive waste (500 cubic meters) if divided into two subcategories does not equal their volume; low-level radioactive waste (210 cubic meters) and transuranic waste (280 cubic meters). Why?
 - Page 4-97: "An additional 3.2 cubic meters (110 cubic feet) of Class A low-level radioactive waste would be generated annually during maintenance and surveillance of this orphan waste." What is this additional waste? Contaminated containers, handling equipment, leachate, soil, or what?
 - Page 4-98, **Sitewide Close-In-Place Alternative:** Less than 3.2 cubic meters,(110 cubic feet) of Class A low-level radioactive waste would be generated annually during maintenance and surveillance of this orphan waste. What is the nature of this additional waste?
 - Page 4-98, **"Phased Decisionmaking Alternative:** Less than or equal to 3.2 cubic meters (110 cubic feet) of Class A low-level radioactive waste would be generated annually during maintenance and surveillance of this orphan waste." What is the nature of this additional waste?
 - Page 4-101, "**4.1.12.1 Methodology and Assumptions:** Shipping packages containing radioactive materials emit low levels of radiation; the amount of radiation depends on the kind and amount of transported materials. DOT regulations require that shipping packages containing radioactive materials have sufficient radiation shielding to limit the radiation to 10 millirem per hour at a distance of 2 meters (6.6 feet) from the transporter." Is "low level" defined and used in the context of what amount of radiation can get out of a package? Otherwise the first sentence should be removed; just state the regulation.
- 238-268 238-202 Acreage lots refers to residential lots. The text was modified to refer to an increase in recreational, commercial, and residential lots.
- 238-269 238-203 Elevations noted in this EIS are used as cited in the referenced source documents. In general, data used include the North American Vertical Datum of 1988 (NAVD 88) and North American Datum of 1983 (NAD 83).
- 238-270 238-204 The orientations of Figures 3-7 and 3-6 in Chapter 3 of this EIS were made consistent and the extent of the South Plateau cross section in Figure 3-8 was modified to extend up to but not beyond Buttermilk Creek.
- 238-271 238-205 In isolation, this may be the case. However, much more information is provided in Figure 3-9 in Chapter 3 of this EIS, and the scale of each graphic is constrained to the page size and the composition of the entire figure.
- 238-272 238-206 The current wording in Chapter 3, Section 3.3.1.1, of this EIS has been corrected as suggested by the commentor.
- 238-273 238-207 The passage was revised to more clearly indicate that the sediments were deposited in deltas where streams entered glacial lakes.
- 238-274 238-208 The purpose of the geologic resources section is to provide the public with a general overview of the geographic distribution and production of oil and gas and nonfuel raw minerals in relation to WNYNSC. The level of detail presented is appropriate for the stated purpose of the discussion.
- 238-209 238-209 The use of the term "district" is consistent with its usage in the source documents cited in the section.
- 238-210 238-210 Examples of operational incidents are provided in Chapter 3, Section 3.3.2, of this EIS. Operational incidents may be caused by human error, failure of a mechanical system, or other situation.
- 238-211 238-211 The second paragraph in Chapter 3, Section 3.3.1, of this EIS has been reworded to more clearly discuss the primary radiologically contaminated areas.
- 238-212 238-212 The text has been modified as recommended.
- 238-213 238-213 The term "slightly exceed" means that the metal concentrations in the soils samples are indicative of concentrations within the expected background range.

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- Page 4-107, 4.1.12.4, Sitemwide Close-In-Place Alternative: "If train transport was used, the total number of shipments would be about one-half of those made under truck-only transport (about 615 shipments)." Which is which? 1230 vs 615 or 615 vs 307
- Page 4-109, 4.1.12.5, Phased Decisionmaking Alternative: "If train transport was used, the total number of shipments would be about one-half of those made under truck-only transport (about 6,300 shipments)." *Is 6,300 the bigger number or the smaller number?*
- Page 4-113, 4.1.13.2, Long-term Impacts: Have any studies been done on cancer rates on the Seneca Nation of Indians reservation?
- Page 4-114, last paragraph: "bounding", Use a different word; maximum, largest, etc?
- Page 4-119, 4.3.4: "The downstream population estimates are also conservative because no credit is taken for radionuclide removal as part of water treatment systems, and it was assumed that in addition to direct water consumption, the water would be used to irrigate a local garden." Please explain how and why a water treatment system takes out radionuclides. What percentage is taken out?
- Page 4-123, 1st paragraph: "Cumulative impacts can also result from spatial (geographic) and/or temporal (time) crowding of environmental perturbations (i.e., concurrent human activities and the resulting impacts on the environment are additive if there is insufficient time for the environment to recover.)"
- "Perturbations"! Just say disturbance. The word is more typically used to describe a change in the typical/normal movement of a celestial body. See previous comments about the readability of the document.
- Page 4-123, 3rd bullet: "The construction and operation of these facilities would result in a noticeable addition to local employment." Disagree that the operation of wind powered electrical generation towers would be a noticeable addition to local employment. Construction is short term and specialized so employment of local citizens at a noticeable level is also questioned.
- Page 4-123, 4.5.1: One impact not listed from past actions (or inaction) is the scope of additional contamination that resulted from the failure to clean up the groundwater plume when it was first discovered. The inability of the agencies to agree on cleanup should be discussed in this document. How much smaller would the plume be if remediation had been done in a timely manner? What is the added cost of this failure?
- Page 4-125, 5th bullet: Ellicottville has not issued approvals for the conversion to burning wood chips. The proposal appears to be problematic for Ellicottville.

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- 238-214** Incidents of uncontrolled airborne releases are discussed in more detail in Chapter 3, Section 3.11.5.1, of this EIS. The specific incident cited occurred when a high-efficiency particulate air filter in the main ventilation system failed and part of the filter media was drawn into the blower, cut into pieces, and discharged out through the main stack.
- 238-215** The two references to the figure showing the location of the slump blocks have been corrected.
- 238-216** Chapter 3, Section 3.8.2, of this EIS was revised to state, "The characteristics of this area are consistent with the New York State Freshwater Wetlands classification system definition of a Class IV wetland..."
- 238-217** The text was modified as suggested.
- 238-218** The estimated exposure level to the general public would be due strictly to these surface water releases. Estimated impacts from all waterborne releases from WNYNSC are provided in Chapter 3, Section 3.11.1.2, of this EIS. During 2007, an offsite individual could receive a maximum effective dose equivalent of 0.066 millirem, based on liquid effluent releases and drainage from the North Plateau.
- 238-219** The text has been modified to state that samples are also analyzed for radionuclides.
- 238-220** The text has been modified as recommended.
- 238-221** Offsite sediments are monitored annually at three locations along Cattaraugus Creek. In 2007, none of the locations had radioactivity levels that were greater than applicable limits or screening levels. Each of the three monitoring locations had cesium-137 levels greater than the background level and one had uranium-238 levels greater than the background level. Offsite monitoring at these locations will continue. The possibility of sediments moving downstream and the impacts are discussed in Chapter 4, Section 4.1.4, of this EIS. Appendix F, Sections F.3.1 and F.3.2, discuss sediment transport models.
- 238-222** Sediments behind the Springville Dam are sampled every 5 years and reported in the annual site environmental reports (available at www.wv.doe.gov). No decision has yet been made as to whether or not the sediment behind the dam or the dam itself has to be removed. The level of contamination and any disposal of the sediment behind the dam would be an issue that would be considered in the analysis

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- Page 4-129, 4.5.8, **Water Resources:** “Decommissioning activities at WNYNSC would not substantially contribute to adverse cumulative impacts to surface water resources, and would generally produce long-term beneficial results after decommissioning.” How would long term beneficial results occur? Why is there so much discussion about the construction of Route 219? What exactly does this have to do with West Valley? Where is the relevance?
- Page 4-130, 1st paragraph: “These actions will result in temporary impacts to water resources which will subside once construction activities are complete (USDOT and NYSDOT 2003b).” There will be permanent impacts resulting from the streams being piped (culverted). Culverts are not the natural state of a stream so there will be permanent impacts however minimal.
- Page 4-130, 3rd paragraph: “For example, redirecting the runoff into streams having higher rates of flow will result in the contaminants being more diluted and less likely to impact the overall water quality of the stream.” This sounds good but has the review of the 219 plans indicated this will happen? Moving surface water into different “sub-basins” can have long term implications to both the watercourse receiving more water and the one receiving less. The stream dynamics will change for both. So while diluting may have a positive “chemical” aspect there are potentially greater negative impacts such as increased erosion, gradient changes, water temperature changes and habitat changes related to fish migration, spawning, makeup of populations and density.
- Page 4-132, 4.5.10, 5th paragraph: Research has indicated bats do not necessarily have to be struck by rotating blades to be killed. A bat’s lung is very delicate and can suffer enough trauma from the change in air pressure around a rotating blade to cause the lung to hemorrhage killing the bat. The case does not appear to be the same for even the smallest of birds which have more robust lungs.
- Page 4-137, last paragraph: “Institutional controls are considered an important part of any alternative, and act to ~~mitigate~~ (reduce or minimize) potential impacts. However, the unlikely loss of institutional controls would potentially lead to ~~unmitigated uncontrolled~~ erosion and/or intruders within site boundaries and would result in radiological dose impacts to humans. The ~~unmitigated uncontrolled~~ erosion case would lead to doses approaching or exceeding 500 millirem per year for some individual receptor scenarios.

There is no mention of invasive species on-site nor a discussion of preventing their occurrence /spread.

Book: *Chapter 5*

- Page 5-11, “*Coalition on West Valley Nuclear Wastes & Radioactive Waste Campaign and DOE Stipulation of Compromise Settlement*”: States that an action was filed in 1996 but that they entered into a stipulation in 1987. Is that correct?
- Page 5-14: footnote 2 is not shown at the bottom of the page

for removing the dam, but that is not within the scope of this EIS, which addresses decommissioning and/or long-term stewardship of WNYNSC.

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| 238-283 | 238-223 Chapter 3, Section 3.6.2.1, of this EIS was modified to state that water is periodically (approximately every 1 to 2 weeks) pumped. With the French drain plugged, it is possible that groundwater is periodically infiltrating Lagoons 2 and 3, but there is no evidence of this occurring. Lagoon 2 is untreated water that is treated by the Low-Level Radioactive Waste Treatment Facility. Lagoon 3 is treated water that is sampled prior to discharge. |
| 238-284 | 238-224 The wording here is general, referring to all types of biotransformations. The focus of the sentence is on the resulting variation in geohydrological properties. |
| 238-285 | 238-225 The text was corrected to state, “the flow becomes...” |
| 238-286 | 238-226 The text, with edit, was clarified as recommended. |
| 238-287 | 238-227 Well completion is the act of preparing a well bore for producing water, oil, or gas. In the referenced sentence, wells drawing water from the weathered zone correspond to the regional bedrock aquifer. The text was changed to say, “the wells completed in this zone...” |
| 238-288 | 238-228 The text associated with Chapter 3, Figure 3-22, of the Revised Draft EIS was modified to state that the figure reflects data as recent as 2007. Appendix C, Section C.2.13, also has been revised to state that the plume boundary on the figure represents the boundary of the 10-picocuries-per-liter gross beta concentration in groundwater as of 2007. |
| 238-289 | 238-229 The estimated plume extent incorporates data as of 2007. Since the plume changes over time, dashed lines were used in the figure to depict the approximate nature of the contour. |
| | 238-230 The panels progress from the higher to lower intervals as they appear going down the page. |
| | 238-231 As discussed in Chapter 3, Section 3.6.2.1, of this EIS, monitoring of the performance of the pilot permeable treatment wall is no longer required; therefore sampling from some monitoring points has been discontinued while sampling from other monitoring points has been reduced. |
| | 238-232 The term “mitigate” is the correct term. While it is not specific, at the time of installation of the Groundwater Recovery System, it was unclear as to how effective |

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Book: *Chapter 6*

- Page 6-6, 6.4, 3rd bullet: "Limit unnecessary idling times on diesel-powered engines." New York State Conservation Law limits the operation of certain on-road heavy duty diesel powered vehicles. Off road vehicles such as earth movers are exempt from the regulation. Over the road trucks that would visit the site would be subject to the regulation.
- 6 NYCRR Part 217: Motor Vehicle Emissions
No person who owns, operates or leases a heavy duty vehicle including a bus or truck, the motive power for which is provided by a diesel or non-diesel fueled engine or who owns, leases or occupies land and has the actual or apparent dominion or control over the operation of a heavy duty vehicle including a bus or truck present on such land, the motive power for which said heavy duty vehicle is provided by a diesel or non-diesel fueled engine, shall allow or permit the engine of such heavy duty vehicle to idle for more than five consecutive minutes when the heavy duty vehicle is not in motion, except as otherwise permitted by section 217-3.3 of this Subpart.
- Page 6-7, 6.5, Ecological Resources: "For example, prior to land-disturbing activities, the proposed site would be surveyed for nests of migratory birds in accordance with the Migratory Bird Treaty Act. Although threatened and endangered species have not been recorded on the site, any mitigation actions deemed necessary through the consultation process regarding state and federally listed threatened and endangered species would be implemented if such species were recorded onsite in the future. (For applicable regulatory requirements, see Chapter 5, Section 5.6.1, Ecological Resources Consultations.)" It is against the law to interfere directly or indirectly with the nesting of any birds covered by the Migratory Bird Treaty Act whether they are threatened or endangered or not.
- Page 6-7 Chapter 6.5, 1st paragraph: "For example, prior to land-disturbing activities, the proposed site would be surveyed for nests of migratory birds in accordance with the Migratory Bird Treaty Act. Although threatened and endangered species have not been recorded on the site, any mitigation actions deemed necessary through the consultation process regarding state and federally listed threatened and endangered species would be implemented if such species were recorded onsite in the future."

See comments for Page 4-34, Table 4-9. It is imperative that the client must insure that all bird species are protected through the Migratory Bird Treaty Act. Throughout this proposal, it is apparent that the only species given serious consideration are state listed species. However, the MBTA prohibits the destruction, harassment, or overall 'taking' of any bird species. That includes disruption of the nest, the eggs, the nestlings, or the bird itself. In other words, every effort must be made to minimize harassment of the numerous species of birds which occupy the forests in which work is proposed, and all bird species must be considered.

238-290

the system would be (whether or not it would stop or reduce the expansion of the plume).

238-233 The text was changed as recommended.

238-234 Approximately 0.6 meters (2 feet) of the 909 well is in the weathered Lavery till, and the remainder of the 4.6-meter (15-foot) screen is in the unweathered Lavery till.

238-235 Chapter 3, Figure 3-5 of this EIS, "Topography of the Western New York Nuclear Service Center," shows elevations within the WNYNSC site boundary in excess of 518 meters (1,700 feet). The Project Premises are at approximately 427 meters (1,400 feet). The text has been modified to express the elevation change in terms of the highest elevation within the WNYNSC boundary because it is this elevation change that can influence meteorological conditions.

238-236 The semi-colon was changed to a comma so that the text reads, "the former vitrification heating, ventilation, and air conditioning system;..."

238-237 The text was changed to refer to the adjacent area around a wetland.

238-238 These doses have been updated to reflect the results reported in the *2007 Annual Site Environmental Report* (WVES and URS 2008). Doses to the public are calculated in accordance to DOE- and EPA-approved techniques. The techniques and assumptions are described in detail on pages 3-2 through 3-11 of the *2007 Annual Site Environmental Report*.

For the airborne releases, the doses were modeled using the EPA-approved CAP88-PC computer code and included the effects of ingestion, inhalation, air immersion, and ground surface pathways. The dose for the maximally exposed offsite individual was calculated assuming the individual resided 1.9 kilometers (1.2 miles) north-northwest of the site and ate only locally produced foods.

238-239 These doses have been updated to reflect the results reported in the *2007 Annual Site Environmental Report* (WVES and URS 2008). Doses to the public are calculated in accordance with DOE- and EPA-approved techniques. The techniques and assumptions are described in detail in pages 3-2 through 3-11 of the report. For the liquid releases, the doses were modeled using the EPA-approved GENII computer code and included the effects of ingestion and ground surface pathways. The dose from liquid releases is primarily from release of strontium-90 and cesium-137 from the existing site groundwater contamination. The *2007 Annual*

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- Page 6-7, 6.5, 2nd paragraph: "Options to mitigate direct impacts to wetlands could range from the reestablishment of affected areas to the creation of new wetlands either on- or off site." Remove the "-" after the word "on".

Book: *Chapter 11*

- Senator Clinton and Representative Reynolds no longer hold elective office.

Book: *Glossary*

Comments:

- Page 8.2, "Bedload": definition should read as: *Soil, rock particles or other solid debris moving along the bottom of a stream in traction by rolling, sliding or saltation (jumping) and in general not supported by the water.* "...silt load" carried by suspension. Both clay and silt are carried by suspension.
- Page 8.2, "Best Management Practices", first sentence: Structural, nonstructural, and managerial techniques, other than effluent limitations, to prevent or reduce pollution of surface water.
- Page 8.3: "*Clay*" should be added to the definitions. Is clay used in containment or other specific ways that should be described? Bentonite?
- Page 8.5, "Environmental Impact Statement (EIS)", first sentence: "...significantly affecting the quality of the human environment." Shouldn't it read "...significantly affecting the quality of the environment"?
- Page 8.5, "Erosion": should read as: *Nature processes which include weathering, dissolution, abrasion, corrosion and transportation, by which material is worn away from the earth's surface.*
- Page 8.8, "Ion Exchange": Definition not well written.
- Page 8.9, "Mitigative Measures: Those actions that avoid impacts altogether, minimize impacts, rectify impacts, reduce or eliminate impacts, or compensate for the impact." While this definition may come out of the dictionary and law/regulation is does little to succinctly describe what is occurring in each instance that it used. Specific words should be used: avoid, reduce, replace, etc.
- Page 8.10, "Modified Mercalli Intensity Scale", 2nd sentence, 2nd parenthesis: Damage total. Should is read as "total damage"?

|| 238-292

Site Environmental Report indicates that the most important waterborne exposure pathway is the consumption of fish from Cattaraugus Creek by local sportsmen and residents. The estimated maximum offsite individual dose in 2007 was 0.066 millirem, which is about 1.65 percent of the 4.0 millirem per year standard used by EPA and the New York State Department of Health for community drinking water supplies.

|| 238-293

238-240 The text in Chapter 3, Section 3.11.1.2, of this EIS was modified to state: "Figures 3-32 and 3-33 show the calculated annual dose to the hypothetical maximally exposed individual and the collective dose to the population, respectively, over the last 10 years. The doses represented by these data confirm the continued small (less than 0.07 millirem per year) addition to the radiation dose of 620 millirem per year that the average individuals in the population around the WNYNSC receives from ubiquitous background and other sources of radiation."

|| 238-294

238-241 All underground tanks at WNYNSC, whether currently used or used in the past, have been characterized and the remaining inventory information was used in the characterization of the site.

|| 238-295

238-242 The indicated text accurately reflects the radiological exposures for West Valley workers. The data is taken from the DOE complex-wide compilation of occupational radiation exposures, which is available on the Internet at: <http://www.hss.energy.gov/csa/analysis/rems/annual.htm>. As indicated in the Revised Draft EIS text: "This equates to an average dose to workers with a measurable TEDE [total effective dose equivalent] of..." These averages are only for those workers with a measurable dose. For example, in 2006, the indicated reference, the DOE *Occupational Radiation Exposure 2006 Report* indicated on Exhibit 3-14 (page 3-10) that 189 workers had measurable doses, and hence were included in the average dose calculation. Exhibit B-14 of the *DOE Occupational Radiation Exposure 2006 Report* indicates that, for the year 2006 at West Valley, 470 workers were monitored; 281 had less than measurable exposures; 129 had exposures ranging from measurable to 0.1 rem; 47 had 0.10 to 0.25 rem; 12 had 0.25 to 0.50 rem; and none had a dose greater than 0.50 rem; the average measurable total effective dose equivalent (TEDE) was 0.085 rem.

|| 238-296

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At all DOE sites, contractors are required to use the "as low as is reasonably achievable" (ALARA) principle in controlling planned worker radiological exposures. One tool in that planning is establishing administrative goals that limit worker exposures to less than the annual limits. One such control at West Valley is to limit a worker to less than 100 millirem (0.1 rem) on any one day.

***Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation***

<p>Enclosure 2 - NYSDEC Non West Valley Assigned Staff DEIS Comments</p> <ul style="list-style-type: none"> • Page 8.10 “orphan waste”: Waste that cannot currently be disposed of in an established or planned permanent disposal facility. <i>Why can't it be disposed of? It is not enough to just say it can't be disposed of.</i> • Page 8.11, “Radioactive Waste”, 2nd sentence: “Waste material that contains source, special nuclear, or by-product material is subject to regulation as radioactive waste under the Atomic Energy Act.” <i>What does “special nuclear” mean?</i> • Page 8.13, “Silt Load”: <i>Clay and silt are carried in the suspended load. The defined word should be “Suspended Load”.</i> • Page 8.13, “Sole Source Aquifers”: <i>Poorly written. Should be rewritten.</i> • Page 8.13, “Solid Waste”, 2nd definition: …sludge from a waste treatment plant… <i>Should read as …sludge from a waste water treatment plant.</i> • Page 8.13, “Solvents”: <i>Should include that water is the universal solvent.</i> • Page 8.13: <i>“Special Nuclear” should be added to the list of definitions.</i> • Page 8.14, “Stream Terrace”: Originally occurring at or below the level of the stream, the stream terrace is exposed as stream downcutting occurs. <i>How can it occur below the level of the stream? Glaciers are probably the most common cause of streams aggrading. Once the stream bedload returns to non-glacier conditions the stream will cut through the alluvial deposits, degrading. Terraces can then be created.</i> • Page 8.15: <i>Should there be a definition for “Visitor”? – Individuals on site for reasons such as regulatory oversight, as representative of agencies with permit authority for activities on-site.</i> <p>Book: Appendix C</p> <ul style="list-style-type: none"> • There were fourteen references to “clean fill”, seventeen to ‘clean material” twelve to “other clean material” and twenty two to “appropriate backfill material” found in Appendix C. Please describe exactly what these different items are. • There are twenty eight references to “contour to grade”. In every case will seeding, mulching and erosion control take place? How much time will elapse between the placing of these various items and seeding and mulching? Immediately after, within 24 hours or 48 hours? • Page C-63, C.3.1.3.1, 3rd paragraph: “The steel shield walls and roof of the STS Valve Aisle would be removed remotely using a telescoping mast equipped with cutting, grappling, and lifting end-effectors.” 	<p>238-243 The leak from Line 7P-240-1-C in the off-gas operating aisle occurred in the late 1960s. The liquid went through an expansion joint in the Main Process Building and is the major source of the North Plateau Groundwater Plume (WVNSCO 1995). Information about this incident and subsequent decontamination actions can be found in WSMS-OPS-05-001 (WSMS 2005).</p> <p>238-244 NEPA requires agencies to include analysis of reasonably foreseeable transboundary effects of proposed actions, based on case law. The Council on Environmental Quality provides guidance on when to consider transboundary effects.</p> <p>238-245 The decision regarding which facilities would be removed has been developed by DOE and NYSERDA after careful consideration of all WNYNSC facilities and areas. The Remote Handled Waste Facility will be in a condition for dismantlement by the end of the Interim End State, as stated in Appendix C, Section C.2.5.1, of this EIS.</p> <p>238-246 The reference to paper, wood, and scrap metal was removed from Chapter 3, Section 3.13.2, of this EIS.</p> <p>238-247 The discussion in the introduction to Chapter 4 has been revised. This discussion no longer refers to resource areas or the level of significance of potential impacts.</p> <p>238-248 All of the decommissioning alternatives addressed in this EIS include provisions to remove or control the spread of contamination in the Cesium Prong and North Plateau Groundwater Plume.</p> <p>238-249 The sentence was revised in this Final EIS to delete “for NDA and SDA stabilization” and to reference Chapter 4, Table 4-61, which lists the projected volumes of the principal bulk materials used on site for each EIS alternative.</p> <p>238-250 The editorial correction has been made as requested.</p> <p>238-251 “Minimized” has been substituted for “mitigate.”</p> <p>238-252 The paragraph was clarified.</p> <p>238-253 “Minimized” has been substituted for “mitigate.”</p> <p>238-254 The discussion of Hazard Index is no longer in this section. It is addressed in Chapter 4, Section 4.1.10, and Appendix H of this EIS. It is unclear to what the commentator refers in stating that the release would be two orders of magnitude greater. Assuming this refers to radioactive impacts, preceding Appendix H,</p>
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**Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation**

Enclosure 2 - NYSDEC Non West Valley Assigned Staff DEIS Comments

effector (ĕ-fĕk'ĕr) n.

1. A muscle, gland, or organ capable of responding to a stimulus, especially a nerve impulse.
2. A nerve ending that carries impulses to a muscle, gland, or organ and activates muscle contraction or glandular secretion.
3. *Biochemistry* A small molecule that when bound to an allosteric site of an enzyme causes either a decrease or an increase in the activity of the enzyme.
4. *Computer Science* A device used to produce a desired change in an object in response to input.

Used 15 times in this appendix. While the reviewer understands what is trying to be said, the word does not seem to really the use that is intended.

- Page C-77, C.3.1.7.6: It is not clear from the description if all the excavated areas would remain open and then all be filled at one time. Are they all under cover until the holes are filled?
- Page C.3.1.12.3, Railroad Spurs: "The removed rails and tracks would be disposed of as construction and demolition debris." Ties typically contain creosote to extend their life. There is no mention of ballast which is used to support the track and provide drainage. Is there ballast, and if so, how will it be disposed of, if at all?
- Page C-134, C.4.4, 1st paragraph: "It would also be capable of receiving wastes in packaged form, decontaminating the packages, if necessary, classifying them, temporarily storing them, and loading them onto trucks or railcars for offsite transport." Could any of these received wastes come from off-site?
- Page C-134, 3rd paragraph: Why would a second floor be created for office space? No piping for potable water? or sewers?
- Page C-137, C.4.4, 1st paragraph: "A receiving dock, separate from the shipping dock would also be provided for reception of process materials, such as empty boxes and drums, and prepackaged wastes." Where would the prepackaged wastes be coming from? Any from offsite?
- Page 138, C.4.4 2nd paragraph: "One component of the waste retrieval process that involves a high level of uncertainty is the retrieval of wastes from the Nuclear Fuel Services deep holes, using primarily a telescoping boom with various end effectors."

Suggest changing end of sentence to read "...telescoping boom with various attachments/tools at the end."

**238-312
cont'd**

Table H-32, there is this statement: "The peak radiological risk is on the order of 100 times greater than the peak chemical risk." This compares radiological risk to chemical risk. All of the chemicals addressed in Chapter 4, Section 4.1.10, have a Hazard Index less than 1, which indicates that there is not a recognized chemical health risk.

238-313

238-255 "Minimized" has been substituted for "mitigate."

238-314

238-256 "Or lower" has been added to the text.

238-315

238-257 The sentence is correct as written.

238-258 The paragraph was revised.

238-259 Informal consultation has been carried out with both the U.S. Fish and Wildlife Service (USFWS) and the NYSDEC Natural Heritage Program (see Appendix O of this EIS). Additionally, site-specific studies have been conducted. Neither the site-specific studies nor the consultation process indicated the presence of threatened and endangered species. Thus, it was determined that actions taken under each of the alternatives would not impact this group of species. As a clarification, the statement being questioned has been changed to read, "No impacts to federally or state-listed endangered, threatened, or candidate species are expected." A similar change has been made to the "Threatened and Endangered Species" subsections.

238-316

A reference to conducting clearing operations prior to or after the breeding season was mentioned in the last paragraph of "Terrestrial Resources" (Chapter 4, Section 4.1.6.1, of this EIS). The sentence has been revised to indicate the dates as noted in the comment.

238-317

238-260 The text has been revised as suggested.

238-318

238-261 As noted in Appendix C, Section C.2.14, of this EIS, 95 percent of the radioactivity in contaminated soil is contained within the top 4 inches of soil; thus, the depth to which soil removal would be limited. While site-specific revegetation plans have yet to be finalized, with proper preparation and soil amendments, revegetation should be successful.

238-262 The statement was intended to be conservative.

238-263 The statement was modified to indicate that species repopulating the area would likely be different from those originally there.

**Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation**

Enclosure 2 - NYSDEC Non West Valley Assigned Staff DEIS Comments

- Page C-139, C.4.5, 7th paragraph: “In general, scabbing waste and demolished equipment...” Please use a word that the general public can understand.
- Page C-145, C.4.6.8, 2nd paragraph: This paragraph is also found in C.4.4 on page C-138. Does not seem to belong here.
- Page C-150, C.4.8.3: Plants are tenacious. How will all manner of plants be dealt with when they start growing on top of the cap?
- Page C-155, C.4.13, Erosion Control Structures: All of the man made structures will change the dynamics of the area. What is the projected design life of these structures? Notwithstanding design life things can happen at any time that require attention. How will these structures be maintained as everything around them erodes? If not maintained, diversion ditches will immediately begin to be populated by trees and shrubs. Plant litter will start to fill the ditches which will get wetter. Eventually, the ditches will be overtapped during a storm event with the berms ultimately breaching.
- Straightening a stream entails increasing the gradient and therefore erosional forces.
- Page C-157, Diversion Ditches: What is the “maximum probable flood”? Water Control Structures. What is the “maximum probable flood”?
- Page C-159, last sentence: “Finally, the stream flow would be redirected back to the armored streambed.” There is no discussion about diverting the stream before the channel is excavated.

Book: *Appendix D*

- Page D-13, D.3.1.3, **Receptors Inside the Current Western New York Nuclear Service Center Boundary**, 2nd paragraph: “In particular, direct intrusion into buried waste is assumed to not occur in the erosion case, because erosion-driven exposure of the waste involves development of steep slopes and concentrated flow as the area moves within the rim of a creek.” Exposure would occur as the creek rim advanced (due to erosion) into/toward the Disposal Area. The disposal area would not move toward the creek rim. The creek rim moves into the Disposal Area.

Children/teenagers who lived in the house where the excavation took place would likely be more exposed than their residential farmer farther. Aren’t children more susceptible to the effects of radiation/chemicals than adults?

Book: *Appendix E*

- 238-264 “Minimized” has been substituted for “mitigate.”
- 238-265 As noted in the response to Comment no. 238-259, informal consultation has been carried out with both the USFWS and the NYSDEC Natural Heritage Program (see Appendix O of this EIS). Additionally, site-specific studies have been conducted. Neither the site-specific studies nor the consultation process indicated the presence of threatened and endangered species. Thus, it was determined that actions taken under each of the alternatives would not impact this group of species.
- 238-319
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- 238-325
- 238-266 The section containing the cited sentence was revised to reflect updated analyses for this Final EIS. The term “unmitigated erosion” was retained because of its historic use as part of EIS development.
- 238-267 The paragraph was revised to refer the reader to sections in this EIS that address construction of temporary facilities for the Phased Decisionmaking Alternative.
- 238-268 The text has been revised as suggested.
- 238-269 The cited footnote was revised.
- 238-270 In 2009, *The Journal of Rural Health* published the results of a study that evaluated the incidence of cancer among the Seneca Nation of Indians as compared to the rest of New York State (except New York City) for two 15-year periods (1955 through 1969 and 1990 through 2004). The study concluded that “[d]espite marked changes over time, deficits [lower rates compared to those in the rest of the State] in overall cancer incidence have persisted between the time intervals studied” (Mahoney et al. 2009).
- 238-271 The term “unmitigated erosion” was retained because of its historical use during the development of this EIS.
- 238-272 The difference is due to rounding. Note that the volumes of high-level radioactive waste, low-level radioactive waste, and transuranic waste discussed in the paragraph are presented as approximate volumes.
- 238-273 The waste projected for possible storage in the Container Management Facility would be stored within shipping containers such as drums, boxes, or high-integrity containers. Surveillance or maintenance of this waste is projected to annually generate small volumes of miscellaneous, low-activity, contaminated materials—essentially trash—such as paper, plastic sheeting, or discarded clothing.

**Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation**

Enclosure 2 - NYSDEC Non West Valley Assigned Staff DEIS Comments

- Page E-33, E.3.4.1, Thick-bedded Unit, 2nd paragraph: "These estimates employed artificial neural network methods. Data from locations with both hydraulic conductivity measurements and soil textures were used to train a Radial Basis Network or RBN network. Soil texture data from locations without conductivity determinations were run then through the trained network to produce estimates for those locations." Should there be a period to end a sentence after "RBN network"?
 - Page E-33, E.3.4.1, 2nd paragraph, last sentence: "The soil textures used for training the network and subsequently predict additional hydraulic conductivities consisted of both laboratory determined textures extended by estimates from site geologists using boring log descriptions (Cohen 2006)." Sentence not well written. The use of the word "both" does not seem correct. Should "determined" be determined?
 - Page E-37, E.3.4.1, 1st paragraph: "Well locations are scattered about the site, mostly on the South Plateau and the average distance between locations is hundreds of feet—likely exceeding the scale of spatial any structure in the unit." Spatial any structure? Should it be *exceeding the scale of any spatial structure in the unit?*
 - Page E-37, E.3.4.1, 1st paragraph: "Although not completely optimal, sensitivity of model results to changes in the parameter value appears low and the initial input value has not been changed." Should it say, "...even though the initial input value has not been changed."? Confusing.
 - Page E-37, E.3.4.1, Slack-water Sequence, 2nd sentence: Do they mean that only 12 locations were used after 1999 or were some of the wells plugged?
 - Page E-37, E.3.4.1, Slack-water Sequence, 2nd paragraph, 1st sentence: Are they talking about data from 12 wells? or 12 pieces of data?
 - Page E-46, E.3.5, Automated Calibration, 3rd paragraph, 2nd sentence: "The automated-calibrated model yielded the a head RMSE of 4.2 meters and a seeps RMSE of 1.04 kilogram per second, but weighted RMSEs were 5.2 meters and 1.11 kilograms per second, respectively" Should "the" be removed in, "yielded the a head RMSE"?
 - Page E-51, E.3.7.1, last paragraph, 2nd last word on page: "Unperturbed" poor word usage given generally accepted meanings. A much better choice would be "Undisturbed".
 - Page E-53, E.3.7.1, 3rd paragraph, 4th sentence: "unperturbed" see immediately above for comment on word definition. Is the author in this case trying to say a model based upon natural conditions where there are no human constructed facilities or disturbances on the site?

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| 238-326 | 238-274 The first cited sentence describes the physical situation encountered during transportation of radioactive materials and is believed to be an informative precursor for the second cited sentence. |
| 238-327 | 238-275 The sentence has been revised for clarification. |
| 238-328 | 238-276 The sentence has been revised for clarification. |
| 238-329 | 238-277 "Bounding" appears to be an appropriate descriptor in this case. |
| 238-330 | 238-278 The Erie County water treatment plants at Sturgeon Point on Lake Erie, downstream of Cattaraugus Creek and on the Niagara River, all currently use three separate processes that remove solids and particulates down to microscopic size before the water is provided to consumers. The three processes are used in series: flocculation, sedimentation, and filtration. Although not designed specifically to remove radionuclides from water, these processes remove most solids, including solid particles of radionuclides that may be present in water. A 2008 report from the Erie County Water Authority shows that, like all water treatment plants in the United States, these facilities measure the concentrations of radium, uranium, alpha radiation emitters, and beta radiation emitters in drinking water and compare the concentrations to EPA and New York State drinking water standards. (Of the radionuclides present at WNYNSC, radionuclides such as transuranic isotopes are alpha emitters, while strontium-90 and cesium-137 are beta emitters.) The 2008 report shows that samples taken in 2008 have levels that are either below the detection limits of instrumentation or, at most, about 10 percent of the allowable limits (ECWA 2008). In the hypothetical and unlikely event that treatment of water was contemplated for removal of specific radionuclides, treatment systems specifically designed for radionuclide removal (e.g., ion exchange columns) could be installed and used. |
| 238-331 | 238-279 The text in Chapter 4, Section 4.5, of this EIS was revised as suggested. |
| 238-332 | 238-280 This language is taken from the environmental documents prepared for the wind energy projects. For example, documentation from Horizon Wind Energy states: "Horizon anticipates investing as much as \$40 million in labor and materials such as gravel, stone, and cement. When feasible, Horizon tries to utilize regional labor and materials during the construction phase. The construction phase also creates a significant ripple effect on the local economy, particularly for retail and service establishments" (Horizon 2008). |

**Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation**

Enclosure 2 - NYSDEC Non West Valley Assigned Staff DEIS Comments

- Page E-74, E.4.1.2, 1st paragraph: “To represent these features the hydraulic conductivities of the tanks and sediments of Lagoons 2 and 3 are assigned values of hydraulic conductivity of 1×10^{-10} centimeters per second while the combined effects of barriers at Lagoon 1 are represented by assignment of a value of 1×10^{-10} centimeters per second to the material at Lagoon 1.”
- The phrase “Waste Tank Farm Tanks” was used 9 times in Appendix E. the second use of “tanks” didn’t seem to fit well in several cases. It would be better to leave it out.
- Page E-76, E.4.1.3, 1st paragraph: “The cross-sectional structure of the aquifer is that represented in Figures E-33 through E-36 with the same vertical discretization as the historical conditions case.”
- Page E-76, E.4.1.3: “Flow balances predict flow from the prior area of the location of the removed Main Plant Process Building through the slurry wall to the west, that is, towards the Waste Tank Farm and from the area of the lagoons both to the east towards Erdmann Brook and to the west through the slurry wall towards the northern extension of the North Plateau Plume.” This sentence is too long. It should be turned into at least two sentences.

Book: *Appendix F*

- Pg 53, F.3.2.5, 2nd paragraph: “One element that would likely be improved by a more thorough calibration approach is the degree of landscape dissection.” Wrong word.

Book: *Appendix G*

- Page G-4, G.2: “Cumulative impacts of a mixture of radionuclides are estimated as the sum of dose or risk...”. Has any thought been given to the likelihood that when several “contaminants” are mixed together the impact is greater than the sum or has this been disproved in studies?
- Page G-20, G.3.2.2, 1st sentence: “...include a tumulus covering an above-ground...” Tumulus – an artificial hillock or mound (as over a grave) esp: an ancient grave.
- Page G20, G.3.2.2: “The primary features of the tumulus are soil, drainage, and clay layers designed to minimize flow rate of water reaching the wasteform.” ...designed to minimize the amount of water penetrating the cover or ..reaching the waste..
- Page G-23, G.3.2.3: Why will groundwater flow through the tanks? Is this because the time period is so long that the tanks have failed or that holes for piping in the tanks have failed?
- Page G-39, G.4 Intruder Scenario Models: Is an intruder by definition a human? Did not find “intruder” in glossary. Why use the hiker who comes once or twice? That seems like

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| | 238-281 DOE acknowledges the commentor’s concern about past actions at WNYNSC. These past actions, however, are outside the scope of this EIS. Note that the discussion of current conditions in Chapter 3 of this EIS reflects the impacts resulting from past actions. |
| | 238-282 There is no indication that this activity may be cancelled, but currently remains as a reasonably foreseeable action in the region. |
| | 238-283 Regarding the question about long-term beneficial results, some short-term adverse impacts may occur during earth-moving activities, but cleanup and/or containment generally results in improvements in long-term conditions by removing contaminants or isolating them from the environment. Regarding the question about the Route 219 Freeway, construction of this freeway is the major impact-producing activity in the region. Therefore, impacts associated with this activity have the greatest potential to interact with activities at WNYNSC to produce cumulative impacts. |
| | 238-284 While it is true that there would be impacts associated with changing the natural stream channel to a culvert, the statement in question refers to construction impacts that would cease once construction activities are complete. |
| | 238-285 This language was obtained from page 4-117 of the <i>Final Environmental Impact Statement for the Route 219 Freeway</i> (USDOT and NYDOT 2003). |
| | 238-286 The text in Chapter 4, Section 4.5.10, of this EIS has been revised to acknowledge and provide references to this research. |
| | 238-287 The first cited sentence was revised. Regarding the second two sentences, the term “unmitigated erosion” was retained because of its historic use as part of EIS development. Regarding invasive species, Executive Order 13112, <i>Invasive Species</i> , is listed in Chapter 5 of this EIS as a requirement potentially relevant to decommissioning and/or long-term stewardship of WNYNSC. Chapter 4, Section 4.1.6.1, was revised to note that disturbed areas would be regarded and revegetated using native species according to a sitewide revegetation plan that would be approved by the State of New York. Chapter 6, Section 6.5, was also revised to note revegetation using native species. |
| | 238-288 This was a typographical error. The text has been revised to replace 1996 with 1986. |

**Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation**

Enclosure 2 - NYSDEC Non West Valley Assigned Staff DEIS Comments

a minimal exposure. Why not children playing in the “neighborhood” who are the children of the resident farmer, riding dirt bikes, atvs, and other types of play? Are children more impacted by radiation and chemical exposures? Children are also drawn to water, to play in, build dams, etc.

Shouldn’t largest accident dose be from a terrorist attack? Or is that not considered in accident category? Is there a listing for intentional vandalism/terrorism?

What about “dumpster divers” looking for resources?

Book: Appendix H

- Page H-25, H.2.2.1, 1st paragraph, last sentence: “While decrease in retention of elements on cement with degradation has been reported (Bradbury and Sarott 1995), high retention of actinide elements is reported for even for degraded cements.” This sentence needs to be rewritten.
- Page H-25, H.2.2.1, 2nd paragraph, 2nd sentence: “Characterization of grouted materials has established that cesium and strontium are retained **primary** **primarily** on the aggregates used in the concrete (*add “,” or end sentence here*) while other elements are retained both on the aggregate and on the calcium silicate hydrogel matrix of the concrete (Stinton et al. 1984)”
- Page H-25, H.2.2.1, 3rd paragraph: Prepositional phrases at the beginning of sentences make them awkward and harder to understand.
- Page H-26, H.2.2.2.1, Total Effective Dose Equivalent, 2nd paragraph, 2nd sentence: “There is an earlier, subsidiary SDA peak occurring at about 1,000 years, and a few minor peaks associated with the.” The sentence needs to be finished.
- Page H-33, H.2.2.2.1, Hazard Index, footnote 7, 3rd sentence: “*If the hazard quotient for an individual chemical or the hazard quotient for a group of chemicals exceeds unity, the chemical(s) may produce and adverse effect, but normally this will require a hazard index or quotient of several times unity.*” The word “and” should be changed to “an”.
- Page H-35, H.2.2.2.2, 2nd sentence: What does a Seneca Nation of Indian receptor mean? Is the receptor a member of the Seneca Nation? There are Cayuga Nation members that live on Seneca Nation land. Please see all other “Seneca Nation of Indians receptor”.
- Page H-35, H.2.2.2.2, 1st paragraph, 2nd sentence: The use of the word “raised” means that someone/something has taken an active role in at least part of the life cycle of the fish that are being consumed. Fish are not normally raised in Cattaraugus Creek. Fish found in Cattaraugus Creek typically are raised in a hatchery and then stocked or are native to the creek. The word should be changed to “living and or stocked”. The word “raised” is used seven times in this appendix.

238-289 This was a typographical error. The second footnote callout has been deleted from the text.

238-290 DOE and NYSERDA note the comment. State air quality permit requirements for implementation of the preferred alternative would be followed to maintain compliance with the permit; necessary air quality regulatory coordination with NYSDEC would occur prior to commencement of any activities.

The intent of the bulleted list is to summarize potential mitigation measures. Specific details will be included in the Mitigation Action Plan, including how the mitigation measures will be planned and implemented.

238-291 The discussion of migratory birds in Chapter 6, Section 6.5, of this EIS has been moved and revised to state: “Potential direct impacts on ecological resources would include habitat loss (including wetlands) and increased mortality of wildlife (i.e., terrestrial and aquatic fauna), as well as indirect impacts, such as displacement of wildlife from the affected area. Construction and decommissioning activities would incorporate mitigation measures for ecological impacts, such as avoidance of undisturbed habitat (e.g., nesting areas) and timing land-disturbing activities to avoid animal breeding seasons. For example, to avoid disturbing breeding bird populations, many of which are migratory, it might be necessary to undertake any required land-clearing during the non-breeding season (i.e., August 1 through March 15). In addition to protecting bird populations in general, conducting land-clearing activities during the non-breeding season would meet the requirements of the Migratory Bird Treaty Act by protecting adults, their nests, and the young. Also, fencing would be used to deter wildlife from entering areas disturbed by construction.”

238-292 The text has been revised as suggested.

238-293 DOE and NYSERDA note the commentor’s statement. The definition for “bedload” has been removed because the term is not used in this EIS.

238-294 DOE and NYSERDA note the commentor’s statement.

238-295 DOE and NYSERDA note the commentor’s statement. The definition for clay has been added to this EIS and states: “The name for a family of finely crystalline sheet silicate minerals that commonly form as a product of rock weathering. Also, any particle smaller than or equal to about 0.002 millimeters (0.00008 inches) in diameter.” Requirements for and use of clay minerals, including bentonite, to

***Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation***

Enclosure 2 - NYSDEC Non West Valley Assigned Staff DEIS Comments

- Page H-51, H.2.2.3.3, Total Effective Dose Equivalent, 3rd paragraph, 1st sentence: “The results presented in Table H-47 show that the total peak annual dose to the Cattaraugus Creek receptor due to groundwater releases would be below 25 millirem per year for both alternatives.” Remove single letter “s”.
- Page H-53, H.2.2.3.3, 1st sentence: No period at the end of the sentence.
- Page H-54, H.2.2.3.3, Controlling Nuclides and Pathways, 1st paragraph, 1st sentence: The sentence starts “It is of interest....” It is of importance or necessary to understand.
- Page H-57, H.2.2.3.3, Hazard Index, Table H-52, footnote a: Why does the, “limited information suggest....”? What is this based on? Lack of information means you should plan for worst case.
- Page H-58, H.2.2.3.3, Table H-53, footnote b: Same comment as immediately above about “limited information”.
- Page H-61, H.2.2.3.3, last sentence: “For the No Action Alternative, the principal difference from Cattaraugus Creek is that the dominant nuclides and pathways for the principal contributor (the Waste Tank Farm) is now strontium-90 via fish rather than via drinking water.”

“Difference from Cattaraugus Creek”?? Is it supposed to mean the dominant pathway for strontium-90 in Cattaraugus Creek is now fish rather than drinking water?

Book: *Appendix I*

- Page I-13, I.4.3.2, 1st sentence: “Source term(s) (that is, the quantities of radioactive material released to the environment over a given period) for the No Action Alternative normal operational releases were based on release quantities identified in Annual Site Environmental Reports, which can be found on the Internet at www.wv.doe.gov and are summarized in a technical report (WSMS 2008e).” This is one sentence. It states that Annual Site Environment Reports can be found on the internet and that they are summarized in WSMS 2008e. The single sentence is misleading since one would expect everything in the sentence to be on the internet. Since the summary is not on the net it should tell the reader where to get it.
- Page I-18, I.4.3.5: The paragraph states that an MEI is a member of the Seneca Nation of Indians. The statement should also identify the possibility that it could be a member of the Cayuga Nation who reside on Seneca Nation land. Not all Native Americans living on Seneca Nation land are Senecas.
- Page I-20, I.4.3.6, 1st full paragraph: same comment as immediately above regarding Cayuga Nation members

- support implementation of EIS alternatives are presented in Chapter 4, Section 4.1.3 of this EIS.
- 238-296 DOE and NYSERDA note the commentor’s statement. The definition is correct as written based on the DOE NEPA Glossary.
- 238-297 DOE and NYSERDA note the commentor’s statement. The definition has been revised to state “Natural processes which include weathering, dissolution, abrasion, corrosion, and transportation, by which material is worn away from the earth’s surface.”
- 238-298 DOE and NYSERDA note the commentor’s statement. The definition has been revised to state: “A unit physiochemical process that removes anions and cations, including radionuclides, from liquid streams (usually water) for the purpose of purification or decontamination.”
- 238-299 DOE and NYSERDA note the commentor’s statement. The definition of “mitigative measures” has been removed and replaced with a definition for “mitigation.” The definition for “mitigation” is taken from the DOE NEPA Glossary and states: “Mitigation includes: (1) avoiding an impact altogether by not taking a certain action or parts of an action; (2) minimizing impacts by limiting the degree or magnitude of an action and its implementation; (3) rectifying an impact by repairing, rehabilitating, or restoring the affected environment; (4) reducing or eliminating the impact over time by preservation and maintenance operations during the life of an action; or (5) compensating for an impact by replacing or providing substitute resources or environments.”
- 238-300 DOE and NYSERDA note the commentor’s statement. The definition is correct as written based on the DOE NEPA Glossary.
- 238-301 DOE and NYSERDA note the commentor’s statement. The definition for “orphan waste” has been revised to state: “Waste that cannot currently be disposed of in an established or planned permanent disposal facility because the path forward for treatment and disposal has not yet been defined. Examples of orphan wastes include some types of excess fissile materials, control rods, sludges, and hot-cell examination wastes.”
- 238-302 DOE and NYSERDA note the commentor’s statement. The “radioactive waste” definition has not been revised because the text is from the wording of the DOE NEPA Glossary; however, a separate definition for “special nuclear material” has been added to this EIS. Please see the response to Comment no. 238-307.

***Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation***

Enclosure 2 - NYSDEC Non West Valley Assigned Staff DEIS Comments

- Page I-22, I.5.3: Why does the list only identify structural failures from seismic activity? Were other weather related events such as heavy snow load or high winds or possibly tornadoes considered?
- Page I-23, I.5.3: "Chemicals at the WVDP are intended for decommissioning activities are not capable of reaction with chemicals already at the WVDP or with each other in such a way that could initiate any accident releasing radionuclides."
- Page I-23, I.5.3, 3rd paragraph: "The seismic event is also assumed to fail any isolating or confinement covers around the high-level radioactive waste tanks."

Rewrite to read: The seismic event is also assumed to cause any isolating or confinement covers around the high-level radioactive waste tanks to fail.

or:

The seismic event is also assumed to compromise any isolating or confinement covers around the high-level radioactive waste tanks.

- Page I-41, I.5.8, last paragraph, 5th line: "For the chemicals listed in Table I-26..." - Should be Table I-28

Book: *Appendix J*

- Page J-33, J.11.4, last paragraph, 1st sentence: What does "State-of-the-art computer codes" mean? Codes for what?

Book: *Appendix K*

- Page K-1, K.1, 1st paragraph, 2nd sentence: "Air quality impacts were assessed by estimating onsite and offsite concentrations of criteria and toxic air pollutants of environmental concern and comparing them to Federal and State health-based ambient air quality standards." What does the underlined mean?

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238-303 DOE and NYSERDA note the commentor's statement. The definition for "silt load" has been removed from this EIS. The term is not used in the Final EIS.

238-304 DOE and NYSERDA note the commentor's statement. The definition has not been revised because the wording is from the U.S. EPA Region 2 Water Sole Source Aquifer website.

238-305 DOE and NYSERDA note the commentor's statement. The definition is correct as written based on the DOE NEPA Glossary.

238-306 DOE and NYSERDA note the commentor's statement. The definition for "solvents" has not been revised per the commentor's statement.

238-307 DOE and NYSERDA note the commentor's statement. The definition for "special nuclear material" has been added to this EIS and states: "A category of material subject to regulation under the Atomic Energy Act, consisting primarily of fissile materials. It is defined to mean plutonium, uranium-233, uranium enriched in the isotopes uranium-233 or -235, and any other material that the NRC determines to be special nuclear material, but it does not include source material."

238-308 DOE and NYSERDA note the commentor's statement. The definition for "stream terrace" has been revised in EIS to state: "A stream terrace is indicated by an abrupt vertical or definite sloping rise in elevation uphill/landward, identifying the outer edge of the floodplain. It is more or less flat or lightly rolling land parallel to the stream channel and very rarely or never floods."

238-309 DOE and NYSERDA note the commentor's statement. A definition for "visitors" has not been added to this EIS because visitors are not included in analyses in this EIS.

238-310 All these terms refer to the same thing. For consistency, the term "appropriate clean backfill material" was used throughout Appendix C of this Final EIS.

238-311 Contouring to grade will follow common construction practices and will adhere to site procedures prepared in conformance with the New York State guidance documents.

238-312 The term "end-effectors" was changed to "tools" throughout this EIS.

238-313 Holes and trenches in WMA 7 that are cleared of waste materials would be backfilled with interim backfill (material stockpiled from the cap removal) as soon

***Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation***

Enclosure 2 - NYSDEC Non West Valley Assigned Staff DEIS Comments

Book: *Appendix M*

- Page M-17, M.4.2, 2nd to last paragraph: The word mitigate is used in the broad sense. A much better choice would be "minimize".
- Page M-12, M.3.1.2: The word "buffer", while it may be descriptive, is not used in the regulations. The proper term is "adjacent area", which is used in the regulation, 6 NYCRR Part 663.2(b). The adjacent area is at least 100 feet wide but may be broader where necessary to protect and preserve a wetland. The word "buffer" was used six times in this appendix. Five of those usages were with regard to NYS freshwater wetlands and should be corrected.
- Page M-14, M.3.2.1, Last sentence: "Additionally, the loss of institutional controls leading to unmitigated erosion of the NDA and SDA (i.e., no credit is taken for monitoring and maintenance of erosion control structures) is analyzed in Appendix H." Is the sentence intended to say "uncontrolled" erosion?
- It is not clear if the section states that Corps Permits would be required for federal wetland disturbances (when they are not state wetlands). Additionally, the Corps may require Water Quality Certification be issued by New York State if the activity has not been pre-certified by the DEC.
- Page M-16, M.4.1, 4th paragraph, 2nd sentence: "These measures include adherence to the State Pollutant Discharge Elimination System (SPDES) General Permit for construction activities occurring in an area of five acres or greater." The area subject to regulation under this program is now one acre or greater.
- Page M-17, M.4.2, 1st paragraph: "A Sitewide Stormwater Pollution Prevention Plan for controlling runoff and pollutants from the site during and after construction activities would be required to obtain permit coverage under NYSDEC's General Permit (GP-02-00) for Stormwater Discharges from Construction Activities." Replace with GP-08-001
- Page M-17, M.4.2, 2nd paragraph: "Prior to the disturbance of any wetland, a Section 404 permit would be acquired from the U.S. Army Corps of Engineers along with a Section 401 Water Quality Certificate from the State of New York." This statement is misleading. In cases where a Corps Nationwide Permit has been pre-certified by New York State an individual Water Quality Certification is not required.

Book: *Appendix N*

- Page N-1, N.2: Explosive devices are discussed but it is not clear if a scenario with a fire is part of any of the on-site scenarios. (Fires are discussed in transportation situations) Would a fire that could not be controlled by water (phosphorous?) with a resulting smoke plume disperse more material over a greater area?

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as the hole/trench is completed. Once all of the holes and trenches are cleared, a mass excavation would be performed to remove the potentially contaminated overburden and interstitial soils. The interim backfill would be excavated during this phase. Subsequently, final status surveys and chemical confirmatory testing would be performed in the mass excavation prior to a final backfilling of the area with appropriate clean backfill material. The NDA Environmental Enclosure would remain in place and functional until all of the holes and trenches are cleared.

238-314 Wording has been added to Appendix C, Section C.3.1.12.3, of this EIS to state that the railroad ties will be sampled and characterized for potential hazardous constituents, such as creosote and pentachlorophenol, prior to their disposal. Wording also has been added to address the track ballast. The ballast would be excavated and stockpiled on site for subsequent disposal as construction and demolition debris.

238-315 The only wastes that will arrive at the Container Management Facility (CMF) are wastes removed from the NDA and the SDA or orphan wastes from other onsite locations scheduled for interim storage at the CMF. No offsite wastes will be processed at the CMF.

238-316 The design of the CMF is conceptual at this time; however, placing an office building on the second floor separate from the first floor facility areas would reduce the size of the overall footprint. Piping is available for potable water and for sewers.

238-317 "Prepackaged wastes" was removed from this sentence in Appendix C, Section C.4.4, of this EIS. There would be no "prepackaged wastes" received by the receiving dock.

238-318 The end of the sentence was changed to "...telescoping boom with various tools."

238-319 The last few paragraphs of Appendix C, Section C.4.5, of this EIS were rewritten. The term "scabbling" was removed.

238-320 The cited paragraph does not belong in Appendix C, Section C.4.6.8, of this EIS and has been removed. It remains in Section C.4.4.

238-321 The multilayer cover systems would be routinely inspected for signs of deterioration or damage resulting from subsidence, erosion, or the growth of deep-rooted vegetation. Routine repairs to the covers, such as reseeding or backfilling small depressions, would be performed as needed. Additional maintenance activities

***Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation***

Enclosure 2 - NYSDEC Non West Valley Assigned Staff DEIS Comments

Book: Appendix P

- Page P-2, P.3, recreational hiker: Why was this class of individual chosen? Was it for the type of activity or for the location that the activity takes place? If it was for the activity one would think the exposure was minimal and why bother except to show the small amount of exposure. If the attempt was to find some type of individual that would be in a specific location then there is a better choice. Children/youths would likely be in the same area and could have potentially more exposure by operating off road vehicles or playing in the stream.

238-369

would include periodic mowing of the vegetated portions of the covers, trimming of vegetation, and removal of vegetation with root depths in excess of one foot to prevent deep root growth into the multilayer covers.

- 238-322** Erosion controls would be designed consistent with guidance in NRC's NUREG-1623, "Design of Erosion Protection for Long-Term Stabilization," September 2002. As stated in Section 2.1.2 of the NUREG, designs must provide reasonable assurance of control of hazards for a 1,000-year period, to the extent practicable, but in any case, for a minimum 200-year period. In Section 2.1.2 of the NUREG, remedial action designs are intended to provide overall site stability for the long time periods, with no reliance placed on active maintenance; however, active maintenance would be performed for a shorter period of time to assure that the planned long-term controls will be effective. Adjustments to the long-term controls would be made during the active maintenance period. DOE and NYSERDA are aware that straightening a stream increases erosional forces. The effects of the increased forces would be factored into the erosion control designs.
- 238-323** The term should be "probable maximum flood" and was changed in Appendix C of this EIS. The term was added to Chapter 8 of this EIS, the Glossary, where its definition is given. In general terms, the probable maximum flood represents the largest flood for which there is a reasonable expectancy.
- 238-324** Wording was added to Appendix C, Section C.4.13, of this EIS that discusses diversion of the stream prior to channel excavation.
- 238-325** The text was revised to state that the creek rim moves into the contaminated areas. It is correct that young individuals may be more susceptible to certain risks than adults. Consistent with NRC guidance in NUREG-1757, "NRC Consolidated Decommissioning Guidance," use of the average member of the critical group is intended to reasonably bound potential doses and the analysis primarily uses intake-to-dose conversion factors for adults. The gender and age-averaged dose and risk coefficients of Federal Guidance Report 13 are used in the EIS decommissioning and long-term human health impact analysis.
- 238-326** The sentence has been revised and the punctuation corrected in this Final EIS.
- 238-327** The sentence has been revised and clarified in this Final EIS.
- 238-328** The text has been revised for clarity in this Final EIS.
- 238-329** The text has been revised for clarity in this Final EIS.

***Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation***

- 238-330 The qualifier “post 1999” is a reference to the statistical screening. The first sentence of the paragraph indicates that, “...the observed hydraulic conductivities appear to change around 1999 in a manner similar to the thick-bedded unit.”
- 238-331 This is in reference to the 12 locations discussed in the previous paragraph. The text has been clarified in this Final EIS.
- 238-332 The text has been revised for clarity in this Final EIS.
- 238-333 “Undisturbed” is a better word. The text has been revised in this Final EIS.
- 238-334 The text in Appendix E, Section E.4, of this Final EIS, has been revised as suggested.
- 238-335 The text in Appendix E, Section E.4, of this Final EIS, has been revised as suggested.
- 238-336 The text in Appendix E, Section E.4, of this Final EIS, has been revised as suggested.
- 238-337 The sentence does not appear in Appendix F in this Final EIS.
- 238-338 The individual doses and risks from each radionuclide in a mixture are additive. As stated in Appendix I of this Final EIS, in the definition of a rem (the measurement of the dose equivalent from radiation based on its biological effects), the biological effect of a rem from one type of radiation is the same as from a rem of any other kind of radiation. There are no multiplicative effects. Appendix I, Section I.3, discusses the studies used to develop the risk models used in this EIS.
- 238-339 An artificial mound of soil, drainage, and clay layers is being considered as part of the closure designs. The ultimate design goal for the tumulus is to minimize amount of water passing through the waste form. The text has been modified consistent with the suggestion.
- 238-340 No credit is taken for tank integrity, so groundwater flow is determined by hydraulic head and hydraulic conductivity of the various materials. As stated in Appendix G, Section G.3.2.3, of this Final EIS, “The grout, backfill, and slurry wall system have low hydraulic conductivity...flow model described in Appendix E indicates that groundwater will enter the excavation and a portion will flow around and through the tanks in the horizontal direction... a portion of the available groundwater will move downward through the tank.”

***Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation***

- 238-341** An intruder is a human and the intrusion can either be temporary (for the construction and well drilling exposure scenarios) or occur over a longer period of time (resident farmer). The intruder and intruder scenarios are more fully discussed in Appendix G, Section G.4.2, of this Final EIS. The exposure to the individual while hiking is considered as part of the total exposure to the farmer resident. Hiking was identified as one activity of this person that would provide an additional opportunity for exposure. As such, the impact from hiking was added to the impacts associated with the other activities of this individual. It is correct that young individuals may be more susceptible to certain risks than adults; however, NRC guidance (NUREG-1757, "NRC Consolidated Decommissioning Guidance") is used along with higher ingestion factors. The analysis uses the gender and age-averaged dose and risk coefficients of Federal Guidance Report 13.
- 238-342** Intentional destructive acts (IDA) are not considered accidents and are addressed separately from the accident analysis. Results of the IDA analysis are presented in Chapter 4, Section 4.4, of this EIS.
- 238-343** "For" has been taken out of the text as recommended.
- 238-344** The recommended word change has been made and a comma has been added.
- 238-345** DOE and NYSERDA note the comment.
- 238-346** The paragraph has been rewritten. The incomplete sentence is not included.
- 238-347** The text has been revised as suggested.
- 238-348** A Seneca Nation of Indians receptor is someone who lives on the Seneca Nation of Indians Cattaraugus Reservation. The text has been changed to state, "...the second lives on the Seneca Nation of Indians reservation and has a significantly higher consumption..."
- The statement has been modified to state, "...higher fish consumption for a resident on the Seneca Nation of Indians reservation..."
- The statement has been modified to include other Native American Nation members living on Seneca Nation land. After "...Seneca Nation...", the following has been added "...(or other Native American Nations living on Seneca Nation land..."
- 238-349** The suggested change has been made.
- 238-350** The suggested change has been made.

*Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation*

- 238-351 The suggested change has been made.
- 238-352 The suggested change has been made.
- 238-353 DOE and NYSERDA note the comment, but have not revised the footnote. The footnote means that the information we have indicates a chemical inventory that is small compared to that in some other facilities or WMAs.
- 238-354 The text has been revised to refer to “the Cattaraugus Creek receptor.”
- 238-355 The text has been revised to state, “Source term(s) (that is, the quantities of radioactive material released to the environment over a given period) for the No Action Alternative normal operational releases were based on release quantities reported in a technical report (WSMS 2008e).”
- 238-356 The assumed structural failure for the seismic event bounds any structural failure from weather-related events such as heavy snow, high winds, or tornados.
- 238-357 The text has been revised to state, “Chemicals at the WVDP intended for decommissioning activities are not capable of reaction with chemicals already at the WVDP or with each other in such a way that could initiate any accident releasing radionuclides.”
- 238-358 The text has been revised to state, “The seismic event is also assumed to cause any isolating or confinement covers around the high-level radioactive waste tanks to fail.”
- 238-359 “For the chemicals listed in Table I-26...” has been changed to, “For the chemicals listed in Table I-28...” in this sentence.
- 238-360 This statement refers to the use of computer codes for calculating radiological impacts from transportation. See Appendix J, Section J.4, of this EIS for these codes.
- 238-361 The statement was reworded to state, “...onsite and offsite concentrations of criteria pollutants and toxic air pollutants of environmental concern...”
- 238-362 This change has been made where appropriate in this paragraph. In another location in this paragraph, the text has been revised to clarify certain mitigation measures would minimize impacts.

***Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation***

- 238-363** References to a “100-foot buffer zone” have been replaced with “adjacent area,” and “buffer area” (referring to a 100-foot buffer zone) also has been changed to “adjacent area.”
- 238-364** The suggested change has not been made. The term “unmitigated erosion” is correct and is discussed in detail in Appendix H of this EIS.
- 238-365** A new paragraph has been added to Appendix M, Section M.3.1.2, of this EIS, which begins with, “Prior to the disturbance of any jurisdictional wetland, a Section 404 permit would be acquired from the U.S. Army Corps of Engineers, and, in the case of a New York State Freshwater Wetland, a permit would be acquired from NYSDEC.”
The first sentence in the third paragraph of Appendix M, Section M.4.2, has been revised to state: “Prior to the disturbance of any jurisdictional wetland...” The remainder of the sentence has not been revised; the Army Corps of Engineers will coordinate with New York State to determine applicability.
- 238-366** The second and third sentences of the fourth paragraph of Appendix M, Section M.4.1, have been revised to state: “These measures include adherence to the State Pollutant Discharge Elimination System (SPDES) General Permit which requires the implementation of best management practices during regulated construction activities to reduce nonsource pollutant loadings into waters of the state.”
- 238-367** The General Permit number has been updated to GP-0-08-001.
- 238-368** The use of an explosive device results in a larger source term and greater radiological impacts than a fire even with phosphorus present. The robust design of radioactive waste transportation casks includes their tested ability to withstand extended high-temperature fires. By assuming use of an explosive device, the radioactive source term is larger than that from a fire.
- 238-369** The SDA QRA quantifies the risk to a nominal recreational hiker to account for historical evidence that trespassers have occasionally entered the NYSERDA property. The available records indicate that these intruders have primarily been hunters who traverse the area along Buttermilk Creek and the lower reaches of Franks Creek. The more general term “recreational hiker” is used in the QRA to broadly characterize these types of activities.

***Commentor No. 238 (cont'd): Edward Dassatti,
New York State Department of Environmental Conservation***

The recreational hiker receptor scenario was considered representative of a group of members of the public, which, through their varied activities on the NYSERDA site property outside the fenced control boundary, could be exposed to radionuclides transported through the streams following a release from the SDA. This scenario was included in the analysis for completeness.

Radionuclides deposited along the banks of Franks Creek and Buttermilk Creek following release from SDA trenches and dilution by other sediments along the transport path were recognized to be the major sources of exposure for this receptor. Radionuclides in water transported from the trenches were recognized to be much less important, in part because the durations of peak concentrations of radionuclides in water in the stretches of interest would be short. Exposure times to peak concentrations would also be short, if not zero. Deposited sediments, on the other hand, could reside in the reaches of interest for some time following release, and the potential for exposure over significant time durations would be greater. In this analysis, dose estimates were maximized by assuming no scouring, further dilution, or redistribution of this sediment following initial deposition.

The point estimate sediment exposure was assumed to be 100 hours per year to a circular sediment source 10 meters in radius. (It should be noted that exposure to an effectively smaller source would require longer exposure times to receive the same dose.) To assess uncertainty, the exposure time was assigned a uniform probability distribution within the range 50-150 hours per year. The sediment exposure time estimate of 100 hours per year corresponds to two hours per day for nearly two months per year, or one hour per day for nearly four months per year.

There appears to be no basis for preferring exposure at one location along the reaches of interest over any other location. For this reason, the exposure time was assumed to be uniformly distributed along the total length of the stream reaches of interest.

Based on casual observation of conditions and activities at the site, this exposure scenario seems to be conservatively representative for a single individual engaged in any likely activities along the reaches of interest.

Refer to Sections 11.2 and 11.5.2 of the QRA report for details of the analyses and results.

Commentor No. 239: Martha Sullivan

From: Martha Sullivan [scooteranne@rochester.rr.com]
Sent: Saturday, August 29, 2009 9:01 AM
To: frank.murray
Subject: clean up of nuclear waste at West Valley

Good morning, Mr. Murray,

I'm writing you to urge you to select the option that cleans up ALL the nuclear waste at the West Valley site. Don't leave it buried for 30 more years - that is just a recipe for disaster. Our Great Lakes are priceless. Nuclear waste is not something to mess around with, especially if there is even a CHANCE of contaminating our drinking water supply.

This is a no-brainer. Please clean up ALL the nuclear waste at this site. It's the right thing to do.

Thank you.

Martha Sullivan
Rochester, NY

239-1

239-1

DOE and NYSERDA acknowledge the commentor's preference for cleanup of all of the waste and opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Commentor No. 240: Ron Missel

From: Ronald Missel [rcm_14617@yahoo.com]
Sent: Wednesday, September 02, 2009 10:37 AM
To: frank.murray
Subject: West Valley Nuclear Wast Site - Clean Up

Mr Frank Murray,

NYSERDA President

I urge you to promote full clean-up of the West Valley Nuclear Waste Site and remove all waste from the site. Eventually, waste will leech into the immediate watershed and ultimately into Lake Erie. I believe this is already occurring.

As you know, a recent devastating storm in the area eroded a wall of Buttermilk Creek bringing the creek closer to the radioactive waste trenches.

I understand this problem was not of your doing, but it is critical that it's addressed and dealt with, rather than reviewed and tabled. Again, the only realistic solution is to dig up and remove the waste.

Thank you.

Ron Missel
xxx-xxx-xxxx
3905 Bowen Rd. - Unit 48
Lancaster, NY 14086

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|--------------|--------------------------------|---|
| <p>240-1</p> | <p>240-1</p> | <p>DOE and NYSERDA acknowledge the commentor's support for the full cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.</p> |
| <p>240-2</p> | <p>240-1
<i>cont'd</i></p> | <p>DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. The erosion predictions used for the unmitigated erosion analysis are based on the assumption that storms occur more frequently than is currently estimated and include the effects of storms of greater severity than the one that occurred in the region in August 2009. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling are discussed in Appendix F. Please see "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.</p> |

Commentor No. 241: Mark Hatley

From: James Hatley [shirivasta@gmail.com]
Sent: Friday, September 04, 2009 10:19 AM
To: secretary@hq.doe.gov; frank.murray
Subject: West Valley Nuclear Waste Site Full Clean Up

Dear Secretary Chu and President Murray,

I am a Buffalo resident writing to urge you to strongly consider a full and timely clean up of the West Valley Nuclear Waste Site. With many needs and little money to go around it would seem difficult to weigh a potential problem that has not yet presented. However, in this case, there is a potential consequence that elevates this issue to a special status.

Best regards,

Mark Hatley
167 University Avenue
Buffalo, NY 14214

241-1

241-1 DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup and support for the full cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 242: Pam Hatley

From: Pamela Hatley [pamelahatley@gmail.com]
Sent: Friday, September 04, 2009 4:59 PM
To: frank.murray
Subject: West Valley Nuclear Waste Site

Dear President Murray,

I am a Buffalo resident writing to urge you to strongly consider a full and timely clean up of the West Valley Nuclear Waste Site. With many needs and little money to go around it would seem difficult to weigh a potential problem that has not yet presented. However, in this case, there is a potential consequence that elevates this issue to a special status.

Best regards,

Pam Hatley
167 University Avenue
Buffalo, NY 14214

242-1

242-1

DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup and support for the full cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 243: Catherine Reimers

September 8, 2009

Catherine Reimers

2384 Blakeley Road

South Wales, NY 14139

It is very important that the government take responsibly for digging up the high level nuclear waste that is still at West Valley before it leaks into the tributaries that feed Lake Erie. Let's do it right so we don't regret this in the future.

243-1

243-1

DOE and NYSERDA acknowledge the commentor's support for cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

**Commentor No. 244: Barbara Warren,
Citizens' Environmental Coalition**

Adirondack Mountain Club NFG
 Catholic Diocese Care For Creation Committee
 Center for Health, Environment & Justice
 Citizens Campaign for the Environment * Citizens' Environmental Coalition
 Concerned Citizens of Cattaraugus County
 Environmental Justice Action Group of WNY
 F.A.C.T.S. (For A Clean Tonawanda Site), Inc.
 Franciscan Sisters of St. Joseph * Great Lakes Sport Fishing Council
 Sierra Club * Nuclear Information and Resource Service
 Presbytery of Western New York

September 1, 2009

Dr. Steven Chu, Secretary
 Department of Energy
 1000 Independence Ave., SW
 Washington, DC 20585

Francis Murray, President
 NYSERDA
 17 Columbia Circle
 Albany, NY 12203

Re: West Valley Radioactive Waste Site Full Cleanup Decision

Dear Secretary Chu and President Murray,

Today, September 1, 2009, the West Valley Action Network organized a CLEAN-UP CREW at a Press Conference in Buffalo. The CLEAN-UP CREW is tired of waiting for a Full Clean-up at the West Valley Radioactive Waste Site. Federal and State governments plan to clean-up just 1% of the dangerous radioactivity at the site. This leaves 99% in place to threaten the Great Lakes and our drinking water, while officials study the situation for another 30 years. Complete with buckets, mops, sponges, gloves and masks the CLEAN-UP CREW is demonstrating the need and urgency of a FULL CLEAN-UP NOW, not at some long distant future date.

"TIRED OF WAITING," the CLEAN-UP CREW stressed that there is renewed urgency to ACT NOW to dig up the radioactive waste and safely contain it so that it cannot spread further. The West Valley site is particularly vulnerable to erosion and independent scientists have warned that radioactive waste could be released by the powerful forces of nature and jeopardize the Great Lakes and drinking water. Global warming is also predicted to cause more frequent severe weather events. The weekend of August 8th gave us a preview of things to come—with over 5 inches of rainfall, flash floods caused severe erosion and flooding in nearby areas. A

244-1 DOE and NYSERDA acknowledge the commentors' preference for the Sitewide Removal Alternative and opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

244-2 DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds

**Commentor No. 244 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

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landslide occurred on the steep 160 foot bank of Buttermilk Creek near the radioactive waste trenches of the State Disposal Area. It is estimated that thousands of tons of material were moved in the slide including a strip of land approximately 15 feet wide at the top of the bank. Other creeks were also impacted and reservoirs at the site overflowed.

The independent scientific study released in December 2008, *The Real Costs of Cleaning Up Nuclear Waste*, estimated it could cost tens of millions of dollars to build engineered structures to try to prevent erosion but that even with strict and constant monitoring, it is very questionable that erosion at the West Valley site could be effectively prevented for a thousand years. This is especially true in light of the fact that global warming could increase precipitation by 20–30% with more extreme rainfalls. The 160 foot bank of Buttermilk Creek is particularly unstable and significant erosion could expose and release radioactive waste buried in the elevated plateau in which West Valley waste site is located.

Unfortunately, the US DOE and NYSERDA assumed when performing an Environmental Impact Statement for West Valley that no Global warming would occur for 10,000 years and therefore there would be no exacerbation of severe weather in the West Valley area. Thousands of scientists worldwide including many within the US government have acknowledged the inevitability of global warming and have documented impacts that are occurring today. Global warming impacts at this site, which is vulnerable to erosion under ordinary circumstances, should have been studied. In 2006 rainfall of 14-15 inches in Binghamton, NY caused a flood of historic proportions. Failing to study potential severe weather impacts from global warming leaves everyone in the dark about how quickly dangerous radioactivity could be spread widely in the region and provides inadequate warnings to the public officials and safety professionals who might have to respond to a disaster.

A long string of failures has been associated with the venture into commercial reprocessing including the choice of the West Valley site, the promises related to long term waste disposal and a fund to pay for cleanup. The proposed plan to clean up just 1% of the dangerous radioactivity while asking us to WAIT another 30 YEARS JUST FOR A DECISION ON FURTHER CLEANUP is a recipe for disaster. The government assumes it can contain radioactive waste at this site for thousands of years. The record of failures makes this a dangerously flawed assumption.

WAITING will guarantee that CLEAN-UP or consequences of failure to fully clean up will be far MORE EXPENSIVE, but it may also be CATASTROPHIC for millions of people and the Great Lakes. The only acceptable option is a Full Clean-up under the Sitemwide Removal option presented in the Environmental Impact Statement. We need a commitment to FULL CLEAN-UP NOW!

Thank you for your consideration of our views.

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of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling are discussed in Appendix F. In addition to the previously cited Issue Summary, please see “Concerns about Potential Contamination of Water” and “Questions about Long-term Erosion Modeling” for further discussion of these issues and DOE's and NYSERDA's responses.

The report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., has been addressed in this CRD consistent with the Council on Environmental Quality's NEPA regulations. Please see the Issue Summary for “Conclusions of the Synapse Report” in Section 2 of this CRD for further discussion of the report's issues and DOE's and NYSERDA's response.

The analysis in this EIS recognizes the potential for climate change to influence the long-term consequences of waste management. Climate changes, whether natural or influenced by human actions, could change the nature and amount of precipitation. Appendix H, Section H.3.1, of both the Revised Draft EIS and this Final EIS discusses the sensitivity of groundwater flow to changes in annual precipitation. The revised erosion prediction used for the unmitigated erosion dose analysis is based on the assumption that storms could occur more frequently than indicated by current records. This prediction includes the effects of storms of greater severity than the one that occurred in the region in August 2009. The use of this higher erosion rate associated with an elevated precipitation rate is discussed in Appendix H, Section H.2.2.1. Chapter 4, Section 4.3.5, has been revised to include a discussion of how the uncertainties about future climate change are addressed in this EIS.

**Commentor No. 244 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

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Respectfully,

Barbara Warren
Citizens' Environmental Coalition
warrenba@msn.com

Diane D'Arrigo
Nuclear Information and Resource Service
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Anne Rabe
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**Commentor No. 244 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

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Gladys Gifford
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Art Klein
Adirondack Mountain Club Niagara Frontier Group
arthurklein@mac.com

Thomas Marks
Great Lakes Sport Fishing Council
tommarks@verizon.com

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**Commentor No. 245: Diane D'Arrigo,
Nuclear Information and Resource Service**

WestValleyEIS@wv.doe.gov

From: Diane D'Arrigo [mailto:dianed@nirs.org]

Sent: Tuesday, September 08, 2009 10:09 PM

To: WestValleyEIS@wv.doe.gov

Subject: Comments on West Valley revised DEIS - Factsheets from the Full Cost Accounting Study

Factsheets are summaries of chapters in *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site* released in December 2008.

Diane D'Arrigo
Nuclear Information and Resource Service
6930 Carroll Ave Suite 340
Takoma Park, MD 20912

245-1

245-1 DOE and NYSERDA acknowledge the receipt of these factsheets.

**Commentor No. 245 (cont'd): Diane D'Arrigo,
Nuclear Information and Resource Service**

**The Real Costs of Cleaning Up Nuclear Waste
Summary of Report Findings**

The study evaluated two cleanup Alternatives presented in the Department of Energy's 2005 draft Draft Environmental Impact Statement (DEIS).

- Waste Excavation Alternative 1: Total exhumation of the wastes, off-site disposal, followed by complete site release for unrestricted use.
- Onsite Buried Waste Alternative 2: Partial waste removal, stabilization of buried wastes for permanent onsite disposal.

Findings and Recommendations

■ **Waste Excavation is less expensive than Buried Waste.** Over a 1000 year timeframe, Waste Excavation presents the least risk to a large population and the lowest economic social and project cost. Over 1000 years, the Waste Excavation approach costs \$9.9 billion while the Onsite Buried Waste approach costs between \$13 and \$27 billion, depending on if a catastrophic release occurred accidentally or not.*

■ **Waste Excavation poses significantly lower risks to future generations after closure activities cease.** The Onsite Buried Waste approach poses a risk to residents long after closure activities have ended. In contrast, Waste Excavation leaves behind a contamination-free area after 73 years.

■ **The Onsite Buried Waste approach inadequately protects the health and environment of residents, and is an unrealistic cost.** It poses a risk to residents if controls fail while dangerous radionuclides are buried at West Valley.

■ Waste Excavation poses a risk to onsite workers during the relatively short period of time for remediation activities. It also does not "solve" the problem of West Valley's nuclear waste disposal, rather it prevents further contamination, prevents a catastrophic release that could cause severe damage to populations in the Great Lakes region, and mitigates the problem by transferring the waste to a less risk-prone site. (It is important, yet unfortunately beyond the scope of this analysis, to note that wastes which have left the site are not risk free. Rather, they will have to be stored somewhere else and may also pose a threat to future generations.)

■ **Based on these findings, we recommend that the Department of Energy and NYS agencies take the following actions for any new West Valley DEIS.**

- Reject current assumptions about timeframe, institutional controls and continuity, and budget requirements as presented in the 2005 DEIS due to their inability to adequately protect health and the environment as required by federal statute.
- Assume that, until shown otherwise, the safest and most economically viable option is to fully excavate the wastes buried at West Valley (Alternative 1).
- Explore other options for retrievable, monitored, above-ground storage of nuclear waste at a more stable site. In addition, the full costs of remediating West Valley must be factored in to decisions being made for new reprocessing and nuclear power.
- In the new DEIS, revisit the following topics more rigorously and with public input: 1) the probability of maintaining effective institutional controls over the expected lifetime of radioactive elements buried at the site; 2) the risk of erosion control failure with or without

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The report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, have been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for "Conclusions of the Synapse Report" in Section 2 of this CRD for discussion of the report's issues and DOE's and NYSERDA's response.

**Commentor No. 245 (cont'd): Diane D'Arrigo,
Nuclear Information and Resource Service**

the maintenance of controls; the rate of release and source of contamination should there be an erosion control failure; and 3) the potential for radioactively contaminated groundwater to move rapidly through sand layers in West Valley soils.

- In the new DEIS, revisit the following budget topics more rigorously, with public input: 1) the costs of addressing contaminated groundwater and drinking water for local populations and watersheds; 2) the costs of addressing contamination impacting Lake Erie; and 3) the economic opportunity cost of lost development ability at the site.
- Evaluate options for mitigating radioactive waste at West Valley based not only on project cost alone, but also on project and post-closure risks over the expected lifetime of radioactive elements buried at the site.

Additional Full Cost Accounting Analysis Results

1. **The Department of Energy's DEIS analysis of Alternatives 1 and 2 are unrealistic, and, more importantly, incomplete.** The DEIS uses a period of analysis far too short to reflect real costs and risks, and does not adequately address real harm risks as well as monetary costs to the public and the environment. With Waste Excavation, as soon as closure activities cease—in an estimated 73 years—the site is released to the public and there are no remaining costs. With Onsite Buried Waste, however, the site must be maintained into perpetuity. *In this case, perpetuity is not a dozen years, or even two or three generations—the buried radioactive waste would have to be monitored, tracked, and maintained in place for tens of thousands of years. Despite this basic axiom, the DEIS only allocates a skeleton budget for 200 years.*

2. **Extending the period of analysis to 1000 years, a first step in setting a period more in line with the decay times for high-risk radioactive waste (yet not nearly long enough for some of the most dangerous radionuclides), reveals that the long-term site maintenance costs are burdensome and expensive.**

3. **The total costs of this analysis must be taken as a whole, undiscounted cost.** In standard capital investments, a discount rate is applied to account for future interest earnings. Over periods of 1000 years, any substantial discount rate implies that the health and wellbeing of future generations has no present value (i.e. no worth to us today). Since the plans being considered are ostensibly meant to protect the public for many generations, we cannot reasonably assume that there is no value to public health in the year 1000. Therefore, the discount rate must be zero, or near zero. While the choice of a discount rate for short term decisions is an economic question, the choice of an intergenerational discount rate is a matter of ethics and policy. The value of future lives and health is a strong argument for not using an economic discount rate in this analysis. **However, if standard federal Office of Management and Budget discount rates (3% and 7%) are employed, Alternatives 1 and 2 cannot be said to be significantly different from an economic standpoint.**

4. **As a practical necessity, we are compelled to use a precautionary approach at West Valley.** We cannot know the costs which may occur if wastes are left buried at West Valley, but we do know if a release occurred, it would have expensive and disastrous consequences. The costs of exhuming radioactive contamination will be expensive in the short-term, but the costs of maintaining buried waste in an attempt to thwart future disaster will be far more expensive and far less certain. In a precautionary sense, we should

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**Commentor No. 245 (cont'd): Diane D'Arrigo,
Nuclear Information and Resource Service**

excavate and move the wastes while we still know what is in the ground, how to handle it, and have some chain of responsibility still available.

5. We adjusted the underlying budget assumptions and included enhanced erosion controls in Alternatives 1 and 2 to bring balance to their relative long term risks, calling the new options Waste Excavation Alternative 1A and Buried Waste Alternative 2A. We considered that: 1) erosion would need to be kept rigorously under control at the site; 2) security would need to be held at a relatively rigorous level to ensure intruders could not access wastes; 3) a spreading plume of contaminated groundwater would have to be remediated to prevent contaminants from entering the local watershed; and 4) the inevitable and powerful forces of time and erosion could eventually expose wastes catastrophically, leading to high costs of remediation for water consumers.

(Excerpts from Executive Summary of *The Real Costs of Cleaning Up Nuclear Waste*)

*Under the assumptions of a non-discounted future. This does not include all the societal costs due to resources or lack of data.

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**Commentor No. 245 (cont'd): Diane D'Arrigo,
Nuclear Information and Resource Service**

History of West Valley

Thirty miles south of Buffalo, New York, the West Valley nuclear waste site sits on a plateau slowly but certainly eroding away with time. In the 1960's, when Nuclear Fuel Services began reprocessing nuclear fuels, the potential dangers were rapidly outweighed by the enthusiasm for nuclear reprocessing and the economic prosperity it promised. After nearly a half century, there is no doubt that this decision was a mistake for the region's safety and health. The six years in which this facility reprocessed nuclear fuel have been dramatically overshadowed by decades of fierce debate about the cleanup of the site.

Radioactive Contamination

The site is in the Town of Ashford in Cattaraugus County, NY. At least 250 of the 3,345 acres have been heavily contaminated with nuclear and hazardous wastes. By today's standards, a nuclear facility would not be allowed on land as erosion-prone as the West Valley site. *The site is burdened with vast amounts of toxic and radioactive wastes, many of which will remain radioactive for tens of thousands of years, some for millions of years.* The list of contaminated wastes reads like a laundry list of dangerous elements: cesium-137, plutonium-238, -239, -240, and -241, uranium-238, iodine-129, tritium, and thorium-234, amongst others. These elements, if ingested or inhaled, lodge in human tissues, fat, or bone and are known to be responsible for leukemias and cancers at very low doses. There is no known safe level of exposure to radioactive chemicals—each exposure increases the likelihood that cancer and other health effects may occur.

*The site has been plagued with problems from the start, including leakage of radioactive and toxic waste in several areas, such as a significant underground plume of radioactive elements spreading through groundwater. Waste from the site has been found as far away as the sediment along the shore at the juncture of the Niagara River and Lake Ontario.**

Site Created by Country's Failed Commercial Reprocessing Facility

The site is the nation's only venture into commercial reprocessing of irradiated nuclear fuel. The Nuclear Fuel Services (NFS) facility was a Plutonium Uranium Extraction process plant and the process included storing spent fuel assemblies; chopping the assembly rods; dissolving the uranium, plutonium, and radioactive products in acid; separating and storing the radioactive wastes, and separating uranium nitrate from plutonium nitrate. In 1959, New York became the only state to accept a federally-initiated plan to form a public-private partnership to reprocess nuclear material and in 1961, the state purchased the land in the Town of Ashford, for what would become the Western New York Nuclear Services Center owned by NFS, a company that continues to this day. The facility operated for six years (1966-1972) and reprocessed about 640 metric tons of irradiated fuel. In 1972, reprocessing ceased and changes in safety and environmental regulations required NFS to undergo a complete licensing review. In 1976, NFS determined it would cost over \$600 million to comply and decided to leave the site, passing on responsibility for all wastes to the government.

- 245-3 The commentor is correct that scientific studies have not clearly demonstrated the existence of a threshold below which exposure to ionizing radiation conveys no risk of health effects. By assuming that the risk of health effects at low doses is proportional to the exposure (i.e., doubling the exposure also doubles the risk), regulatory agencies such as EPA and NRC have adopted a prudent approach to establishing standards to protect human health and the environment from the effects of ionizing radiation. EPA typically regulates radiation exposure based on a lifetime cancer risk of 1×10^{-6} to 1×10^{-4} (1 in a million to 1 in 10,000), consistent with its approach for chemical carcinogens. NRC's license termination dose criterion of 25 millirem per year total effective dose equivalent is consistent with the recommendations of advisory bodies such as the International Commission on Radiological Protection to limit exposures to members of the public from individual sources of radiation. Estimated exposures from the alternatives considered in this EIS are presented throughout this document in a manner that allows a comparison with these levels of protection.
- 245-4 Chapter 3, Section 3.6.2.1, of this EIS addresses groundwater at WNYNSC that was contaminated due to past activities (for example, the North Plateau Groundwater Plume). This EIS was prepared to evaluate the environmental impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC. Under all of the action alternatives, DOE would either remove contamination sources, mitigate their impacts to groundwater, or both. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the North Plateau Groundwater Plume. Potential groundwater impacts associated with the EIS alternatives are discussed in Chapter 4, Sections 4.1.4 and 4.1.10, and Appendix H of this Final EIS.
- 245-5 The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program.
- 245-5 Chapter 1 of this EIS summarizes the history of the WNYNSC site and of the EIS process for addressing decommissioning and/or long-term stewardship of the site. Section 1.1 provides an accurate history of the development of the site and how DOE and NYSERDA became responsible for their respective roles. Section 1.2 describes the EIS process that has led to the development of this EIS. Note that Chapter 1, Section 1.2, identifies the 2005 version as an internal preliminary

**Commentor No. 245 (cont'd): Diane D'Arrigo,
Nuclear Information and Resource Service**

Department of Energy Remediation of the West Valley Site

In 1981, a federal law, the West Valley Demonstration Project Act, directed the Department of Energy (DOE) to solidify the high-level liquid wastes, clean up and close the site. West Valley Nuclear Services was selected as the prime contractor. Vitrification—mixing the high-level waste with melted glass—was the solidification method which started in 1996 and was completed in 2002. In 1987, DOE agreed to do an Environmental Impact Statement (EIS) on the cleanup and closure of the site. A draft EIS (DEIS) was issued in 1996 with five different cleanup alternatives. In 2001, the DOE split the EIS process into two parts; one on waste management at the processing facility and the other on total site cleanup and closure options. The first part, "Waste Management EIS", was released in 2003. The second DEIS part was released in 2005 on "Site Closure Options." After the 2001 splitting of the EIS process, the Coalition on West Valley Nuclear Wastes took legal action as they believed it was contrary to federal law. The case remains in Federal Court, under appeal and unresolved.

DOE's draft 2005 Draft Environmental Impact Statement (DEIS) on final cleanup and closure options changed substantially from the 1996 DEIS; useful alternatives were eliminated and the estimated costs of cleanup changed radically. *Although there was no recommendation given, the DEIS seemed to imply that leaving the bulk of the waste in the ground was a cost-effective way of remediating the site.* Concerns raised by state agencies appear to have prompted the DOE to work on another DEIS, expected to be released soon. *Currently, this process is one of the longest unresolved EIS procedures in US history.*

Cleanup Governed by Mix of Federal and State Policies

The site cleanup is governed by a complex mix of federal and state laws, regulations and guidance. On the federal level, the DOE is the lead agency, although the Nuclear Regulatory Commission also has some regulatory authority and requirements. There are also state Department of Environmental Conservation cleanup requirements, and the site includes a state-licensed radioactive burial area covered by state procedures. *Under federal law, NYS is responsible for 10 percent of the costs and the federal government is responsible for 90 percent of the cleanup costs at the West Valley Demonstration Project site.* (NY is responsible for all the costs of the State licensed Disposal Area.) NY is the only state that contributes to the cleanup of a high-level radioactive waste site, and to date, the state has contributed more than \$250 million to the project. *In 2007, the NYS Attorney General and the NYS Energy Research & Development Authority filed a lawsuit to ensure that DOE remediated the site in a timely manner, and to seek damages for harm the federal government has caused to the state's natural resources.* The lawsuit seeks to clarify the DOE cleanup responsibility after recent DOE funding cuts. A Federal Judge required the state and DOE to first work to resolve their differences through negotiations which started in 2007.

(Excerpts from Sections 1 and 2 of *The Real Costs of Cleaning Up Nuclear Waste*)

*Joshi, S.R. 1988. West Valley - Derived Radionuclides in the Niagara River Area of Lake Ontario. Water, Air, and Soil Pollution. Vol. 37, No 1-2, pp: 111-120.

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245-6

Draft EIS for review by the co-lead and cooperating agencies. After review of the internal preliminary Draft EIS, DOE established a Core Team of agencies to resolve the issues arising from that review, including the range and definition of the alternatives to be analyzed.

The court case referred to in the comment was settled August 31, 2009, with the United States Court of Appeals for the Second Circuit affirming a district court's summary judgment in favor of DOE.

245-6 A variety of Federal and state agencies have roles and responsibilities in the decommissioning and/or long-term stewardship of WNYNSC, and there are a large number of laws and regulations that apply to the site and its activities. Chapter 5 of this EIS describes the applicable laws and regulations. Chapter 1 discusses the roles and responsibilities of the Federal and state agencies. Of particular importance to the subject of this EIS is Appendix L, which addresses the regulatory compliance.

With respect to the referenced lawsuit, the State of New York, NYSERDA, and NYSDEC filed a complaint against the United States and DOE on December 11, 2006. The complaint: (a) asserted claims for cost reimbursement and damages to the State of New York's natural resources under section 107 of CERCLA, 42 U.S.C. 9601 et. seq.; (b) sought delineation by the court of DOE's responsibilities under the West Valley Demonstration Project Act; and (c) requested a ruling under the Nuclear Waste Policy Act, 42 U.S.C. 10107, that the Federal Government must pay the fee for offsite disposal of the high-level radioactive waste stored at the site. At the parties' request, the court stayed the litigation and directed the parties to engage in a confidential mediation process.

**Commentor No. 245 (cont'd): Diane D'Arrigo,
Nuclear Information and Resource Service**

Severe Erosion Problems at West Valley Site

The report found that erosion is a powerful and fast moving force at the West Valley site. West Valley sits on a geologically young landscape which is undergoing a relatively rapid rate of erosion. Within the next few hundred years, erosion is estimated to create damaging gullies. **This region could expect to have hundreds of new gullies form with erosion removing the plateau surface in the next few thousand years.** Wastes that would be left at the site are extremely long-lived and radioactive for thousands to millions of years. It is easy to imagine that if erosion is uncontrolled, gullies will penetrate a buried waste area.

Predicted Erosion Breaches Buried Waste Areas

Unless erosion and other institutional controls are rigorously maintained, we predict that the disposal areas could be breached in less than 1000 years and as quickly as 150 years from now without any controls in place. This breach would be a catastrophic failure, leaking high concentrations of radioactive waste into the watershed and then quickly into Lake Erie. Since severe erosion problems are estimated to occur at the site within hundreds of years, clearly, the long-term disposal of buried waste at the site is not an environmentally sound approach. Currently, there is a large plume of contaminated groundwater moving towards Buttermilk Creek. However, even more worrisome for the downstream population and the priceless resource of the Great Lakes is the potential for streams near the site to undercut or expose buried wastes. The following is a summary of the erosion problems that were investigated in the report.

Estimated 500 Gullies in 10,000 Years

There are approximately an estimated 64 gullies and streams per square mile in this region. Over the roughly 15,000 year period that this landscape has evolved, we estimate that the density of gullies doubles every 3,000 years. This region could expect to have over 500 new gullies, or stream splits, form in the next 10,000 years. It is easy to imagine that if erosion is uncontrolled, at least one of these gullies will penetrate a buried waste area. In fact, it will take far fewer than 500 gullies and far less time for the entire plateau surface to erode.

20 % of Plateau Surface Estimated to Erode in 10,000 Years

Using a bench-scale (30 x 50 ft) experiment as a model for the evolution of the site landscape, we estimated that within 10,000 years, 20% of the plateau surfaces that are un-gullied today will have eroded away across the lower Buttermilk watershed. There are various reasons why this is a conservative rate. First, Buttermilk Creek tributary gullies drop more rapidly and over more waterfalls than in the bench-scale model which lead to faster erosion rates in reality. Deforestation and impervious surface runoff increase erosion rates, and we expect climate change to result in more severe storm events, when the most severe erosion occurs.

Erosion Will Create Damaging Gullies Within a Few Hundred Years

A 1993 document concluded from 35 years of repetitive air photos that the head cut on Franks Creek advanced an average of 7.5 feet per year and on Erdman Brook advanced 10.5 feet per year. From these rates, we would expect that within several hundred years, this erosion will have opened new areas on the adjacent plateaus to damaging gullies. *At the rate of plateau-edge removal anticipated for Franks Creek, we*

245-7

DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in this EIS. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. Consistent with DOE guidance for conducting accident analyses, the long-term performance assessment evaluated a “spectrum of reasonably foreseeable” events and avoided those that are so speculative as to render the results not reasonably foreseeable and therefore not helpful to the decisionmaker. The potential impacts of climate change are evaluated through sensitivity analyses, but this EIS does not attempt to address extreme global-scale climate change. Although there are no reliable projections of future specific climate changes in the WNYNSC region, the groundwater dose analysis investigates the sensitivity of wetter or drier climates on the estimates of human health impacts. This includes evaluation of the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. The analysis of doses due to unmitigated erosion uses a gully advance rate associated with a climate that is wetter than current site conditions. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling are discussed in Appendix F. Please also see the response to Comment no. 245-1 and the Issue Summaries for “Concerns about Potential Contamination of Water” and “Questions about Long-term Erosion Modeling” in Section 2 of this CRD for further discussion of these issues and DOE’s and NYSERDA’s responses.

**Commentor No. 245 (cont'd): Diane D'Arrigo,
Nuclear Information and Resource Service**

might anticipate a breach of the northeast edge of the state-licensed disposal area in less than 400 years due to side-cutting alone. In addition, there are concerns about landslides and a Buttermilk side-slope retreat.

Worse Case Scenarios Result in Contaminated Public Water Supplies

Landslides, gullies, and stream cuts all put the West Valley site at high risk of erosional failure. There is a significant probability that at some point in the future while the radioactive waste still poses a threat, controls will fail, or an unforeseen major storm and flooding will result in a serious failure. Erosion controls typically have short life spans of 10 to 25 years. Many of the erosion controls proposed have short design lives, raising the question: Can we count on a system design so sound and repairs made so frequently that the dangerous contaminated waste at the site is never released?

There is a tremendous risk of erosion penetrating the buried wastes at the West Valley site. A major concern with the Onsite Buried Waste cleanup option is the potential for waste to be released and impact water supplies. We looked at two worse case scenarios resulting in the leaching of contaminants into public water supplies.

Scenario 1: Expanding desiccation allows escape or exchange of trench water leachate into Erdman Brook or Franks Creek. Then contaminated liquid and sediment migrate to Buttermilk and Cattaraugus Creek stream bed and point bars, and are also taken up by the food chain. Lastly, a 10 or 100 year storm event flushes the system, including gullies and desiccation cracks. The timeframe could be less than a century.

Scenario 2: After centuries, trenches containing contaminated leachate are exposed by a landslide. This sudden exposure of the end of a trench will allow a release of fluid waste contents, in addition to the processes described in Scenario 1. Because of the need to have conditions that promote landslides, this scenario may occur in centuries.

Preventing erosion and landslides at West Valley will be difficult, if not impossible, over the long term. Over a period of years to decades, erosion controls can be ineffective under design conditions—and if the system maintenance is neglected, or if a rare extreme flood occurs, mechanisms can become ineffective quickly. For example, levees along rivers are not designed to allow floodwaters into towns, and yet this is a regular occurrence throughout the Midwest. The probability that institutional controls, memory, and budgets will remain effectively in place throughout the next millennium is highly unlikely, and therefore we should be concerned about any plan to try to maintain critical control features if buried wastes remain at West Valley.

(Excerpts from Section 6 of *The Real Costs of Cleaning Up Nuclear Waste*)

245-7
cont'd

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**Commentor No. 245 (cont'd): Diane D'Arrigo,
Nuclear Information and Resource Service**

Drinking Water Costs & Public Health Impacts

The study evaluated the following public health and social costs and impacts: treating contaminated drinking water, lost land revenues and radiation doses and cancer deaths.

Drinking Water Costs

The site poses a significant danger to people who live along Buttermilk and Cattaraugus Creek, the residents of Buffalo and the large population along the shores of Lakes Erie and Ontario. These populations are endangered by the risk of a radionuclide leak. We estimated water replacement costs if there were a catastrophic release of radionuclides approximately 500 years from the time of closure expected in the Onsite Buried Waste option. The costs are substantial in the first year—at over \$272.7 million dollars—and then decline to \$27.5 million per year to maintain the Buffalo and Erie County Water Authority's water treatment plants. This is only a case example, and does not include a substantial population along Lakes Erie and Ontario who could also be impacted.

Exposures to Radioactive Pollution and Projected Cancer Deaths

We evaluated the public's exposure to West Valley radionuclides from both a rapid leak and a continuous leak scenario. We found that the radioactive waste buried at the site poses an unacceptable risk to the populations in the surrounding area, including those that draw their water from Lake Erie. Potential radiation doses from various exposure pathways could lead to enormous doses and illnesses. The doses to people living downstream and those drinking contaminated surface water will exceed standards, leading to adverse health effects as well as unnecessary deaths from cancer. Leaving these wastes in the ground presents a significant burden and public health threat to future generations as the waste will be radioactive for thousands to millions of years.

Scenario 1: Over 800,000 Lake Erie Water Users Exposed to Substantial Radiation

If just one percent (1%) of radioactivity leaked from the site in a particular year, we calculated that a large population of over 800,000 Lake Erie water users would be exposed to substantial radiation, and that people downstream along the Buttermilk and Cattaraugus Creeks would be exposed to doses well in excess of federal and state standards.

Scenario 2: One Plant's Polluted Water Could Result in 334 Cancer Deaths

If just 1% of the radioactivity leaks, starting in year 100 to 1,000 years into the future, it is expected that 400,000 people receiving Lake Erie water from the Sturgeon Point Water Treatment Plant would be exposed to up to 334,320 person-rem,* resulting in the cancer deaths of up to 334 people. *This means that from 100 to 1,000 years into the future it is expected that up to 334 of the people receiving their water from one Treatment Plant are expected to die of cancer as a result of their exposure to contaminated water from Lake Erie.* The number of cancer fatalities would be greater if it included the entire population in the United States and Canada which receive their drinking water from Lake Erie, although it would be spread throughout a larger total population.

245-8

245-8

Chapter 4, Sections 4.1.9 and 4.1.10, of this EIS respectively address human health impacts from decommissioning actions and long-term health impacts. The analysis considers the impacts to the offsite population from transport of contaminants in the water. Chapter 4, Section 4.1.10, and Appendix H of this EIS present the results of the analysis of impacts to maximally exposed individuals near the site as well as to the population receiving water from Lake Erie and Niagara River water treatment plants. The reader is again referred to the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion, including a summary description of receptors, the scenarios considered, and the resulting doses.

The Issue Summary for "Conclusions of the Synapse Report" addresses DOE's and NYSERDA's responses to the cost issues raised by the commentor.

**Commentor No. 245 (cont'd): Diane D'Arrigo,
Nuclear Information and Resource Service**

Lost Land Revenues

As long as people are restricted from utilizing the land at the site, there will be lost land revenues. As a highly conservative hypothetical estimate, we assume that if the fully remediated land were used for agricultural purposes, it could bring in \$130,000 a year, which would be lost if the site is not cleaned up to allow such use.

(Excerpts from Section 4 of *The Real Costs of Cleaning Up Nuclear Waste*)

**"Person-rem" is a measurement of the collective dose in rems that a specific population is exposed to over a certain time period. The person-rem units represent the average dose per person times the number of people exposed. Doses are presented in units of rem or millirem (1 rem is equivalent to 1,000 mrem).

|| 245-2
cont'd

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**Commentor No. 245 (cont'd): Diane D'Arrigo,
Nuclear Information and Resource Service**

Valuing the Future: h

The Viability of Institutional Controls Over 1,000 Years

The report investigated the risks of losing institutional controls for the Onsite Buried Waste approach and examined issues surrounding very long periods of time: continuity of governments, language, ethical issues with leaving ab enormous hazard to future b generations abd valub future costs.b

Institutional Controls Unreliable Over the Long-Term

Wastes that would be left at the site are extremely long-lived. For example, one of the longest lasting radionuclides, thorium-232, has a half-life of 14 billion years. If the buried waste is left at West Valley, government would need to monitor the waste for thousands of years; such monitoring and control activities are called institutional controls. However, b controls are not foolproof and have failed at many sites resulting in the need for b additional remediation. Controls failed multiple times at West Valley, including the b overflowing trenches in the State Disposal Area. *These incidents are not unique to the site and such failures speak to the unreliability of controls as a long term strategy for preventing harm to people.* Understanding that there is no guaranteed place or b technology to truly isolate long-lasting radioactive waste, these failures suggest that the b real solution to first minimize additional production of nuclear waste from atomic b power, weapons and the nuclear fuel chain.

1,000 Year Continuity in Government and Language Improbable

Maintaining institutional controls at a nuclear waste site first requires a continuity of b government and language. *A fundamental obstacle to maintenance of institutional controls is the improbability of thousand-year continuity in either government or language.* A thousand years is a long time for any government to endure, let alone b institutional controls at a particular waste site. It is of course impossible to look forward b time and see the world of 3008; as an alternative, we can look the other way, at the b world of a thousand years ago. In 1008, Vikings were attacking England; the Norman b Conquest was still decades away. Of the governments and nations that exist today, only b Iceland has an unbroken lineage spanning over a thousand years. If the government of b any country (other than Iceland) had made the benthantium in 1008 to protect an b important site for a thousand years, there is no guarantee that anyone would still know b about that commitment today. b

A thousand years is also a long time in the history of language—long enough for a b language to change beyond recognition. While something called the English language b has existed for centuries, it changes fast enough so that modern readers cannot b understand words written a thousand years ago. The English literature classic that b dates back a thousand years, *Beowulf*, is no longer readable, and has to be translated b into modern English in order for anyone but a few specialists to understand it. A b warning from the author of *Beowulf* written in the English of roughly 1000 years ago b would be incomprehensible to all but a handful of experts today. In 3008, when the b English of this report is as abile as the language of *Beowulf* is today, will casual b readers and potential intruders on a waste site be able to read our warning signs? b There is no reason to assume that the Department of Energy could adequately address b safety and communication issues at West Valley for the Onsite Buried Waste option.b

245-9

245-9

DOE and NYSERDA note the commentor's position regarding the longevity of governments, language, and institutional controls. DOE and NYSERDA would maintain and monitor the site as long as a hazard remained. However, the analysis in this EIS acknowledges and accounts for the possibility of loss of institutional controls. Appendix L of this EIS discusses the requirements of the NRC License Termination Rule with respect to radiological criteria under various conditions, including loss of institutional controls. Appendix H describes the analysis and results of the long-term performance assessment of the site, including evaluation of potential impacts from unmitigated erosion following loss of institutional controls and use of the site by an intruder (well driller and farmer). The results of the impacts analysis are presented in Chapter 4, Section 4.1.10, of this EIS.

**Commentor No. 245 (cont'd): Diane D'Arrigo,
Nuclear Information and Resource Service**

Protecting Rights of Future Generations

One of the best-known authors to address nuclear waste issues is Kristin Shrader-Frechette, a University of Notre Dame scientist who argues that burial of nuclear waste repositories is important, both because of the scientific uncertainty in predictions of geological events over the millennia, and because waste burial compromises the rights of future generations to equal treatment and informed consent. She calls for us to monitor, above-ground waste storage so that future generations can make their own decisions about new technologies to the problem without facing additional risks from unretrievable buried waste disposal. Every generation should have the right to equal treatment and to give or withhold informed consent to avoidable hazards. *No generation has the right to impose its hazards on those who come later. These principles, rather than cost calculations should determine our choices about nuclear waste.*

Ethical Policy Requires Zero Discounting Over 1,000 Years

Economists discount future costs and benefits, expressing them by present value terms—a process that is nothing more than compound interest in reverse. For instance, at a 3 percent discount rate, \$103 next year has a present value of \$100 today, because \$100 is the amount one would have to put in the bank today at 3 percent interest, in order to end up with \$103 next year.* For short- and medium-term private financial decisions, discounting is essential. For intergenerational public policy decisions, the case for discounting is much less compelling. Rather than by individual weighing complete costs against complete benefits, nuclear waste policy consists of choices about what this generation will or will not do for those who will come later. *That is, the choice of an intergenerational discount rate is a matter of ethics and policy, not a market-determined economic decision.*

Fairness requires that all generations be treated as equally important. This means that the discount rate would apply if all generations had equal resources must be very zero or close to zero. Indeed, in 2001, the DOE in a Report to Congress on Long-Term Stewardship recommended that discounting should not be used when calculating future site maintenance costs for federal nuclear waste sites. The same conclusion—the discount rate for a 1,000-year analysis must be zero—can be reached by a different argument. The existence of regulatory requirements for protection of sites that will remain dangerous for 1,000 years must imply that we care today about health hazards that will be experienced in 3008. Costs and benefits incurred in that distant year must have a significant present value; otherwise, we could ignore them and we could "prove" via discounting that it is not cost-effective to spend anything today or our successors a thousand years down the road. At a discount rate of 1.4 percent, considered implausibly low by many conventional economists, \$1 million in 3008 has a present value of \$1 billion today. Thus it would not be worth spending more than \$1 today to prevent \$1 million of harm in 3008. To validate the commonsense idea that outcomes in 3008 matter today, the discount rate must be no more than a few tenths of a percent per year or zero. *If we care about the long-term impacts of today's nuclear waste, stretching across much more than a 1,000 years, then the only supportable discount rate is zero.*

(Excerpts from Section 5 of *The Real Costs of Cleaning Up Nuclear Waste*)

*This example, like the entire discussion of discounting in the report, assumes the use of inflation-adjusted, or constant-dollar, amounts.

245-10

245-10 This EIS evaluates alternatives for decommissioning and/or long-term stewardship of a site on which waste has already been disposed. Offsite disposal capacity is available for most of the waste that could be generated from any of the EIS alternatives. The shift to a national policy of storage rather than disposal of this waste is outside the scope of this EIS. Consistent with existing practice, any waste generated from any of the EIS alternatives that does not currently have offsite disposal capacity (referred to as orphan waste) would be safely and retrievably stored on site until such disposal capacity is available.

245-11

245-11 DOE and NYSERDA acknowledge the commentor's opinion about cost discounting in the cost-benefit analysis included in the Revised Draft EIS. Please see the Issue Summary for "Questions about Cost-Benefit Analysis" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

The cost-benefit analysis presented in Chapter 4, Section 4.2, of the Revised Draft EIS was performed to support NRC's request for cost-benefit information consistent with its as low as is reasonably achievable (ALARA) analysis guidelines. This cost-benefit analysis follows the principles in the NRC ALARA guidance presented in NUREG-1757, "NRC Consolidated Decommissioning Guidance." The analysis in Section 4.2 has been revised for this Final EIS and uses several relatively low discount rates (1, 3, and 5 percent) to investigate the sensitivity of the results to lower discount rates. The use of a single discount rate of zero for the ALARA analysis is not considered to be consistent with the NRC guidance.

**Commentor No. 245 (cont'd): Diane D'Arrigo,
Nuclear Information and Resource Service**

**List of Proposed Nuclear Power Reactors and
Irradiated Fuel Reprocessing Facilities in the US**

1) States with Proposed Nuclear Reprocessing Facilities

Proposed Reprocessing for Global Nuclear Energy Partnership (GNEP) in ID, IL, NM, OH, SC, TN and WA.

Idaho

- EnergySolutions, LLC, Atomic City
- Regional Development Alliance, Inc., Idaho National Laboratory

Illinois

- General Electric Company, Morris

Kentucky

- Paducah Uranium Plant Asset Utilization, Inc., Paducah Gaseous Diffusion Plant

New Mexico

- Eddy Lea Energy Alliance, Hobbs
- EnergySolutions, LLC, Roswell

Ohio

- Piketon Initiative for Nuclear Independence, Portsmouth Gaseous Diffusion Plant

South Carolina

- EnergySolutions, LLC, Barnwell
- Economic Development Partnership of Aiken and Edgefield Counties, Savannah River National Laboratory

Tennessee

- Community Reuse Organization of E. Tennessee, Oak Ridge National Laboratory

Washington

- Tri-City Industrial Development Council/Columbia Basin Consulting Group, Hanford Site

2) States with Proposed Nuclear Power Reactors

Combined License Applications Received by the US Nuclear Regulatory Commission in AL, FL, GA, LA, MD, MI, MS, MO, NY, NC, PA, SC, TX and VA.

Alabama

- Bellefonte Nuclear Station Units 3 and 4 AP1000 Tennessee Valley Authority (TVA)

Florida

- Levy County Units 1 and 2 AP1000 Progress Energy Florida, Inc. (PEF)

245-12

245-12 Comment noted. The list of facilities is not within the scope of this EIS.

**Commentor No. 245 (cont'd): Diane D'Arrigo,
Nuclear Information and Resource Service**

Georgia

- Vogtle Units 3 and 4 AP1000 Southern Nuclear Operating Company (SNC)

Louisiana

- River Bend Station Unit 3 ESBWR Entergy Operations, Inc. (EOI)

Maryland

- Calvert Cliffs Unit 3 EPR Calvert Cliffs 3 Nuclear Project, LLC. and UniStar Nuclear Operating Services, LLC.

Michigan

- Fermi Unit 3 ESBWR Detroit Edison Company

Mississippi

- Grand Gulf Unit 3 ESBWR Entergy Operations, Inc. (EOI)

Missouri

- Callaway Plant Unit 2 EPR AmerenUE

New York

- Nine Mile Point Unit 3 EPR Nine Mile Point Nuclear Project, LLC and UniStar Nuclear Operating Services, LLC (UniStar)

North Carolina

- Shearon Harris Units 2 and 3 AP1000 Progress Energy (PE)

Pennsylvania

- Bell Bend Nuclear Power Plant EPR PPL Bell Bend, LLC

South Carolina

- Virgil C. Summer Units 2 and 3 AP1000 South Carolina Electric & Gas (SCE&G)
- William States Lee III Units 1 and 2 AP1000 Duke

Texas

- South Texas Project Units 3 and 4 ABWR South Texas Project Nuclear Operating Company (STPNOC)
- Victoria County Station Units 1 and 2 ESBWR Exelon Nuclear Texas Holdings, LLC (Exelon)
- Comanche Peak Units 3 and 4 US-APWR Luminant Generation Company, LLC (Luminant)

Virginia

- North Anna Unit 3 ESBWR Dominion Virginia Power (Dominion)

Source: Nuclear Information and Resource Service, www.nirs.org compiled from US NRC www.nrc.gov and US DOE <http://www.energy.gov/news/4492.htm>

245-12
cont'd

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Commentor No. 246: Dolores Kurzdorfer

September 8, 2009

Dolores Kurzdorfer
40 Hillcrest Drive
Amherst, NY 14226

I am concerned about the the water quality of the Great Lakes and the drinking supply of fresh water for our whole population and those in the future

|| 246-1

246-1

DOE and NYSERDA acknowledge the commentor's concerns about water quality impacts in the Great Lakes. The purpose this EIS is to evaluate the environmental impacts of the various alternatives, including impacts on water resources and human receptors. These impacts are presented in Chapter 4 of this EIS. Please see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 247: Nora Herzog

September 7, 2009

Nora Herzog

4884 Pine Ledge Drive W.

Clarence, NY 14031

A complete West Valley cleanup is needed.

|| 247-1

247-1

DOE and NYSERDA acknowledge the commentor's support for the full cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 248: Kimberly DePerno

September 7, 2009

**Kimberly DePerno
570 Porterville Rd.
East Aurora, NY 14052**

I am writing to express my concern with the waste buried at West Valley. Many years ago, my Uncle Jim Cottrell worked as an engineer at the site. He died 15 years ago at the young age of 51 from a rare form of cancer that was most certainly a result of the exposure he received at the workplace. If the nuclear waste at this site is allowed to remain and contaminate the Cattaraugus Creek and eventually Lake Erie it would be the ruin of an entire region. It is imperative that the waste be removed and properly disposed of.

Sincerely,
Kim DePerno

248-1

248-1

DOE and NYSERDA acknowledge the commentor's support for removal of the waste from the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response. The human health impacts to workers and the public are addressed in Chapter 4, Sections 4.1.9 and 4.1.10, of this EIS.

Commentor No. 249: Kathleen Duwe

September 7, 2009

**Kathleen Duwe
13788 Groth Rd.
Springville, NY 14141**

Once upon a time, many, many years ago, I moved to Springville with my family. We were in our early thirties with two young children. It was the first I heard of the West valley site. Gradually I started to hear more about the Site. Most of what i heard wasn't good. I joined the West Valley Coalition to work at a grassroots level to petition for cleanup. I had another baby. By 1981, it seemed things were moving in a positive direction. There was a contractual commitment for cleanup. I had another baby. Gradually it became clear that this "contract" - this agreement - would need some citizen oversight. I was a citizen. I was willing to stay involved. But I also had another baby. Over the years I went to lots of meetings and conferences. I wrote letters and met with government officials - elected representatives and key players in various agencies. There were lawsuits and court decisions. Eventually, with a full time job and five children, my time was limited. But I continue to follow this "issue." It's been 30 years. I just retired. I have grandchildren. It's time to do this job right. We need a full cleanup. Sitewide Removal is the only responsible alternative. I want this for my grandchildren. There is the certainty of erosion. The burial grounds are slowly ticking time bombs. Choose Sitewide Removal.

249-1

249-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling are discussed in Appendix F. Please see "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

**Commentor No. 250: Marilyn J. Galley,
Citizens Campaign for the Environment**

September 6, 2009

Marilyn J. Galley

Citizens Campaign for the Environment

59 Overland tr.

W. Henrietta, NY 14586

please protect our future by throughly cleaning up the West Valley site.

|| 250-1

250-1

DOE and NYSERDA acknowledge the commentor's support for the full cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 251: Anne Gayley

September 8, 2009

**Anne Gayley
404 Burroughs Dr.
Amherst, NY 14226**

I am writing to urge you to insist on a complete clean-up of the West Valley Nuclear Waste site. As a resident of Erie County and user of Lake Erie water, I have a strong concern about our drinking water and environmental contamination. It seems to me that waiting to totally dispose of this hazardous waste is not an option. I hope you will support its removal now.

251-1

- 251-1 DOE and NYSERDA acknowledge the commentor's support for prompt action to provide complete cleanup of WNYNSC. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

**Commentor No. 252: Arthur Klein, Sierra Club,
Niagara Group, Solid Waste Committee**

September 8, 2009

Arthur Klein

Sierra Club, Niagara Group, Solid Waste Committee

43 Luksin Dr

Tonawanda, NY 14150

On September 1, 2009, I and over a dozen members of two Western New York environmental groups, The Sierra Club, Niagara Group and the Adirondack Mountain Club, Niagara Chapter Conservation Committee, joined with many other concerned citizens and the West Valley Action Network at a CLEAN-UP CREW civil protest and action at a Press Conference in Buffalo.

All of us in Western New York with any knowledge of the threat of West Valley are tired of waiting for a Full Clean-up at the West Valley Radioactive Waste Site. There is just no justification for Federal and State governments to leave any of the radioactive waste on site. Continued inaction by the parties responsible for this mess, namely DOE and NYSEDA threaten the Great Lakes and our drinking water, while officials endlessly study the situation for another 30 years.

The fact is that the site represents a failure to cope with a real and very dangerous situation. I worked in the Great Lakes Basin for the Corps of Engineers for nearly forty years the last seventeen of which I monitored and inspected hundreds of erosion control devices along the shorelines of the lower lakes. Mostly I learned that erosion control is self-contradictory. You can slow erosion with various strategies but water is a constant enemy and ultimate victor. West Valley is a prime site for not building nuclear waste storage because of the strong role water has in the dynamics of the plateaus it is built upon. Surface and sub surface forces are undermining and over whelming the puny control structures that have been placed in the site since the early 1970's.

In addition the proximity of Cattaraugus Creek with a long history of flash floods of dangerous magnitudes just guarantees an increase of the likelihood that a long-term erosion of the creek could expose the West Valley site itself. This, tied to the increased storm densities we experience as a result of climate change any future that causes that material to remain on site is a unique and serious peril to the drinking water of forty some million people. The flooding of Gowanda, NY, August 8t, 2009 gives a preview of things to come—with over 5 inches of rainfall; flash floods caused severe erosion and flooding in nearby areas. A landslide

252-1

252-2

252-1 DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup and support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

252-2 DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well

**Commentor No. 252 (cont'd): Arthur Klein, Sierra Club,
Niagara Group, Solid Waste Committee**

occurred on the steep 160-foot bank of Buttermilk Creek, immediately adjacent to the radioactive waste trenches of the State Disposal Area. Thousands of tons of material were moved in the slide including a strip of land approximately 15 feet wide at the top of the bank. Other creeks were also impacted and reservoirs at the site overflowed.

Unfortunately, the US DOE and NYSERDA assumed when performing an Environmental Impact Statement for West Valley that no Global warming would occur for 10,000 years and therefore there would be no exacerbation of severe weather in the West Valley area. Thousands of scientists worldwide including many within the US Government have acknowledged the inevitability of global warming and have documented impacts that are occurring today. Global warming impacts on this site, which is vulnerable to erosion under ordinary circumstances, should have been studied. In 2006 rainfall of 14-15 inches in Binghamton, NY, caused a flood of historic proportions. Failing to study potential severe weather impacts from global warming leaves everyone in the dark about how quickly dangerous radioactivity could be spread widely in the region and provides inadequate warnings to the public officials and safety professionals who might have to respond to a disaster.

A long string of failures have been associated with the venture into commercial reprocessing, the choice of the West Valley site, the promises related to long term waste disposal and a fund to pay for cleanup. The proposed plan to clean up just 1% of the dangerous radioactivity while asking us to WAIT another 30 years is a recipe for disaster. The government has assumed it can contain radioactive waste at this site for thousands of years. The record of failures makes this a dangerously flawed assumption.

Western New York can WAIT no more. Full CLEAN UP will be far MORE EXPENSIVE, but it may also be CATASTROPHIC for millions of people and the Great Lakes if it is not done. The only acceptable option is a Full Clean-up under the Site wide Removal option presented in the Environmental Impact Statement. We need a FULL CLEAN-UP NOW!

Thank you,
Respectfully,
Arthur F. Klein Jr
43 Luksin Dr
Tonawanda NY 14150

252-2
cont'd

252-3

252-1
cont'd

as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling are discussed in Appendix F. In addition to the previously cited Issue Summaries, please see "Questions about Long-term Erosion Modeling" for further discussion of this issue and DOE's and NYSERDA's response.

The analysis in this EIS recognizes the potential for climate change to influence the long-term consequences of waste management. Climate changes, whether natural or influenced by human actions, could change the nature and amount of precipitation. Appendix H, Section H.3.1, of both the Revised Draft EIS and the Final EIS discusses the sensitivity of groundwater flow to changes in annual precipitation. The revised erosion prediction used for the unmitigated erosion dose analysis is based on the assumption that storms could occur more frequently than is currently estimated. This prediction includes the effects of storms of greater severity than the one that occurred in the region in August 2009. The use of this higher erosion rate associated with an elevated precipitation rate is discussed in Appendix H, Section H.2.2.1. Chapter 4, Section 4.3.5, has been revised to include a discussion of how the uncertainties about future climate change are addressed in this EIS.

Commentor No. 253: Calypso Sky Hahn Maurer

From: Mr Sky [mailto:mrsky@earthlink.net]

Sent: Thursday, August 27, 2009 12:06 PM

To: WestValleyEIS

Subject: west valley waste removal

Dear sir or madam,

Sitewide Removal Alternative at West Valley.

I am 11 years old and am concerned about the waste at west valley.What about kids futures? if they don't dig it up IT'S BAD. Just please tell the

~~DOE[department of energy] help to do this ADD THE READY.~~

Thank you.

Sincerely,

Calypso Sky Hahn Maurer

253-1

253-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 254: Victoria B. Ross,
Western New York Peace Center



2123 BAILEY AVENUE
 BUFFALO, NY 14211-2056
 716.894.2013/PHONE 716.894.8705/FAX
 WWW.WNYPEACE.ORG

September 2, 2009

Att: Catherine Bohan
 EIS Document Manager
 West Valley Demonstration Project,
 U.S. Dept. of Energy
 P.O. Box 2368
 Germantown, MD 20874

Ladies and Gentlemen:

As testified at your April 2 hearing at Buffalo's Erie Community College, full clean-up of West Valley nuclear waste is absolutely necessary. Anything less would be catastrophically harmful, as the Cattaraugus Creek feeds into the Great Lakes System, a full 20% of the world's fresh water supply.

Expensive as a full clean-up may be, it's a bargain compared to the other two options. Limited clean-up and/or wait-and-see options allow irreparable, ever-spreading damage to the environment and inhabitants, with multiplicative costs on all fronts.

Recent local flooding only emphasized the peril in anything less than complete, immediate clean-up of the West Valley site.

Thank you in advance for implementing full clean-up, for all our sakes.

Sincerely,

Victoria B. Ross, LMSW, QCSW, MALD

• Persist • Agitate • Unite • Defy •••

In the Spirit of Peace and Justice

254-1 254-1

DOE and NYSERDA acknowledge the commentor's support for the full cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes," "Concerns about Potential Contamination of Water," and "Questions about Long-Term Erosion Modeling" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 255: Mary O'Herron

125 Parkside Avenue

Buffalo, New York 14214

September 3, 2009

Ms. Catherine Bohan

EIS Document Mgr.

West Valley Demonstration Project

U.S. Department of Energy

P.O. Box 2368

German Town, Maryland 20874

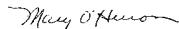
Dear Ms. Bohan:

I am asking the U.S. Department of Energy to implement full cleanup of the West Valley Demonstration Project site. As a resident of the city of Buffalo, as a mother and grandmother, and as a responsible human being, I believe it is critical that all safeguards are taken to keep Lake Erie and its feeder streams from being any further polluted by health damaging and life-threatening toxins than have already been introduced into these waters.

Future generations depend on our present good stewardship of Earth's most precious resource. We cannot afford to risk leaving nuclear waste in any places where it could potentially gain access to ground water.

Thank you.

Sincerely,



Mary O'Herron

255-1

255-1

DOE and NYSERDA acknowledge the commentor's support for the full cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Commentor No. 256: Devon Roblee

Devon Roblee
7 Orchard Street
Auburn, NY 13021

ATTN: Catherine Bohan
EIS Document Manager
West Valley Demonstration Project, US DOE
PO Box 2369
Germantown, MD 20874
September 4, 2009

Ms. Bohan,

I am writing on behalf of my family regarding the West Valley nuclear waste site in Cattaraugus County, New York.

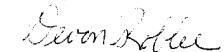
I have many relatives that live near the waste site, and I am concerned for their health and well being. The site is highly susceptible to erosion, and I have been made aware that scientists recognize that over time erosion will lead to release of buried toxic waste. If this waste, which is highly radioactive, leaks out into the water supply and soil many of my relatives may become exposed to this radioactivity. There is no safe level of exposure to radioactive waste. Exposure increases the risk of serious adverse health impacts, including cancer, reproductive disorders, and neurological effects.

I have read an independent study on cleanup options and costs, entitled "The Real Costs of Cleaning up Nuclear Wastes," and I urge US Department of Energy Secretary Steven Chu to support the FULL cleanup of the West Valley nuclear waste site. This is the only way to ensure that future generations will not suffer the effects of exposure to radiation left behind at the site.

Please pass my concerns along to Mr. Chu. A comprehensive cleanup and excavation of the entire site is the safest, most cost-effective solution to dealing with the West Valley nuclear waste site.

Thank you for your time and consideration.

Sincerely,


Devon Roblee

256-1

256-1

DOE and NYSERDA acknowledge the commentor's support for the comprehensive cleanup and excavation of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling are discussed in Appendix F. In addition to the previously cited Issue Summary, please see "Concerns about Potential Contamination of Water" and "Questions about Long-term Erosion Modeling" for further discussion of these issues and DOE's and NYSERDA's responses.

The report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., has been addressed in this CRD consistent with the Council on Environmental Quality's NEPA regulations. In addition to the previously cited Issue Summaries, please see "Conclusions of the Synapse Report" for further discussion of this report's issues and DOE's and NYSERDA's response.

Commentor No. 257: Robert M. Ciesielski

Robert M. Ciesielski
94 Lamarc Drive
Amherst, New York 14226

September 4, 2009

Ms. Catherine Bohan
EIS Document Manager
U.S. Department of Energy
PO Box 2368
Germantown, Maryland 20874

Re: West Valley Nuclear Waste Site Clean-Up

Dear Ms. Bohan:

I am asking for an immediate clean-up of the West Valley Nuclear Site. There are numerous problems with the phased decision making alternative concerning this site. The main action schedule for Phase I is to demolish the process building and to remove the radioactive strontium 90 plume which has developed nearby. Additionally, barriers are to be installed to attempt to prevent the future migration of radioactive material into groundwater.

Phase II will await for a period of up to 30 years for further action on the site.

The Phase I clean-up would only address 1.2% of the total radioactivity on this site. The other 99% of the radioactivity, to be addressed in Phase II, includes high level waste tanks and both radioactive burial sites—the northern disposal area and the southern disposal area. All of which contain approximately 600,000 curies of radioactivity.

There are several serious issues concerning the phased clean-up. First is that the site itself was built by a private enterprise on a site totally unsuitable for the storage of radioactive material. The site is located on a peninsula between two creeks which flow into Cattaraugus Creek and then into Lake Erie, the Niagara River and Lake Ontario. Millions of people reside along the shores of these waters, and many depend upon them for their drinking waters. The site is built on soft, gravelly, porous soil. Besides the mentioned creeks, a sole source aquifer exists below the site. There has already been substantial erosion of banks of the peninsula into Buttermilk Creek, one of the tributaries of the Cattaraugus Creek. Recent floods have caused 15 to 20 feet additional erosion. Of course, the strontium plume being addressed in Phase I must be cleaned up. However, looking at the age of the facility and its placement, the development of another plume is almost guaranteed. The original processing plant was built in the 1960's.

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| 257-1 | DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup and opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. |
| 257-2 | It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below). |
| 257-2 | Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected. |
| 257-3 | DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in this EIS. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. The erosion predictions used for the unmitigated erosion analysis are based on the assumption that storms occur more frequently than is currently estimated and include the effects of storms of greater severity than the |

Commentor No. 257 (cont'd): Robert M. Ciesielski

Ms. Catherine Bohan
September 4, 2009
Page 2

The high level waste tanks on the facility are nearing fifty years of age, which is their usual life span. All of the storage facilities and retention areas are aging, and as any engineer will attest, they will be breaking down in relatively harsh winters in the West Valley area, which is located in the Lake Erie snow belt.

The problem is with waiting to clean-up one plume at a time is that expenses increase astronomically. As I understand the economic estimate of the cost of Phase I, with the removal of the current plume, will be between \$1.5 and \$2 billion. Clean-up of the entire site at this time would cost approximately \$10 billion. The clean-up of one or two additional leaks may cost as much as a full clean-up completed now. If the radioactivity does contaminate the waterways just attempting to provide clean water to the populations which draw their water from Cattaraugus Creek and the watershed beyond would be at least three times the cost of a current full clean-up. And drinking water is only one portion of the problem, with the possible effect on the recreation industry, fish, birds and wildlife in the area. The common sense of completing the clean-up now versus a band-aid approach to West Valley is clear. We have already waited 30 years for the removal of radioactive waste from the site. Another 30 years to even address the problem again is unthinkable.

We realize that the Department of Energy is monitoring a number of radioactive sites throughout the United States. West Valley may appear to be just one more problem to leave as is. But is the unique location and potential to affect millions of people with the radioactive waste stored here is very much greater than sites where containment is made easier because of soil conditions, climate, and distance from freshwater drinking supplies.

On another topic, a number of legislatures and elected officials from Western New York and throughout New York State are requesting a full clean-up at this time. The legislatures of Cattaraugus County, Erie County and Niagara County have all passed referendums requesting full clean-ups. Along the shores of Lake Erie, Resolutions have been passed by the Town of Evans, the City of Lackawanna, the City of Buffalo which has a population of over a quarter of a million people, the Town of Tonawanda, the City of Tonawanda, and the Town of Amherst. Both United States Senators from New York, Charles Schumer and Kristen Gillibrand and over half of the States congressional representatives have contacted you and request the full and immediate clean-up. Additionally, 3 dozen State Senators and Assemblypersons have made a similar request. So we are asking the Department of Energy and New York State Department of Research and Development Agency to please reassess their positions about a phased removal. The health of millions of people is at stake. The health of the ecology of eastern Lake Erie, the Niagara River and Lake Ontario are at stake, including fish,

one that occurred in the region on August 8–10, 2009. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

Please refer to the Issue Summary “Concerns about Potential Contamination of Water” in Section 2 of this CRD for a discussion of this issue and DOE’s and NYSERDA’s response. Also see the response to Comment no. 257-5 regarding impacts on wildlife, tourism, and local industries.

257-4

257-4

257-5

257-3
cont'd

DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE has developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flow is into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being further reduced by tank drying.

Additionally, much of the residual contamination in the tanks is attached (i.e., “fixed”) to metal surfaces and is not readily mobile. Chapter 2, Section 2.3.1, of this EIS, as well as text in the *Phase 1 Decommissioning Plan for the West Valley Demonstration Project (Phase 1 Decommissioning Plan)*, have been clarified to acknowledge that the liquids remaining in the tanks will be dried as a result of installation and operation of the tank and vault drying system and that this drying will be complete before any Waste Tank Farm decommissioning actions are initiated.

257-5

Under the Phased Decisionmaking Alternative, the source area of the North Plateau Groundwater Plume, the most mobile contamination on the site, would be removed as part of Phase 1. The North Plateau is the only portion of the site where

Commentor No. 257 (cont'd): Robert M. Ciesielski

Ms. Catherine Bohan
September 4, 2009
Page 3

birdlife, wildlife, plant life. The economic health of these areas including industries which use water from the Great Lakes, and the tourist industry are all at stake.

You may be concerned about funding at this time of financial hardship. But by the time the monies become available for the clean-up, the U.S. and New York State economies will have rebounded and the monies will be available for projects. This is a project which must be accomplished now.

Very Truly Yours,



ROBERT M. CIESIELSKI

|| 257-3
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groundwater moves at a relatively rapid rate, and therefore a plume could move at a relatively rapid rate. Groundwater movement on the South Plateau is relatively slow because of the natural and engineered barriers that limit water infiltration and lateral flow. The extensive characterization and monitoring data does not indicate the presence of any other plumes whose position would noticeably change over the next few decades.

This EIS was prepared to evaluate the environmental impacts of alternatives for the decommissioning and/or long-term stewardship of WNYNSC. It includes evaluation of the potential human health impacts of any radioactivity left on site, including a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. Chapter 4, Section 4.1.10, presents the long-term radiological doses and risks to the population and hypothetical individuals living near the site. Chapter 4, Section 4.1.6, of this EIS also presents the results of an ecological risk assessment showing the projected long-term ecological impacts of the alternatives. The results of the human health and ecological impacts analysis imply that any impacts on wildlife, tourism, and the economies of communities downstream of WNYNSC would be negligible.

**Commentor No. 258: Chuck Jaworski, Council President,
City of Lackawanna**

RESOLUTION # 21 2009

RESOLUTION ON WEST VALLEY NUCLEAR WASTE SITE CLEANUP

Whereas the West Valley nuclear waste site (also known as the Western New York Nuclear Service Center & Demonstration Project) is located 30 miles south of Buffalo and contains large amounts of toxic and radioactive wastes, some of which will remain dangerous for thousands of centuries and;

Whereas the site represents the nation's sole venture into commercial reprocessing of irradiated nuclear fuel, and whereas this venture ended in 1976 when the private partner failed, leaving cleanup responsibility to government taxpayers, and

Whereas contamination from this site has been found as far away as the Niagara River at Lake Ontario, and

Whereas Lake Erie represents the drinking water supply source for Erie County, and the Great Lakes represent a drinking water source for millions of people, and

Whereas the Department of Energy has identified alternatives for the remediation of the West Valley site ranging from complete removal of all radioactive materials to taking no action, and proposes a partial remediation while leaving buried waste onsite, including high level radioactive waste tanks, and

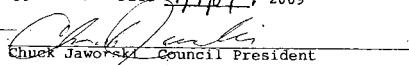
Whereas the Department of Energy preference would postpone a final cleanup decision for up to 30 years, and

Whereas independent joint economic and scientific analysis, funded by a New York State grant, was conducted by expert consultants and academics. And whereas these experts concluded that over time full clean up is approximately 30% less expensive than partial clean up and maintenance, not including any future leaks that would increase clean up costs exponentially,

Therefore, Be It Resolved that the City of Lackawanna City Council supports the option of full cleanup of the West Valley nuclear waste site using standards that are at least as protective as current state radiation standards and toxic standards for unrestricted use.

Be it further resolved that copies of this resolution be sent to all state and federal elected officials representing Niagara, Erie and Cattaraugus counties, as well as the U.S. Department of Energy, and the New York State Energy Research and Development Authority.

Approved: Date 7/19/09, 2009



Chuck Jaworski, Council President

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|--------------|---|
| 258-1 | WNYNSC has inventories of radionuclides and hazardous chemical constituents from past facility operations in the facilities (buildings, lagoons, and waste disposal areas) as well as environmental contamination (e.g., in the North Plateau Groundwater Plume). A description of the facilities and inventories of the radionuclides and hazardous chemical constituents is included in Appendix C of this EIS. This EIS was prepared to evaluate the potential environmental impacts, including impacts from radiological and hazardous chemical constituents, of alternatives for decommissioning and/or long-term stewardship of WNYNSC. |
| 258-2 | Chapter 1 of this EIS summarizes the history of WNYNSC. Section 1.1 provides an accurate history of the development of the site and how DOE and NYSERDA became responsible for their respective roles. |
| 258-3 | 258-3 Chapter 3, Section 3.6.2.1, of this EIS addresses groundwater at WNYNSC that was contaminated due to past activities (for example, the North Plateau Groundwater Plume). This EIS was prepared to evaluate the environmental impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC. Under all of the action alternatives, DOE would either remove contamination sources, mitigate their impacts to groundwater, or both. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the North Plateau Groundwater Plume. Potential groundwater impacts associated with the EIS alternatives are discussed in Chapter 4, Sections 4.1.4 and 4.1.10, and Appendix H of this Final EIS. |
| 258-4 | The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program. |
| 258-5 | 258-4 Please refer to the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for a discussion of this issue and DOE's and NYSERDA's response. |
| | Some of the alternatives evaluated in this EIS, including the Preferred Alternative (Phased Decisionmaking), could result in some facilities and waste remaining on the site, including the high-level radioactive waste tanks. Under the Phased Decisionmaking Alternative, action would be undertaken during Phase 1 for all facilities except the Waste Tank Farm, NDA, SDA, and Construction and Demolition Debris Landfill. Options for Phase 2 (exclusive of the SDA) are |

**Commentor No. 258 (cont'd): Chuck Jaworski, Council President,
City of Lackawanna**

sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close in place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. DOE is required by the West Valley Demonstration Project Act to decontaminate and decommission the waste storage tanks and facilities used to solidify high-level radioactive waste, as well as any material and hardware used in connection with the WVDP, in accordance with such requirements as NRC may prescribe.

DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE has developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flows into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being further reduced by tank drying. Additionally, much of the residual contamination in the tanks is attached (i.e., "fixed") to metal surfaces and is not readily mobile.

- 258-5 Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed the Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the

**Commentor No. 258 (cont'd): Chuck Jaworski, Council President,
City of Lackawanna**

initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.

258-6 DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for “Conclusions of the *Synapse Report*” in Section 2 of this CRD for a discussion of the report’s issues and DOE’s and NYSERDA’s response.

258-7 DOE and NYSERDA acknowledge the commentor’s support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE’s Record of Decision and NYSERDA’s Findings Statement. Please see the Issue Summary for “Support for Sitewide Removal of All Radioactive and Hazardous Wastes” in Section 2 of this CRD for further discussion of this issue and DOE’s and NYSERDA’s response.

Agency actions will comply with the applicable cleanup and decommissioning criteria for WNYNSC that are embodied in Federal and New York State environmental, safety, and health regulatory requirements promulgated under various statutory authorities (see Chapter 5 of this Final EIS). As summarized in Chapter 1, Section 1.3, of this Final EIS, these regulatory requirements include RCRA permitting and corrective actions under New York State and/or EPA requirements, decommissioning according to NRC requirements in its License Termination Rule, and EPA assessments of compliance with National Emission Standards for Hazardous Air Pollutants.

**Commentor No. 259: Melissa Brinson, Town Clerk,
Town of Tonawanda**



Town of Tonawanda
2919 Delaware Ave
Kenmore, NY 14217
Melissa Brinson, Town Clerk
Meeting: 08/17/09 07:30 PM
Department: Attorney

RESOLUTION 2009-630

Motion is in Order to Support the West Valley Nuclear Waste Site Clean Up.

WHEREAS, the West Valley Nuclear Waste Site (also known as the Western New York Nuclear Service Center & Demonstration Project) is located approximately 30 miles south of Tonawanda and contains large amounts of toxic and radioactive wastes, some of which will remain dangerous for thousands of centuries; and

WHEREAS, the site represents the nation's sole venture into commercial reprocessing of irradiated nuclear fuel; and

WHEREAS, this venture ended in 1976 when the private partner failed, leaving cleanup responsibility to government taxpayers; and

WHEREAS, contamination from this site has been found as far away as the Niagara River at Lake Ontario; and

WHEREAS, Lake Erie represents the drinking water supply source for Erie County, and the Great Lakes represent a drinking water source for millions of people; and

WHEREAS, the Department of Energy has identified alternatives for the remediation of the West Valley site ranging from complete removal of all radioactive materials to taking no action, and proposes a partial remediation while leaving buried waste onsite, including high level radioactive waste tanks; and

WHEREAS, the Department of Energy preference would postpone a final cleanup decision for up to 30 years; and

WHEREAS, independent joint economic and scientific analysis, funded by a New York State grant was conducted by expert consultants and academics; and

WHEREAS, these experts concluded that over time full clean up is approximately 30% less expensive than partial clean up and maintenance, not including any future leaks that would increase clean up costs exponentially.

NOW, THEREFORE, BE IT RESOLVED, that the Town of Tonawanda Town Board supports the option of full clean up of the West Valley nuclear waste site using standards that are at least as protective as current state radiation standards and toxic standards for unrestricted use.

RESULT:	ADOPTED [UNANIMOUS]
MOVED:	John Bargnesi, Councilman
SECONDER:	Joseph Emminger, Councilman
AYES:	Caruana, Emminger, Crangle, Bargnesi, Chimera

I do certify that I have compared the foregoing with the original minutes of the regular meeting of the Town Board held on August 17, 2009 and that the foregoing is a true and correct transcript from said original minutes and the whole thereof, and that the resolutions duly adopted by said Town Board are on file in my office.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of the said Town of Tonawanda, Erie County, New York, this 18th day of August, 2009.

- 259-1 WNYNSC has inventories of radionuclides and hazardous chemical constituents from past facility operations in the facilities (buildings, lagoons, and waste disposal areas) as well as environmental contamination (e.g., in the North Plateau Groundwater Plume). A description of the facilities and inventories of the radionuclides and hazardous chemical constituents is included in Appendix C of this EIS. This EIS was prepared to evaluate the potential environmental impacts, including impacts from radiological and hazardous chemical constituents, of alternatives for decommissioning and/or long-term stewardship of WNYNSC.
- 259-2 Chapter 1 of this EIS summarizes the history of WNYNSC. Section 1.1 provides an accurate history of the development of the site and how DOE and NYSERDA became responsible for their respective roles.
- 259-3 Chapter 3, Section 3.6.2.1, of this EIS addresses groundwater at WNYNSC that was contaminated due to past activities (for example, the North Plateau Groundwater Plume). This EIS was prepared to evaluate the environmental impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC. Under all of the action alternatives, DOE would either remove contamination sources, mitigate their impacts to groundwater, or both. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the North Plateau Groundwater Plume. Potential groundwater impacts associated with the EIS alternatives are discussed in Chapter 4, Sections 4.1.4 and 4.1.10, and Appendix H of this Final EIS.
- 259-4 The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program.
- 259-4 Some of the alternatives evaluated in this EIS, including the Preferred Alternative (Phased Decisionmaking), could result in some facilities and waste remaining on the site, including the high-level radioactive waste tanks. Under the Phased Decisionmaking Alternative, action would be undertaken during Phase 1 for all facilities except the Waste Tank Farm, NDA, SDA, and Construction and Demolition Debris Landfill. Options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close in place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two

***Commentor No. 259 (cont'd): Melissa Brinson, Town Clerk,
Town of Tonawanda***

alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. DOE is required by the West Valley Demonstration Project Act to decontaminate and decommission the waste storage tanks and facilities used to solidify high-level radioactive waste, as well as any material and hardware used in connection with the WVDP, in accordance with such requirements as NRC may prescribe.

DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE has developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flows into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being further reduced by tank drying. Additionally, much of the residual contamination in the tanks is attached (i.e., "fixed") to metal surfaces and is not readily mobile.

- 259-5 Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed the Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.

**Commentor No. 259 (cont'd): Melissa Brinson, Town Clerk,
Town of Tonawanda**

- 259-6 DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for “Conclusions of the *Synapse Report*” in Section 2 of this CRD for a discussion of the report’s issues and DOE’s and NYSERDA’s response.
- 259-7 DOE and NYSERDA acknowledge the commentor’s support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE’s Record of Decision and NYSERDA’s Findings Statement. Please see the Issue Summary for “Support for Sitewide Removal of All Radioactive and Hazardous Wastes” in Section 2 of this CRD for further discussion of this issue and DOE’s and NYSERDA’s response.
- Agency actions will comply with the applicable cleanup and decommissioning criteria for WNYNSC that are embodied in Federal and New York State environmental, safety, and health regulatory requirements promulgated under various statutory authorities (see Chapter 5 of this Final EIS). As summarized in Chapter 1, Section 1.3, of this Final EIS, these regulatory requirements include RCRA permitting and corrective actions under New York State and/or EPA requirements, decommissioning according to NRC requirements in its License Termination Rule, and EPA assessments of compliance with National Emission Standards for Hazardous Air Pollutants.

Commentor No. 260: Leonore S. Lambert

Leonore Lambert
451 South Street
East Aurora, NY 14052-2946

September 8, 2009

Draft Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center (DOE/EIS-0226-D (Revised))

Revision of A Draft Environmental Impact Statement for Completion of the West Valley Demonstration Project and Closure or Long-Term Management of Facilities at the Western New York Nuclear Service Center (also called the Cleanup and Closure Draft EIS) (DOE 1996a)¹

Much of my reaction to the present DEIS is included in comments made by the Citizen Task Force (CTF), of which I am a member; in those made by the Coalition on West Valley Nuclear Wastes, and by the League of Women Voters of the state of New York. However, I feel the need to make a few points of my own.

First, I must express my disappointment in the interaction in the past between the site managers: the Department of Energy (DOE) and New York State Energy Research and Development Authority (NYSERDA). A decidedly poor pattern was obvious for many years, sometimes including actual breaks in communication – this from agencies of the government which should have been working together to solve the problems created at the West Valley site. Sometimes DOE officials came to meetings and responded to questions from CTF members while NYSERDA officials seemed to hear the answers for the first time. Didn't DOE work with them, share information with them? I am sure that is what the public expected. Certainly that is what I expected.

When the long-awaited 1996 draft environmental impact statement (DEIS) finally came out without naming a preferred alternative, I wondered why. Some of us concluded the DOE did not like its own numbers and hoped to present evidence that would lead the public to choose in their favor. I discovered much later that the Nuclear Regulatory Commission (NRC) decided none of the options were viable except full cleanup, which DOE resisted for reasons left to the imagination. That information was not public, of course, which is another source of frustration for me. As each agency involved speaks on an issue, the public has no knowledge of their opinion; e.g. by the time the EPA declares a problem we could be far beyond the decision that led to it... most frustrating! Attempts at coordination among the various agencies and departments were made eventually, but Core Team agreement on this latest preferred alternative is very disappointing.

Through the years members of the CTF were troubled by the inability of the NRC to force compliance from DOE. The most notable example is the strontium plume, which the NRC "monitored" for years, reporting on its progress as it moved across the premises, contaminating clean soil and heading for clearer pathways into Cattaraugus Creek. Of course, that is another story: the story of my extreme disappointment in the claim made by NRC officials that they had no authority to force DOE to stop that

260-1

- 260-1** DOE and NYSERDA note the points made by the commentor regarding disappointment with the process for and progress on actions to address WNYNSC. Chapter 1 of this EIS summarizes the history of WNYNSC. Section 1.1 provides an accurate history of the development of the site and how DOE and NYSERDA became responsible for their respective roles. Section 1.2 discusses the evolution of this document. As indicated in that section, DOE and NYSERDA were unable to identify a preferred alternative associated with the 1996 *Draft Environmental Impact Statement for Completion of the West Valley Demonstration Project and Closure or Long-Term Management of Facilities at the Western New York Nuclear Service Center (Cleanup and Closure Draft EIS)* because NRC had not promulgated the decommissioning criteria for WVDP. Therefore, a decision was made to proceed with the *West Valley Demonstration Project Waste Management Environmental Impact Statement (Waste Management EIS)* so that progress on site cleanup could be made with the shipment of WVDP waste off site for disposal. DOE is not aware that NRC ever made a determination that the only viable option presented in the 1996 *Cleanup and Closure Draft EIS* was full cleanup. Since that time, DOE and NYSERDA have collected additional characterization information, including information on structural geology, local fractures, and seismicity, and developed analytical methods to support this EIS. Updated methods for analyzing erosion were also developed and refined. During this time, NRC issued its "Decommissioning Criteria for the WVDP at the West Valley Site; Final Policy Statement" (67 FR 5003), which provided needed criteria for evaluating closure of the NRC-licensed site.

¹ 2008 DEIS, Chapter 1, Section 1.1, Page 1.1

Commentor No. 260 (cont'd): Leonore S. Lambert

plume. Instead they watched it contaminate more and more clean earth, heading for the water system
 Lambert comments -2-

for millions. At the time we were assured that the half-life of strontium was only 26 years or so, which still translates into over 200 years before it is "safe" to ingest it.

My disappointment in that issue extends to the inaction and/or inability of NYSERDA officials to take action or at least to "blow the whistle". At very least it seems they could have strongly objected. Perhaps they did. In that case, shame on the next level for not taking action. Asking them to "go public" would be too much, I suppose, until DOE attempts to walk away in the future and state residents are left with a mess to clean up which they can not, and should not have to, pay for.

After the failure of the 1996 DEIS, claimed to be caused by DOE's inability to name a preferred alternative, all that seemed to be necessary was a simple declaration of a preference toward a full cleanup. Instead of committing to a full cleanup at that time, a split path was chosen, an illegal split of the EIS which should have covered the entire site, but focused instead on "Waste Management". That decision allowed DOE to declare their intention to "clean up" portions of the site and show slides to the CTF and at quarterly meetings, of the future look of the site. Photo mock ups showed before and after depictions of buildings and other material removed and replaced with a great deal of green grass. The presenter at one meeting proudly showed the clean up and declared the land would be safe to live on. A CTF member questioned whether the speaker or, by implication, any resident farmer could then grow vegetables on the site. Hearing an affirmative answer, he continued with "Could I eat them?" the answer was yes. Would you? No response. We know what's underneath a lot of that land that in the artist depiction looks clean because it's green.

My most recent disappointment, actually a source of anger, is calling this DEIS a "revision" of the 1996 Cleanup and Closure DEIS. The change in title from "completion of the...Project and closure or long-term management" to "decommissioning and/or long-term stewardship" raises questions too numerous and complicated to discuss at this time. Not only is the title changed but the latest document provides no valid data to indicate the value of a cleanup. It is definitely not a revision, but an entirely new document calculated to allow a decision to leave a great deal of contamination on site, and to disallow, because of skewed "facts", a decision to remove the material from the ground. Again, the question arises... As supposed partners in decisions, did DOE officials not meet with officials from the state of New York (particularly NYSERDA representatives) to work out disagreements they had with calculations and conclusions? If not, why not?

Now we must deal with the illegal DEIS or nothing. We are handed crumbs and expected to be satisfied that something is being done to ease our hunger for a fair, honest and sensible conclusion to the very real problem of nuclear waste not only at this site but in the entire country and around the world.

So much of what is contained in this DEIS is so inaccurate and/or incomplete that the conclusion of a full cleanup is impossible based on the faulty "evidence" contained in this DEIS. In fact, as presented, the evidence DOE has concocted would lead easily to the conclusion that the contaminated material must remain at West Valley ad infinitum. Evidence in the 1996 draft would have supported full cleanup, if only partly by stating the enormity of the problem and the necessity of getting the contaminated material out of an unstable site subject to large amounts of precipitation and prone to erosion. NYSERDA has expressed objections and listed faults in this DEIS in their foreword to the document. Never before have I seen a foreword that was not in support of the document it preceded. That alone is a telling statement.

**260-1
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260-2

Regardless of the title of the 2008 Revised Draft EIS, the same level of analysis and the same process for public involvement were undertaken as would have been if it had been issued as a continuation or supplement to the *Cleanup and Closure Draft EIS*.

260-2 DOE began the Core Team process in November 2006 with the agencies involved in this EIS to work toward resolution of technical issues that were impeding progress of the document. NYSERDA agreed to join this process in March 2007. Since that time, DOE and NYSERDA have worked cooperatively to advance the NEPA process for WNYNSC.

DOE and NYSERDA have prepared this single, comprehensive EIS for the decommissioning and long-term stewardship of WNYNSC. This EIS adequately analyzes the totality of environmental impacts, including costs, of a broad spectrum of reasonable alternatives that meet the respective purposes and needs of DOE and NYSERDA (Sitewide Close-In-Place, Phased Decisionmaking, and Sitewide Removal), as well as the No Action Alternative. While the Phased Decisionmaking Alternative would temporarily defer a final decision on the disposition of the Waste Tank Farm, the NDA, and the Construction and Demolition Debris Landfill, DOE believes that the impacts of this deferred decision are adequately analyzed within this EIS.

DOE and NYSERDA support the Phased Decisionmaking Alternative as the Preferred Alternative. The agencies agree that, under the first phase of this alternative, important work would be conducted that the agencies believe is critical to keep the project moving toward completion. There is disagreement, however, regarding the level of additional analysis related to long-term performance assessment required to support the Phase 2 decision.

DOE disagrees with many of the points raised in NYSERDA's View, which is included as the Foreword to this EIS. At the core, differences between DOE and NYSERDA center on different views about the nature of analysis required for an EIS and the attendant level of acceptable risk associated with any uncertainties in that analysis as it relates to decisionmaking. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, this EIS (1) acknowledges the information limitation and its relevance to environmental consequence, (2) summarizes existing credible scientific evidence, and (3) presents an analysis using a theoretical approach that

Commentor No. 260 (cont'd): Leonore S. Lambert

Lambert comments

-3-

The biggest question I have, after many years following this issue, is why DOE did not work cooperatively with NYSERDA to present an honest appraisal of the environmental impact of leaving contaminated material of such magnitude and volume at such an unstable site. Why? Some people would say it is because the nuclear industry has a stranglehold on the United States government. After all, the federal government subsidizes the nuclear industry, backing it financially and protecting it from lawsuits for untold missteps. Meanwhile, that subsidization begs the question: if energy is the main goal of the Department of Energy, why the reluctance to subsidize solar and wind power to the same degree?

The question of "why" persists. Why a preference for development of nuclear energy? Is it because of a perceived necessity to develop new and more effective nuclear weapons? Working closely with the Department of Defense (DOD), the Department of Energy expends a great deal of "energy" in terms of the time and talents of its workers, to devise nuclear weapons and try to deal with the waste. Evidence of the link between DOE and DOD is commonplace, exhibited by numerous weapon sites across the country, many of which are "closed" but not clean by any stretch of the imagination. Is it that far-fetched to imagine that many people who have been following the saga of West Valley for decades are wary that the DOE wants to walk away and has devised the DEIS to conform to that decision? Changing the title of the DEIS, and removing the words "Cleanup and Closure" as part of a handy title, was only one part of a process to essentially fool the public into thinking it is possible to have long-term "stewardship" at this site over the thousands of years much of the material will remain radioactive and therefore a dangerous invisible threat to the health and welfare of the people.

I have expressed many disappointments in these comments, those that are my own and those shared by many others. My personal disappointment is also filled with sorrow that, at the rate of government action in the past, I am quite sure I will not live long enough to see a positive result from my efforts to "save the environment" for future generations. Still, I try.

Thank you for the opportunity to express my views.

Sincerely,

Leonore S. Lambert

260-2
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260-3

is generally accepted by the scientific community involved in such analyses. This Final EIS contains text boxes in the relevant subject matter areas that acknowledge the differences of opinion between DOE and NYSERDA. In general, DOE's position is that the agency spent much time and effort engaging highly qualified and respected experts in hydrology and hydrological transport, landscape evolution (erosion), human health and environmental risk analysis, and other technical fields, and stands behind the analyses performed for this EIS.

260-3 DOE and NYSERDA note the comment. DOE will remain on site until it completes its responsibilities as assigned under the West Valley Demonstration Project Act. DOE would not leave the site after completion of the Phase 1 actions because it would not have completed the actions required under the Act. The description of the Phased Decisionmaking Alternative in Chapter 2 of the EIS has been revised to clarify this, and the wording in the *Phase 1 Decommissioning Plan* has been revised to avoid the implication that DOE would leave the site at the end of Phase 1.

The commentator raises a concern about changing the title of the 1996 *Cleanup and Closure Draft EIS*. Chapter 1, Section 1.2, of this EIS provides a detailed explanation of this EIS's development, including why the 1996 *Cleanup and Closure Draft EIS* was split into two EISs. DOE does not agree with the commentator's implication that the change in title from *Cleanup and Closure Draft EIS* to *Final Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center (Decommissioning and/or Long-Term Stewardship EIS)* somehow lessens its commitment to clean up and close WNYNSC. DOE remains committed to meeting its responsibilities under the West Valley Demonstration Act, to protecting the environment, and to ensuring the safety and health of workers at WNYNSC and the public.

***Commentor No. 261: Diane D'Arrigo,
Nuclear Information and Resource Service***



NUCLEAR INFORMATION AND RESOURCE SERVICE

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September 8, 2009

TO: Catherine Bohan, EIS Document Manager
West Valley Demonstration Project, US Department of Energy
PO Box 2368, Germantown, MD 20874
www.westvalleyeis.com

From: Diane D'Arrigo, Radioactive Waste Project Director, Nuclear Information and Resource Service
dianed@nirs.org; 301 270 6477 x16.

Re: West Valley revised DEIS Comments on Decommissioning and/or Long –Term Stewardship at the West Valley Demonstration Project & WNY Nuclear Svc Center DOE/EIS-0226-D Revised Nov 2008

The Nuclear Information and Resource Service (NIRS) testified at all 4 public hearings and has submitted several previous comments to this docket.

NIRS supports the full cleanup of the West Valley radioactive and hazardous waste site to the strictest federal and state standards currently in effect, at minimum. Of the 4 options provided in the revised DEIS, the Site-wide Removal option is the only one that will prevent further contamination and protect the surrounding creeks, the Cattaraugus Creek, Lake Erie, the Niagara River, Lake Ontario and the St. Lawrence River and Seaway to the Atlantic Ocean, potentially impacting residents of the US, the Seneca Nation of Indians and Canada, terrestrial and aquatic flora and fauna and all that are impacted by food-chains, food-webs and weather patterns along the way. The decision now to proceed with Site-wide Removal/ Full cleanup is the most economic in the long run as it will prevent catastrophic contamination of the waters and communities downstream and downwind including the Great Lakes and beyond.

Radioactive wastes from the 1960s and 1970s nuclear power and weapons industries, including irradiated fuel reprocessing, are buried and stored at West Valley.

Before the US Department of Energy puts more taxpayer resources toward MORE nuclear power and weapons, a firm commitment to and commencement of full cleanup of the West Valley site is essential.

Geologically, the site *will* erode into the Great Lakes while the wastes are still radioactively hazardous. The only question is timing—how long will it take for 1%, 10 %, 100% of the radioactivity to migrate slowly or bleed quickly into the surrounding streams which can literally gush into Cattaraugus Creek and Lake Erie.

Nuclear Information and Resource Service/World Information Service on Energy-Amsterdam
Main offices: Washington, DC and Amsterdam, Netherlands
1
Affiliate offices: Asheville, NC; Rosario, Argentina; Linz, Austria; Brno, Czech Republic; Hiroshima, Japan;
Kalinigrad, Russia; Bratislava, Slovakia;
Stockholm, Sweden; Rivne, Ukraine; WISE-Uranium: Arnsdorf, Germany

- 261-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.
Agency actions will comply with the applicable cleanup and decommissioning criteria for WNYNSC embodied in Federal and New York State environmental, safety, and health regulatory requirements promulgated under various statutory authorities (see Chapter 5 of this Final EIS). As summarized in Chapter 1, Section 1.3, of this Final EIS, these regulatory requirements include RCRA permitting and corrective actions under New York State and/or EPA requirements, decommissioning according to NRC requirements in its License Termination Rule, and EPA assessments of compliance with National Emission Standards for Hazardous Air Pollutants.
- 261-2 DOE and NYSERDA recognize that potential radiological releases resulting in water contamination are a concern in the region of WNYNSC. Please see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.
- 261-3 DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. In addition to the previously cited Issue Summaries, please see "Questions about Long-term Erosion Modeling" for further discussion of this issue and DOE's and NYSERDA's response.

**Commentor No. 261 (cont'd): Diane D'Arrigo,
Nuclear Information and Resource Service**

The independent report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site* released in December 2008 has been submitted into the record. It looked at the consequences of just 1% of the radioactivity being released into the water supply and calculated it would cost triple the amount projected for full cleanup of the site to deal with that one limited scenario. (It will cost \$9.7 Billion for the Site-wide Removal option but leaving the waste buried at the site could cost \$27 Billion when a small amount of it leaks out.) Hundreds of cancers would be prevented. The full, long term cost of loss of resources and habitats is incalculable and has not even been estimated. The revised DEIS uses different assumptions for the various options, making full cleanup appear more expensive than it would if comparable assumptions were made. The revised DEIS does not project into the future for as long as the waste remains dangerous thus ignores some of the potential long range consequences. The erosion model used in the revised DEIS has been determined to be completely inadequate by NYSERDA and a team of independent reviewers (Independent Review of the Draft EIS for the Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and WNY Nuclear Service Center).

Floods in August 2009 did devastating damage in the West Valley region. (Towns downstream are receiving Federal Emergency Management Agency disaster aid.) We learned from community people who toured the West Valley nuclear waste site that Buttermilk Creek about a third of a mile from the trenches) eroded at least 15 feet closer to the nuclear waste burial trenches which have at least 14 pounds of plutonium buried in them. Exhibit 1 is a view of the Buttermilk Creek landslide area in 2008 (photo by J Rauch) and Exhibit 2 is a view of it after the August 2009 major rainfall and flooding event (photo by P Bembia). Updates have not been provided on the impacts to other parts of the site...including whether Franks Creek which hugs the trenches moved closer and effects on the strontium plume which is migrating towards the creeks.

Residents of the Seneca Nation, along the Cattaraugus Creek, could be the first, most immediately and directly impacted with potentially highest doses because of their proximity to the site and their culture and lifestyle which is closer to the land and water, traditionally eating a higher amount of fish and game that bio-accumulate or concentrate radionuclides, increasing amounts and doses beyond the "resident farmer" and resident gardeners scenarios used in computer codes to project risks to the public.

The DOE's Decommissioning Plan that is being reviewed by the Nuclear Regulatory Commission presupposes the selection of the phased decision making option. We support exhumation of the entire plume and the source. We question whether the process building is the only source, however, and call for full exhumation of the high level radioactive waste tanks including all the sludge and remains from reprocessing waste. We oppose the designation of the tanks and tank waste as Waste Incidental to Reprocessing or any other designation which would permit leaving them in place. The Site-Wide Removal option would exhume the trenches (SDA) and deep high level waste holes (NDA) which is especially important in light of the rapid erosion and potential for underground migration. If one leak from the process building could cause a plume that will cost \$1.2 Billion to only partially cleanup, how many more plumes can be caused but the many sources of intense long-lasting waste buried at the site in the tanks, trenches and holes? The precautionary principle dictates a decision now to prevent more billion dollar leaks by making the decision now—not in 30 or 15 or 10 even 1 more year --- to exhume and isolate all of the radioactive and hazardous waste at West Valley.

Nuclear Information and Resource Service/World Information Service on Energy-Amsterdam
Main offices: Washington, DC and Amsterdam, Netherlands
Affiliate offices: Asheville, NC; Rosario, Argentina; Linz, Austria; Brno, Czech Republic; Hiroshima, Japan;
Kalininograd, Russia; Bratislava, Slovakia;
Stockholm, Sweden; Rivne, Ukraine; WISE-Uranium: Arnstadt, Germany

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| 261-4 | The report, <i>The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)</i> by Synapse Energy Economics, Inc., including the three appendices, have been entered into the public comment record for this EIS. The substance of the <i>Synapse Report</i> has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for "Conclusions of the <i>Synapse Report</i> " in Section 2 of this CRD for discussion of the report's issues and DOE's and NYSERDA's response. |
| 261-5 | Long-term human health impacts are analyzed in this EIS by evaluating the potential annual doses and risks to future receptors. For each receptor, annual doses and risks are calculated to the year of maximum impact. Following the year of peak impacts, the annual doses to these receptors would decline. Chapter 4, Section 4.1.10, of this EIS presents tables showing peak impacts to receptors and the years in which those impacts occur. It also presents tables showing the time-integrated population dose for 1,000 and 10,000 years following closure. In addition, please see the response to Comment no. 261-3. |
| 261-6 | In Chapter 4, Sections 4.1.9 and 4.1.10, short-term and long-term impacts to a receptor living along lower Cattaraugus Creek are calculated. One of the scenarios for both the short- and long-term analyses involves consumption of potentially contaminated water and food, including consumption of fish at a higher rate of consumption than a typical resident gardener; this receptor could be a member of the Seneca Nation of Indians. |
| 261-5
cont'd | DOE disagrees with many of the points raised in NYSERDA's View, which is included as the Foreword to this EIS. At the core, differences between DOE and NYSERDA center on different views about the nature of analysis required for an EIS and the attendant level of acceptable risk associated with any uncertainties in that analysis as it relates to decisionmaking. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, this EIS (1) acknowledges the information limitation and its relevance to environmental consequence, (2) summarizes existing credible scientific evidence, and (3) presents an analysis using a theoretical approach that is generally accepted by the scientific community involved in such analyses. This Final EIS contains text boxes in the relevant subject matter areas that acknowledge the differences of opinion between DOE and NYSERDA. In general, DOE's position is that the agency spent much time and effort engaging highly qualified |
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**Commentor No. 261 (cont'd): Diane D'Arrigo,
Nuclear Information and Resource Service**

NYSERDA president Frank Murray stated in the September 4, 2009 video conference with DOE EM Asst Secretary Ines Triay, and she agreed, that the agencies would make the decision based on the option that is "justified" in the revised DEIS. The 2008 revised DEIS should have presented alternatives in accord with the spirit and requirements of NEPA, thus providing the necessary and available science for each alternative. But the alternatives were not presented fairly and in a balanced way—different assumptions were made for different alternatives. This has been criticized in the Full Cost Accounting Study and by other commenters including at the public hearings. The Full Cost Accounting Study and NYSERDA and the Independent Review of the DEIS provide additional scientific information justifying the full cleanup/Site-Wide Removal alternative and pointing to the unreliability of models that would allow leaving waste buried, even temporarily.

Choosing the phased decision making alternative is NOT a decommissioning or long-term stewardship option—it is punting into the future a decision that needs to be made now.

The Full Cost Accounting report concludes:

- Waste Excavation is less expensive than Buried Waste...
- Waste Excavation poses significantly lower risks to future generations after closure activities cease...
- The Onsite Buried Waste approach inadequately protects the health and environment of residents, and is an unrealistic cost. It poses a risk to residents if controls fail while dangerous radionuclides are buried at West Valley.
- Waste Excavation poses a risk to onsite workers during the relatively short period of time for remediation activities. It also does not "solve" the problem of West Valley's nuclear waste disposal, rather it prevents further contamination, prevents a catastrophic release that could cause severe damage to populations in the Great Lakes region, and mitigates the problem by transferring the waste to a less risk-prone site..."

DOE and NYSERDA should not use a discount rate when estimating future costs because it reflects future lives and resources as valueless. This is both incorrect and immoral. Chapter 8 of the Full Cost Accounting Study makes a clear case for a zero discount rate when assessing future costs and values.

As reported to Asst Secretary of DOE Environmental Management Dr. Triay and NYSERDA President and CEO Mr. Murray, and submitted to the record, the Seneca Nation of Indians, numerous towns and cities as well as the Counties of Erie, Niagara and Cattaraugus have passed resolutions supporting the full cleanup of West Valley, the site-wide removal option. The New York State congressional delegation and the NYS Senators and Assemblymembers submitted letters calling for the full cleanup decision to be made now in this Record of Decision. A growing number of organizations, religious, sports and recreation, environmental, conservation, consumer and good government groups have joined the West Valley Action Network calling for full cleanup now of the West Valley nuclear and hazardous waste site. We strongly encourage DOE and NYSERDA to choose site-wide removal to protect the Great Lakes and the public by deciding now to proceed with the full cleanup of the West Valley Demonstration Project and Western NY Nuclear Service Center.

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Kalinigrad, Russia; Bratislava, Slovakia;
Stockholm, Sweden; Rivne, Ukraine; WISE-Uranium: Arnsdorf, Germany

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- and respected experts in hydrology and hydrological transport, landscape evolution (erosion), human health and environmental risk analysis, and other technical fields, and stands behind the analyses performed for this EIS.
- 261-6** The flooding (due to storms) cited in the comment is within the range of weather conditions used in developing the erosion model for the site. Regarding the adequacy of erosion modeling in this EIS, please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.
- 261-7** DOE and NYSERDA have identified the Phased Decisionmaking Alternative as the Preferred Alternative in this EIS. Consistent with an agreement between NRC and DOE, DOE is preparing the *Phase 1 Decommissioning Plan for the West Valley Demonstration Project (Phase 1 Decommissioning Plan)* simultaneously with the preparation of this EIS. The proposed decommissioning approach described in the *Phase 1 Decommissioning Plan* is based on the Preferred Alternative in the Revised Draft EIS. NRC recognizes that the use of the Preferred Alternative in the *Phase 1 Decommissioning Plan* before completion of this EIS is preliminary and subject to change based on the content of this Final EIS, DOE's Record of Decision, and NYSERDA's Findings Statement. If DOE selects an action other than the current Preferred Alternative, the *Phase 1 Decommissioning Plan* would be revised to reflect the Record of Decision and Findings Statement. While DOE is conducting the preparation and review processes for this EIS and the *Phase 1 Decommissioning Plan* in parallel, the Agency has not yet made its final decision on its actions for completion of the West Valley Demonstration Project.
- 261-8** The extensive WNYNSC environmental monitoring program, which is designed to detect possible movement of contamination on the site, as well as specific studies, concluded that the source of the North Plateau Groundwater Plume is the Main Plant Process Building (see Chapter 3, Section 3.6.2.1, of this EIS). Note that, during the implementation of Phase 1 of the Phased Decisionmaking Alternative, the source area of the North Plateau Groundwater Plume would be removed. As described in Chapter 2, Section 2.3.1, a permeable treatment wall would be constructed to mitigate the impacts of the non-source area of the plume.
- 261-9** DOE and NYSERDA acknowledge the commentator's opposition to designating the tanks and waste residuals in the tanks as waste incidental to reprocessing (WIR) and to alternatives that would leave the waste on site. The implementation of the WIR process is discussed in this EIS for those waste streams to which it

**Commentor No. 261 (cont'd): Diane D'Arrigo,
Nuclear Information and Resource Service**

Exhibit 1



2008 view of Buttermilk Creek facing trench area

could possibly apply (e.g., see Chapter 4, Section 4.1.11, of this EIS). Use of the WIR process is at the discretion of DOE. A determination that waste is incidental to reprocessing and can be managed as low-level radioactive or transuranic waste depends on meeting the criteria developed to protect human health as documented in DOE Manual 435.1 and the NRC February 2002 policy statement prescribing the use of NRC's License Termination Rule as the decommissioning criteria for WVDP (67 FR 5003).

- 261-10** As described in Chapter 1, Section 1.2, of this EIS, DOE and NYSERDA, working with a Core Team of Federal and state agencies and with input from the public, developed the proposed alternatives. These alternatives are consistent with NEPA requirements (40 CFR 1502.14) to evaluate all reasonable alternatives as well as the No Action Alternative. The Interim End State, the starting point for the analyses in this EIS as defined in Chapter 2, Section 2.3.1, is the same for all of the alternatives, including the No Action Alternative. Many of the assumptions are different for each of the alternatives because the proposed activities are different. However, also in accordance with 40 CFR 1502.14, Section 2.6 of this EIS compares the alternatives and clearly and concisely shows the similarities and differences between the potential impacts so that the public and decisionmakers can discriminate between alternatives.

DOE's differences with NYSERDA's View of the analysis presented in the Revised Draft EIS are discussed in the response to Comment no. 261-5.

Regarding the *Synapse Report*'s conclusions, please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for further discussion of the report's conclusions and DOE's and NYSERDA's responses.

- 261-11** DOE and NYSERDA acknowledge the commentor's position about cost discounting in regard to the cost-benefit analysis included in the Revised Draft EIS. Please see the Issue Summary for "Questions about Cost-Benefit Analysis" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

The cost-benefit analysis presented in Chapter 4, Section 4.2, of the Revised Draft EIS was performed to support NRC's request for cost-benefit information consistent with its as low as is reasonably achievable (ALARA) analysis guidelines. This cost-benefit analysis follows the principles in the NRC ALARA guidance presented in NUREG-1757, "NRC Consolidated Decommissioning Guidance." The analysis in Section 4.2 has been revised for this Final EIS and uses several

**Commentor No. 261 (cont'd): Diane D'Arrigo,
Nuclear Information and Resource Service**

Exhibit 2



August 2009 view of Buttermilk Creek facing trench area after major rainfall and flooding.

One flood event caused erosion toward the trenches at least 15 feet.

relatively low discount rates (1, 3, and 5 percent) to investigate the sensitivity of the results to lower discount rates. The use of a single discount rate of zero for the ALARA analysis is not considered to be consistent with the NRC guidance.

**Commentor No. 262: Barbara Warren,
Citizens' Environmental Coalition**



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September 8, 2009

Catherine Bohan
 EIS Document Manager
 West Valley Demonstration Project
 US Department of Energy
 PO Box 2368
 Germantown, MD 20874

Re: Draft Decommissioning and /or Long –Term Stewardship EIS Comments

Dear Ms. Bohan,

We have previously provided extensive comments related to the Draft EIS and the Decommissioning Plan. We wish to summarize some of those points in our final comments before the deadline. We also wish to explore the issue of emergency planning and prevention that was brought more immediately to our attention by the severe weather event of August 9, albeit in a limited way, given the fact that key documents have not yet been made available to us.

The Decommissioning Plan fails to meet the requirements of the West Valley Demonstration Project Act to decontaminate and decommission the regulated facilities and dispose of the waste at the site.

The Decommissioning Plan is not a Complete Plan for Decommissioning. Thus it is not approvable as a Decommissioning Plan. It is not complete for the following reasons:

- It deals with only 1% of the radioactivity remaining onsite.
- It leaves massive amounts of radioactive waste in the high level tanks: 320,000 curies, and fails to fully examine the problem of the tanks being at the end of their life span.
- It leaves reprocessing waste, fuel rods and cladding in the NDA burial site.
- Both the NDA and the Hi-Level waste tanks are governed by the WV Demonstration Project Act.
- Full site characterization of contamination has not been completed. This characterization report is not expected to be completed until December 2009, after the public comment period has ended.
- The Decommissioning Plan consists of only a limited set of site activities. Key studies that must be completed before deciding on a Complete Decommissioning Plan have not even been briefly listed and described for the public.
- Future indeterminate decision-making by Government officials without public involvement does not constitute a complete Decommissioning Plan today.

'Never doubt that a small group of thoughtful, committed citizens can change the world; indeed it is the only thing that ever has.' — Margaret Mead

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DOE and NYSERDA acknowledge the commentator's preference for a full cleanup of the WNYNSC site and opposition to leaving radioactive or hazardous waste on site. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

It is noted that this first set of comments relate to the *Phase 1 Decommissioning Plan for the West Valley Demonstration Project (Phase 1 Decommissioning Plan)*, which is a related but separate document from this EIS. A number of similar points with respect to this EIS were raised in letters signed by the commentator (see, for example, Commentor nos. 23 and 116); responses with respect to this EIS are provided to the comments in those letters.

**Commentor No. 262 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

The Draft Environmental Impact Statement and the Public Process are fatally flawed for the following reasons:

An Environmental Impact Statement should contain these major and essential elements:

- A Complete Plan or Project
An EIS should start with a complete plan or project and then fully describe all elements of the project.
- Identification of all Potential Environmental Impacts and then full Analysis of those impacts.
- Full Public Disclosure involving a legitimate public process with information made available and an adequate opportunity for the public to have some influence on the decisions that are made.
- A reasonable rationale for any decision, such as the choice of the Preferred Alternative

For all of the options, other than Sitewide Removal, there is no detailed description of the monitoring of containment for leaks or failures, no assessment of the impacts associated with a containment failure, no plan for rapid response to containment failure and as a result there is little public information about an essential element of any cleanup option that allows buried waste to be maintained on site. Similarly there is no detail regarding the engineering and institutional controls needed to maintain buried waste on site. The agencies seem to be viewing only concrete actions, such as excavation, as something to be covered in the EIS. Neglecting or taking no action to cleanup major facilities at the site gets little attention in the EIS, despite the fact that the West Valley Demonstration Project Act explicitly requires the decontamination or cleanup of the facilities covered.

The only cleanup option that has been fully analyzed and disclosed to the public is the Sitewide Removal Alternative- full excavation and cleanup of the radioactive material. As a result this is the only cleanup option that is legally eligible under NEPA, National Environmental Policy Act, for consideration by the agencies for adoption.

Historical Realities related to West Valley Nuclear Reprocessing and Radioactive Waste Disposal can inform more realistic expectations of safe containment of dangerous radioactivity.

About 50 years ago the federal government embarked on a plan to reprocess the nation's nuclear waste using private entities. The government was very enthusiastic and optimistic that its plan would work successfully and as a result sold the public and the state on the plan.

Fifty years later it is pretty clear that the plan was a stupendous failure:

- The private operator walked away from the project.
- A long list of accidents and spills have left the site extensively contaminated.
- Federal and state governments now have responsibility for the site, although legal actions are pending which could impact who is responsible and future cleanup actions.
- The perpetual care fund was never adequately funded to deal with the massive amount of radioactive material that must be isolated and contained for thousands of years.
- The risks to groundwater, surface water, the Great Lakes and public health are enormous.

The actual record of spills, mishaps, accidents and contamination spreading offsite provides a realistic picture of just a few decades of active management of highly dangerous radioactive materials and the abilities of regulatory agencies to safely contain these materials. The delay between discovery of the strontium leak and the extensive strontium plume that now must be dealt with at taxpayer expense is just one example of containment failure and inadequate management. The DOE approach for the long term assumes a degree of control never achieved by private companies and multiple federal and state agencies that have been actively involved at the site. If active management and control have not been successful historically in

- 262-2** As acknowledged in this EIS, long-term monitoring and maintenance would be required for alternatives that would leave waste on site. This EIS provides a summary description of current and potential future environmental monitoring programs. The descriptions of the alternatives have been revised to further describe the use of engineered barriers and long-term monitoring and maintenance. Long-term monitoring and maintenance are described in Chapter 2, Sections 2.4.2.6 and 2.4.3.8. Long-term monitoring and institutional controls are also discussed in Chapter 6. Additional information about current and proposed monitoring and institutional controls is provided in Appendices C, H, and I. Chapter 2, Table 2-4, includes estimates of the environmental consequences if (1) monitoring and maintenance are successful (institutional controls remain in place) and (2) monitoring and maintenance programs fail (institutional controls are lost). Chapter 4, Section 4.2, of this EIS includes monitoring and maintenance costs for the alternatives that would leave waste on the site.
- 262-3** Detailed information regarding long-term monitoring and maintenance programs and institutional controls under alternatives that would leave radioactive waste stored on site has not been specifically defined at this time. Such definition would occur after an alternative is selected for implementation and would include consultation with appropriate regulatory authorities. An element of the long-term programs would be the development of plans and procedures for responding to emergencies. These plans and procedures would include coordination and agreements with local police and fire departments and medical facilities.
- 262-3** DOE and NYSERDA acknowledge the commentor's opinion that the Sitewide Removal Alternative is the only alternative that has been fully analyzed in this EIS. In addition to the Sitewide Removal Alternative, this EIS evaluates the environmental impacts of a Sitewide Close-In-Place Alternative, which would leave some radioactive and hazardous waste in place, as well as a Phased Decisionmaking Alternative. Chapter 2, Section 2.6.1 and 2.6.2, presents a summary of the impacts from all alternatives, including the long-term impacts associated with the alternatives that would leave waste on site. These impacts and the supporting analyses are described in more detail in Chapter 4 and selected appendices, particularly Appendices D, E, F, G, and H. The environmental impacts of implementing Phase 1 of the Phased Decisionmaking Alternative are described for each resource area in Chapter 4 of this EIS. If this alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a

**Commentor No. 262 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

containing and controlling mishaps, spills and leaks it is difficult to imagine how DOE can justify a dramatically reduced level of control in the future for thousands of curies of buried radioactive waste.

It is within this backdrop of actual performance that government agencies now propose:

- To not decontaminate or decommission major radioactive facilities;
- To Cleanup only 1% of onsite radioactivity;
- To Monitor for radiation leakage, but not provide any details;
- To Study for 30 more years but not share details;
- To Make Future cleanup decisions themselves without public involvement; and
- To Fail to Present Long Term Stewardship activities for the site.

Finally, the Government calls all of this—" Decontamination, Decommissioning and Long Term Stewardship".

Long Term Stewardship is necessary only in the case that a complete Cleanup is not carried out. In all scenarios where buried waste must be contained on site for thousands of years, proper stewardship is essential. Sitewide Removal avoids such long term monitoring, engineering and institutional controls because the radioactive material is dug up and removed. The analyses in the EIS related to long term engineering controls, monitoring and containment at the site have been called into serious question by both the independent state-funded study, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Site*, released in December, and by NYSERDA's comments in the Foreword to the EIS, where it called the EIS' long term analyses fatally flawed and scientifically indefensible.

Not only have organizations, individuals and their elected representatives spoken unanimously in favor of a Complete Cleanup at West Valley, but today a Buffalo News Editorial also leant its full support to this objective. See Below

Long Term Stewardship would need to contain radioactive material under extreme conditions including including earthquakes and severe weather events that bring excess rainfall, lightning, high winds such as hurricanes and tornados, flash floods, interrupted power and communications, as well as hindered or impaired emergency services. Previously we have focused on the unique nature of the site, particularly its vulnerability to erosive forces. However, a vulnerability to erosion is exacerbated by weather events such as excess rainfall. August 9th of this year dumped over 5 inches of rain in 1.5 hrs. Rain at the site could have been more severe, but the rain gauge was not functional because of a loss of power. Based on the Buffalo National Weather Services report severe lightning occurred and a tornado also touched down. See below. Flash floods and erosion impacted the entire area. A massive landslide occurred on Buttermilk Creek near the SDA. The reservoirs were overtapped with evidence of some erosion damage to the dams. Erdman Brook, Franks and Quarry Creeks, also experienced erosion damage. The site also lost communications for a period of time. Unknown at this time is the effect of this storm on the Strontium plume which has been allowed to spread for years under the laissez-faire approach of government agencies.

Long term stewardship requires consideration of all possible severe conditions that could cause loss of containment of radioactive material. However, the Draft EIS assumed erroneously that global warming would not have weather impacts in the area for 10,000 years. This is clearly not a scientific approach given that thousands of scientists including those in government who believe that global warming is causing impacts already. It is predicted that the Northeast will experience a 20-30% increase in rainfall. All potential impacts of global warming such as hurricanes, tornados, rainfall, flash floods, and erosive damage should have been studied in the EIS. The August 9th storm was a moderate one, but had relatively severely impacts on the region. A more severe storm could breach containment and the responsible thing to do is to consider

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combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. For each resource area, Chapter 4 discusses the impacts that would occur if either removal or close-in-place is selected for Phase 2. The chapter also discusses which alternative(s) bound the impacts in the event that continued active management is selected for the SDA. The short-term impacts of a Phase 2 decision that involves continued active management of the SDA are bounded by either the removal or close-in-place impacts. The post-decommissioning impacts of a continued active management decision for the SDA, which include staffing, occupational exposure, and waste generation related to SDA monitoring and maintenance, as well as long-term impacts on public health and safety, would be similar to the no action impacts for the SDA. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

This EIS was prepared to evaluate the environmental impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC. Chapter 1 of this EIS summarizes the history of WNYNSC. Section 1.1 provides an accurate history of the development of the site and how DOE and NYSERDA became responsible for their respective roles. Chapter 3, Section 3.11.5, summarizes the history of site accidents that are known to have resulted in environmental impacts, as well as those that might have caused such impacts, based on available operating records and evidence in the form of measured contamination. The additional issues cited by the commentator are discussed in the following paragraphs:

Risks to groundwater, surface water, the Great Lakes, and public health: Chapter 3, Section 3.6, of this EIS addresses water resources at WNYNSC, including contaminant releases and quality. The risks to both groundwater and surface water that are associated with the alternatives analyzed in this EIS are discussed throughout Chapter 4, particularly in Sections 4.1.4 and 4.5.8, as well as in Appendix H. Please also see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program.

**Commentor No. 262 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

the reasonable worst case scenarios for planning purposes. It is only by anticipating a variety of realistic worst case scenarios that you can provide for the needed emergency equipment and services, as well as take steps to prevent and avoid the worst case scenarios from becoming a reality.

After the weather events of August 9th we requested emergency planning documents from the relevant agencies. Unfortunately we had to pursue a FOIA request to obtain the documents from DOE. Emergency planning documents are supposed to be available to the public and discussed at length with the public and emergency providers—police, fire, ambulance, hospital, town and county officials. At this time it has been impossible to adequately pursue emergency planning questions that need answering such as:

- 1) the communications network for emergencies with 2 way communications,
- 2) the availability of emergency planning documents for the public,
- 3) the extent to which there have been real, thorough discussions of this topic, given that these discussions have never occurred at the Citizens Task Force.,
- 4) the extent of involvement with local and state emergency providers and the frequency of updates,
- 5) what possible adverse scenarios have been considered for planning purposes.

Based on the historical record of government performance thus far, the site realities, particularly the powerful forces of erosion, and on the careless, incomplete and scientifically unsound Draft EIS and Decommissioning plan, the public cannot rationally support any solution, except a full cleanup of the site. All other options leave the public, the environment and the Great Lakes in danger.

Thank you for your consideration. We would appreciate a detailed response to all of the comments provided during the comment period.

Respectfully,

Barbara Warren
Executive Director

**Buffalo News Editorial
Clean up West Valley**

Floods and landslides expose risk of incomplete radiation cleanup

September 08, 2009, 6:48 AM /

The coalition urging state and federal officials to do a full cleanup of the state's largest nuclear waste site, at West Valley, has a clear understanding of the implications of doing nothing. Doing nothing means that far into the future, the legacy of West Valley will be the way in which we treated our natural resources. Will Lake Erie be a clean body of water free from radioactive-waste pollutants? Or will it contain evidence of neglect and of a refusal to take responsibility for the highly toxic nuclear wastes buried in, or leaking from, the decommissioned reprocessing site south of Buffalo? There are already signs that should heighten concerns. As a recent article by News reporter Mark Sommer noted, the severe flooding that devastated the Gowanda area last month also triggered a landslide on a 160-foot bank of Buttermilk Creek, which is adjacent to West Valley's nuclear waste trenches. The waste site also drains into streams that feed Buttermilk Creek, and into the Cattaraugus Creek watershed running through the Seneca Nation and into Lake Erie.

Decontamination or decommissioning of major radioactive facilities: Some of the alternatives evaluated in this EIS, including the Preferred Alternative (Phased Decisionmaking), could result in some facilities and waste remaining on the site, including the high-level radioactive waste tanks. Under the Phased Decisionmaking Alternative, action would be undertaken during Phase 1 for all facilities except the Waste Tank Farm, NDA, SDA, and Construction and Demolition Debris Landfill. Options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close in place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. DOE is required by the West Valley Demonstration Project Act to decontaminate and decommission the waste storage tanks and facilities used to solidify high-level radioactive waste, as well as any material and hardware used in connection with the WVDP, in accordance with such requirements as NRC may prescribe. Under both the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the North Plateau Groundwater Plume.

cleanup of only 1 percent of onsite radioactivity It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. If the Phased Decisionmaking Alternative is selected in DOE's Record of Decision and NYSERDA's Findings Statement, about another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected (see below under "30 more years of studies").

The options for Phase 2 of the Phased Decisionmaking Alternative (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued

**Commentor No. 262 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

The buckets and brooms later brandished by 20 or so people outside the New York State Energy and Research Development Authority offices in Buffalo's Larkin at Exchange Building symbolized the cleanup. Of course, the activists fully understand that it will take the force of the state and of the federal Department of Energy to avoid any future radioactive contamination of Lake Erie drinking water.

Federal and state officials have said that they are considering keeping the bulk of the nuclear waste buried right where it is—and promising to keep a careful eye on it. That's hardly a solution at all, let alone a long-term one. This page has advocated digging up all the nuclear waste now and finding a place to keep it for the long term, thereby removing a large toxic land mine. But this would cost a lot of money—roughly \$10 billion. An independent analysis, though, indicates that keeping the waste in place could cost \$27 billion over the long term. The West Valley site, home to a government-encouraged nuclear fuels reprocessing operation from 1966 to 1972, remains a serious concern not just for the surrounding communities but for all of Western New York. There is only one real answer: The 640 tons of irradiated materials from atomic operations, the liquid wastes later solidified by stirring it into melted glass in the federal "demonstration project," require a complete cleanup. Future generations will pay the real price of doing nothing.

National Weather Service Report
http://www.erh.noaa.gov/buf/swrx/web_090810_Flashflood/indexflood.html



The screenshot shows the homepage of the National Weather Service Forecast Office for Buffalo, NY. The main header reads "National Weather Service Forecast Office Buffalo, NY". Below the header, there are two search boxes labeled "Search" and "Search". To the left, there is a sidebar with links for "Local forecast by City, St* or Zip Code", "Current Hazards", "Current Conditions", "Forecasts", and "Radar Imagery". The main content area is titled "Flash Flood Event in Southern Erie, Northern Chautauqua and Northern Cattaraugus Counties". It includes an "OVERVIEW" section with a detailed paragraph about the flooding event on Sunday, August 9, 2009. A map below the overview shows the affected areas with various locations labeled. At the bottom of the page, there is a "Figure 1" caption describing the map.

Flash Flood Event in Southern Erie, Northern Chautauqua and Northern Cattaraugus Counties

OVERVIEW

This page documents select meteorological parameters that came together over Western New York on the even of Sunday, August 9, 2009 to produce one of the most significant flash flood events to hit the region in memory. It is not meant to be an in-depth study of the meteorology behind the flash flood, rather is intended to give the reader an idea of the evolution of the severe weather on the evening of Sunday, August 9, 2009.

The area barely had time to recover from a round of severe weather that afternoon, which produced extensive w damage across several counties including a tornado in western Allegany County. As that round of severe weather moved south of western New York, a second round of severe thunderstorms was evolving out to the west in north Michigan and Wisconsin. During the evening a cluster of severe thunderstorms dropped southeast across West New York from Southern Ontario province. As the storms moved onshore across Niagara and Orleans counties their main impact was damaging winds and near continuous lightning, very similar in fact to the severe weather that occurred earlier that day. However, during the evening the situation evolved from damaging winds to major flash flooding as the storms moved south of Buffalo and approached the Southern Tier. Over the course of a couple hours late Sunday evening, roughly between 1030PM and 1230AM, some of the highest short-term rainfall totals ever recorded in western New York occurred. Those rainfall totals resulted in the worst flash flooding the area has seen in decades. In addition to preliminary estimates of tens of millions of dollars of property damage, the flood also resulted in the direct loss of one life and indirect loss of another that night.

Figure 1 outlines the area that sustained the most damage associated with flash flooding. The communities of Silver Creek and Gowanda in particular had tremendous damage and much of the area between the two villages was also inundated. Smaller streams that flow through both of those villages became raging torrents with walls of water reported by many individuals.

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active management consistent with permit and license requirements. Chapter 4 of this EIS discusses the impacts that would occur for each resource area if either removal or close-in-place is selected for Phase 2. The chapter also discusses which alternative(s) bound the impacts in the event that continued active management is selected for the SDA.

Long-term monitoring and institutional controls (stewardship): As acknowledged in this EIS, long-term monitoring and maintenance would be required for alternatives that would leave waste on site. This EIS provides a summary description of current and potential future environmental monitoring programs. The descriptions of the alternatives were revised to further describe the use of engineered barriers and long-term monitoring and maintenance. Long-term monitoring and maintenance are described in Chapter 2, Sections 2.4.2.6 and 2.4.3.8. Long-term monitoring and institutional controls are also discussed in Chapter 6. Additional information about current and proposed monitoring and institutional controls is provided in Appendices C, H, and I. Chapter 2, Table 2-4, includes estimates of the environmental consequences if (1) monitoring and maintenance are successful (institutional controls remain in place) and (2) monitoring and maintenance programs fail (institutional controls are lost). Chapter 4, Section 4.2, of this EIS includes monitoring and maintenance costs for the alternatives that would leave waste on site.

Detailed information regarding long-term monitoring and maintenance programs and institutional controls under alternatives that would leave waste on site has not been specifically defined at this time. Such definition would occur after an alternative is selected for implementation and would include consultation with appropriate regulatory authorities. An element of these long-term programs would be development of plans and procedures for responding to emergencies that would include coordination and agreements with local police and fire departments and medical facilities.

Thirty more years of studies: Regarding the 30-year timeframe cited by the commentator, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed the Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the DOE Record of Decision, if the Phased Decisionmaking Alternative were selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the

**Commentor No. 262 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

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Figure 1 outlines the area that sustained the most damage associated with flash flooding. The communities of Silver Creek and Gowanda in particular had tremendous damage and much of the area between the two villages was also inundated. Smaller streams that flow through both of those villages became raging torrents with walls of water reported by many individuals.



Figure 1: Google Map showing the approximate location of the worst flash flooding that occurred

METEOROLOGICAL DISCUSSION

Figure 2 is a GOES IR satellite imagery loop that covers the time frame from 5:15PM Sunday afternoon through 2:15AM Monday morning. In the animation you will see a cluster of storms over northern Georgian Bay, often referred to as a Mesoscale Convective System (MCS) and a second MCS over southern Lake Michigan. As the night progressed, the Georgian Bay system moved southeast across western New York while the storms from Michigan moved in a more easterly track. The two storm systems eventually combined and reached their peak intensity over western New York before heading southeast to Pennsylvania. At the time of their peak intensity, the cloud tops associated with the storms dropped to a temperature of -71C, which in that evening's atmosphere equates to storms building to a height of approximately 52,000ft. when the torrential rainfall occurred.

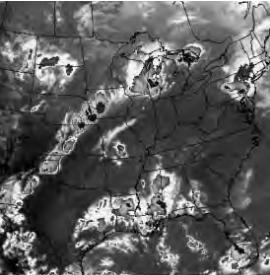
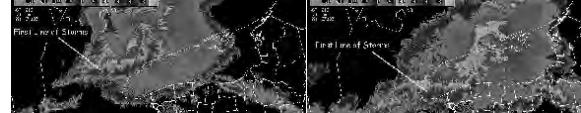


Figure 2: GOES IR satellite loop from 515PM Sunday August 9 through 215AM EDT Monday August 10.

The Composite Reflectivity radar image shown in Figure 3 at 8:27PM looked very similar as it entered western N York to the wind-dominated derecho that occurred earlier that day. As indicated above, early in the evening this of storms was dominated by damaging winds and constant lightning as it moved across the counties north of Buffalo. However, as the line of severe storms tracked toward southern Erie County, a second line of severe storms began erupting over western Lake Erie and extend east toward Silver Creek as shown in Figure 4 at 9:36PM.



Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Public involvement in the Phase 2 Decisionmaking process: Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until final decisions are made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate the Phase 2 decision for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

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The report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., has been addressed in this CRD consistent with the Council on Environmental Quality's NEPA regulations. Please see the Issue Summary for "Conclusions of the Synapse Report" in Section 2 of this CRD for further discussion of the report's issues and DOE's and NYSERDA's response.

DOE disagrees with many of the points raised in NYSERDA's View, which is included as the Foreword to this EIS. At the core, differences between DOE and NYSERDA center on different views about the nature of analysis required for an EIS and the attendant level of acceptable risk associated with any uncertainties in that analysis as it relates to decisionmaking. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, this EIS (1) acknowledges the information limitation and

**Commentor No. 262 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

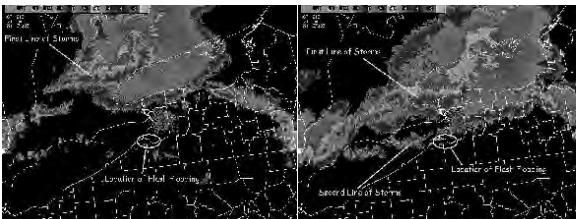


Figure 3: WSR-88D Composite Reflectivity at 8:27PM Sunday, August 9 showing the line of storms over the Province of Ontario, Canada.

Figure 4: WSR-88D Composite Reflectivity at 9:36PM Sunday August 9, 2009 showing the second line of storms developing over Lake Erie

Over the course of the next two hours that evening, the weather system evolved from a wind damaging line of storms to flash flood producing storms. The torrential rainfall culminated along the lower half of the Cattaraugus Creek Drainage Basin. Through a complex interaction of the two lines of storms, the topography of the area and already saturated ground from earlier storms, the adjacent parts of southern Erie, northern Chautauqua and northwest Cattaraugus counties were in the bulls-eye for catastrophic flash flooding. Figure 5 shows the Composite Reflectivity loop of the evolution of the flash flood from 8:46PM to 12:55AM. It is hypothesized that the first line of storms that were moving southeast intersected the second line of storms heading due east and combined to produce a period of torrential rainfall with several thunderstorms crossing the same location between 10:30PM and midnight. The entire thunderstorm complex then continued its track southeast to the Pennsylvania border overnight.



Figure 5: WSR-88D Composite Reflectivity animation from 8:46PM EDT Sunday August 09, 2009 through 12:55AM EDT Monday August 10, 2009

HYDROLOGY / FLASH FLOODING



Figure 6: Map of the tri-county area of southern Erie, northern Chautauqua and northwest Cattaraugus Counties where the worst flooding occurred

The WSR-88D radar has the ability to estimate rainfall from the signal that is returned to the radar from the storms. This is only an estimate of the rainfall amount however and is subject to many factors that can affect the accuracy. You can learn more about radar-derived rainfall in the links about WSR-88D Precipitation Images. Over the course of the 24 hours leading up to the flash flooding, there had been two other rounds of rainfall that occurred across the area. The ground was saturated from the rainfall and therefore would not be able to absorb much more rain, causing most of the precipitation to run off into streams and low lying areas. As the two clusters of thunderstorms merged that evening, the rainfall rates increased greatly across the area. Figure 6 shows the area that we will concentrate on for the rainfall analysis.

its relevance to environmental consequence, (2) summarizes existing credible scientific evidence, and (3) presents an analysis using a theoretical approach that is generally accepted by the scientific community involved in such analyses. This Final EIS contains text boxes in the relevant subject matter areas that acknowledge the differences of opinion between DOE and NYSERDA. In general, DOE's position is that the agency spent much time and effort engaging highly qualified and respected experts in hydrology and hydrological transport, landscape evolution (erosion), human health and environmental risk analysis, and other technical fields, and stands behind the analyses performed for this EIS.

262-6 Please see the Issue Summary for "Questions about Long-Term Erosion Modeling" in Section 2 of this CRD regarding the issue of large rain events. See also the following response, which discusses how this EIS has addressed potential changes in weather conditions.

262-7 The analysis in this EIS recognizes the potential for climate change to influence the long-term consequences of waste management. Climate changes, whether natural or influenced by human actions, could change the nature and amount of precipitation. Appendix H, Section H.3.1, of both the Revised Draft EIS and the Final EIS discusses the sensitivity of groundwater flow to changes in annual precipitation. The revised erosion prediction used for the unmitigated erosion dose analysis is based on the assumption that storms could occur more frequently than is currently estimated. This prediction includes the effects of storms of greater severity than the one that occurred in the region in August 2009. The use of this higher erosion rate associated with an elevated precipitation rate is discussed in Appendix H, Section H.2.2.1. Chapter 4, Section 4.3.5, has been revised to include a discussion of how the uncertainties about future climate change are addressed in this EIS.

262-8 Please refer to the Issue Summary "Conclusions of the Synapse Report" which addresses the comment on the alleged costs and impacts of the leakage of 1 percent of radioactivity.

**Commentor No. 262 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

occurred.

Figure 7 shows the 3-hour radar-derived rainfall between 9:04PM and 12:04AM Sunday evening. The red squares in the image indicate as much as 5 inches of rain. As noted, radar-derived precipitation is only an estimate of the actual amount of rain that may have fallen. The National Weather Service is fortunate to have a Cooperative Weather Observer located in Perrysburg, roughly half way between Gowanda and Silver Creek. In spite of flood at the observer's residence, she was able to go out and measure rainfall throughout the storm. In the timeframe from 10:30PM and midnight, she recorded an incredible 5.98 inches of rainfall. When compared to the radar-derived rainfall at this location, the ground truth measurement suggests the radar-derived rainfall may have been underestimated somewhat. Based on the added information, it is likely that the entire area outlined in red for the hour radar-derived rainfall would equate to about 6 inches of rain in less than three hours, likely in as little as a hour and a half. Figure 8 is the same as Figure 7, except that the four waterways that caused the disastrous flash flooding are sketched in. For the village of Silver Creek, it is readily apparent that not only the headwaters, but significant stretch of both Walnut and Silver Creeks received tremendous amounts of rainfall into their channels the village of Gowanda, Thatcher and Grannis Brooks also saw tremendous amounts of rain that turned these normally placid streams into deadly torrents.

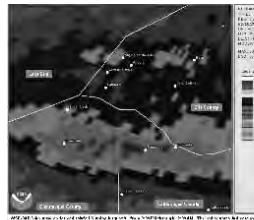


Figure 7: WSR-88D 3-hour radar-derived rainfall between 9:04PM and 12:04AM Sunday evening.

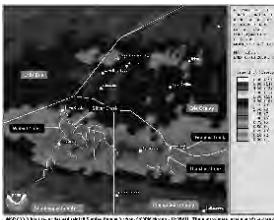


Figure 8: Same as Figure 7 with Silver and Walnut Creeks, Thatcher and Grannis Brooks overlaid.

To give a better local perspective of the areas that received the worst flash flooding, we used Google Earth to view the area around the villages of Silver Creek and Gowanda. Figure 9 shows the location of Silver Creek and Walnut Creek which course their way from the highlands of the Chautauqua Ridge through deeper ravines before winding their way through the village of Silver Creek, where they eventually merge and flow out into Lake Erie. Figure 10 zooms in on Silver Creek and in particular, the area around the mobile home community in the village that was severely damaged from the flooding. Damage photos taken by the NWS survey team, who were escorted by law enforcement are included at the end of this report to show the tremendous power and danger of flood waters.



Figure 9: View of the Silver Creek and Walnut Creek Basins as they course through the village of Silver Creek.



Figure 10: Zoomed in view of the Village of Silver Creek and the location of the mobile home community destroyed by flash flooding.

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**Commentor No. 262 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

The next images will focus on Cattaraugus Creek and the tributaries that flow into the creek in the village of Gowanda. In Figure 11 you can see the main branch of Cattaraugus Creek joined by the south branch of the creek a couple of miles upstream of Gowanda. Cattaraugus Creek flows through an area with significant topography on both sides of the waterway and cuts its way through a deep gorge as well. In fact, several campers who had been in the gorge that night had to be rescued by a basket dropped from a Sheriff's helicopter the next morning in what could only be described as a very heroic effort on the part of the emergency response team. In Figure 12 you can see how Cattaraugus Creek cuts through the village of Gowanda. There are a number of tributaries that flow into the creek through the village as well. Here we have pointed out Thatcher Brook which runs behind Tri-County Hospital. The hospital sustained significant damage from flooding likely due to the overflow from Thatcher Brook. The high school football field is also clearly visible in the Google Earth image. The football field was under several feet of water at one point and also sustained significant damage from the mud that was left after the water receded.



Figure 11: Map of the confluence of the south channel and main channel of Cattaraugus Creek just upstream of the village of Gowanda.



Figure 12: Map of the confluence of Thatcher Brook and the main channel of Cattaraugus Creek and just upstream of the village of Gowanda.

Some of the most interesting images of the indirect impacts the flash flooding had on the region were taken a couple of days after the storms when the skies cleared. Figures 13 through 16 show MODIS polar orbiter satellite imagery of the eastern Great Lakes. The polar orbiter spacecraft orbits at a much lower level than the GOES satellites and provides higher resolution imagery. Figure 13 shows the region a few days before the flash flooding. Figures 14 through 16 show the turbidity plume (muddy water) along the east end of Lake Erie as a result of the runoff/mud/debris that came from streams emptying into the lake. Even more fascinating is the turbidity plume that is evident at the mouth of the Niagara River as it empties into Lake Ontario. It is likely that the plume is a result of all of the rainfall that occurred across the river basins that empty into the east end of Lake Erie from the torrential rains of August 9th, 2009.



Figure 13: MODIS full color image from 2:49PM EDT August 5, 2009 on a clear day 4 days before the floods.

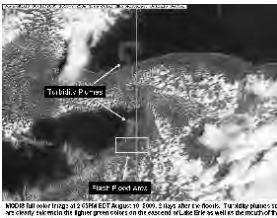


Figure 14: MODIS full color image at 2:55PM EDT August 12, 2009, 2 days after the floods.

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**Commentor No. 262 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**

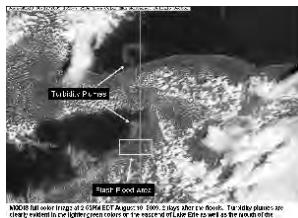


Figure 15: MODIS full color image at 2:05PM EDT August 13, 2009, 3 days after the floods.

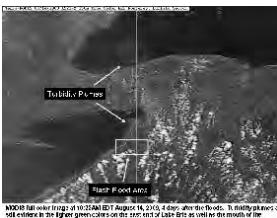


Figure 16: MODIS full color image at 10:22AM EDT August 14, 2009, 4 days after the floods.

Finally, we have included a few photos of damage that occurred as a result of the flash flooding in the villages of Silver Creek and Gowanda during the damage survey conducted by National Weather Service officials in conjunction with the Chautauqua and Cattaraugus County Emergency offices and personnel who staffed the respective Emergency Operations Centers.

Silver Creek Damage Photos



Gowanda Damage Photos



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**Commentor No. 262 (cont'd): Barbara Warren,
Citizens' Environmental Coalition**



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**Commentor No. 263: Joanne Hameister, Chair,
The Coalition on West Valley Nuclear Wastes**

The Coalition on West Valley
Nuclear Wastes

PO Box 603
Springville NY 14141



Comments

Draft Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center (DOE/EIS-2226-D [Revised])

Revision of A Draft Environmental Impact Statement for Completion of the West Valley Demonstration Project and Closure or Long-Term Management of Facilities at the Western New York Nuclear Service Center (also called the Cleanup and Closure Draft EIS) (DOE 1996a)¹

The Coalition has been concerned about and active in the decision process for the West Valley nuclear waste site for over thirty years. Since the Coalition is the original and oldest, continuously involved public stakeholder group at the West Valley site², the Coalition possesses the largest document base and longest institutional memory. The Coalition was formed initially as a coalition of the Springville Radiation Group in 1974 and Sierra Club's Radioactive Waste Campaign and was organized by Carol Mongerson, Henriette Gerwitz, Betty Cooke, Holly Nachbar, Dorothy Cairns and others in 1976.

The West Valley nuclear facility is the only waste site to have its very own legislation. The West Valley Demonstration Project Act (WVDPAct)³ was passed by Congress in 1981 and signed into law by President James Carter. The spirit and intent of this act was to vitrify high-level liquid waste and to then decontaminate and decommission the facility. The law states that among other requirements:

- "(S) The Secretary shall decontaminate and decommission—
(A) the tanks and other facilities of the Center in which the high level radioactive waste solidified under the project was stored,
(B) the facilities used in the solidification of the waste, and
(C) any material and hardware used in connection with the project, in accordance with such requirements as the Commission may prescribe."

West Valley is not the largest waste site in the United States, but it does have the dubious claim to the most hazardous complex soup of chemical and radioactive elements. The nuclear waste problems at West Valley should be regarded as a valuable opportunity for a research and development pilot plant with the ultimate goal of finding answers and procedures for

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263-1 DOE and NYSERDA note the commentor's suggestion.

¹ 2008 DEIS, Chapter 1, Section 1.1, Page 1.1

² The Department of Energy was organized and activated in 1977.

³ West Valley Demonstration Project Act, 42 USC 2021a

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The Coalition on West Valley Nuclear Wastes**

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decommissioning and decontamination.

In 1987, the Coalition entered federal district court to prevent the federal Department of Energy (DOE) from disposing of WVDP generated wastes onsite without first performing an EIS to examine fully the impacts of onsite waste disposal. The case was settled under a Stipulation of Compromise Settlement (SOCS) whereby DOE agreed not to dispose of Class A, B, and C wastes onsite without first performing such an EIS. The 1996 *site-wide* closure DEIS was the result of this lawsuit and settlement agreement. The SOCS stated that "the parties hereby agree that the closure Environmental Impact Statement process – including the scoping process – shall begin no later than 1988 and that this process shall continue without undue delay and in an orderly fashion consistent with applicable law, with the objectives of the West Valley Demonstration Project, available resources and mindful of the procedural processes (including public input) needed to complete the aforesaid Environmental Impact Statement."

The Coalition's position that the site is physically unsuitable for the long-term storage, i.e. whether called "disposal" or "stewardship," of radioactive wastes, remains unchanged from when the position was taken eight years later, in 1996, after release of the information contained in the 1996 site-wide closure DEIS. In fact, the evidence of erosion at the site personally accumulated in the intervening years plus additional information including that of the State-sponsored Full Cost Accounting Study (full title: "The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for West Valley Nuclear Waste") have reinforced our position and added a strong life-cycle economic justification.

The 2008 DEIS document Violated the Intent and Purpose of NEPA and the Stipulation

The 2008 Draft Environmental Impact Statement [DOE/EIS-0226-D (Revised)] violates both the intent and purpose of the law and the established procedural regulations that lie at the heart of the National Environmental Policy Act (NEPA) public decision process, making it inadequate as a decision tool for the Department of Energy (DOE), New York State Energy Research and Development Authority (NYSERDA) and/or the public.

This DEIS is not a revision, since the title and purpose was changed from 'Cleanup and Closure' to 'Long-term stewardship'. Nor is it a supplement to the 1996 Cleanup and Closure site-wide DEIS. This draft is an entirely new entity that attempts to replace the legitimate 1996 DEIS. It presents a preferred alternative which was not mentioned thirteen years ago in the 1996 DEIS: a "Decommissioning or Long-Term Stewardship" alternative that does not offer or present any cleanup decision for more than 98% of the site's wastes; indeed, an implied deferral of such a decision, for up to 30 more years, is a violation of the NEPA regulations regarding full disclosure of environmental impacts and the 1987 SOCS, particularly so since no endpoint or final status is declared or defined for the preferred alternative.

DOE/NYSERDA's selection of this preferred "no decision" alternative is a subterfuge to permanently extend the 46-year old, onsite waste disposal blunder at this site that has been known to be leaking for decades. In the course of this unprecedented 22 year-old NEPA process, it is now obvious that "temporary onsite waste management" has become *de facto* "onsite waste disposal".

The view of the Coalition is that DOE did not like the site erosion analysis and resultant huge offsite radiation dose predictions made by its own DEIS contractor, Science Applications International Corporation (SAIC), in the 1996 site-wide DEIS. Therefore, following the promulgation of the Nuclear Regulatory Commission (NRC) lax License Termination Rule (LTR) in 1997 (10 CFR 20 Subpart E), which condoned onsite "stewardship" of long-lived wastes as a license termination option, DOE subsequently aborted the scientifically valid analysis of 1996 site-wide DEIS, rather than do the proper thing: making any necessary,

- 263-2 DOE and NYSERDA note the commentor's position on the unsuitability of the site for long-term storage. DOE recognizes that erosion is a concern and has addressed it in detail in this EIS, including the long-term (multi-century) consequences of erosion on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. Please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.
- 263-3 DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for a discussion of the report's issues and DOE's and NYSERDA's responses.
- 263-3 This comment questions the validity of the 2008 Revised Draft EIS on the grounds that NEPA, the Council on Environmental Quality's NEPA regulations, and DOE's NEPA Implementing Guidelines were not followed; specifically, because the 2008 document is titled a "Revised Draft" rather than a "Supplemental Draft," or that a Supplement Analysis was not prepared prior to preparing the 2008 Revised Draft EIS. DOE believes that this EIS satisfies the statute, regulations, and guidelines and fully informs both the public and decisionmakers.
- 263-5 The purpose of an EIS under NEPA and its implementing regulations is to ensure that (1) Federal agencies consider the potential environmental impacts of proposed actions in their decisionmaking processes, (2) the potentially affected public has the opportunity to review and comment on those actions, and (3) the opinions of the public are considered in preparing the EIS, and thus, by the decisionmakers. DOE has met its obligations under NEPA in both the letter and spirit of the law. DOE has been transparent in meeting its NEPA responsibilities for activities at WNYNSC, including ensuring timely notification of proposed NEPA documents and opportunities for public participation. In addition, an 18-member Citizen

***Commentor No. 263 (cont'd): Joanne Hameister, Chair,
The Coalition on West Valley Nuclear Wastes***

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substantiated changes in a Final EIS (FEIS) to the 1996 DEIS and then issuing the analysis-appropriate, site-wide Record of Decision (ROD) in a timely fashion.

This 2008 document is the end-product of an illegitimate manipulation of West Valley's 1996 NEPA site-wide cleanup and closure DEIS that began following promulgation by the NRC in 1997 of a much less stringent license termination rule, Title 10 CFR Part 20 Subpart E, *aka* the "LTR." That manipulation involved starting a new segmented process that produced a 2003 Waste Management DEIS and replacement of the 1996 site-wide closure DEIS with the 2008 Long-term Stewardship DEIS. In previous documents (ex. the 2003 DEIS Waste Management DEIS), the SOCS had been listed as a regulatory requirement, however this DEIS fails to accord the Coalition its unique and merited super-stakeholder status.

Instead, DOE segmented the review process into an "interim actions" waste management component "to allow work to continue" (the 2004 Waste Management FEIS) and a subsequent decision document (this 2008 DEIS). However, lacking a *site-wide* waste disposition ROD, many of the *onsite* waste management interim actions – ex. NDA plastic cover and slurry wall, tank drying and North Plateau plume treatment walls – are segmentation. This approach is inappropriate under NEPA and the Coalition's 1987 Stipulation of Compromise Settlement.

The seriously deficient erosion modeling and dose analysis of this 2008 DEIS (also performed by SAIC) has been framed with a view toward satisfying the lax (in comparison to the pre-LTR decommissioning regulatory regime, which required cleanup for unrestricted use in order for license termination to be granted) long-term onsite disposal requirements of NRC's 1997 LTR. It will enable DOE effectively to vacate the site in 8 years following NRC's expected approval of a "concentration averaging" (aka WIR) designation for the HLW tanks and remaining sludges.

The long-term offsite peak annual radiation doses calculated for this 2008 DEIS – "on the order of 100 millirems per year"⁴ – are up to three orders of magnitude, or 1000 times, lower than the peak doses presented in Appendix D of the 1996 DEIS. No justification of this dramatic reduction in offsite doses is given, however 100 millirems happens to be the maximum allowable dose under subsection 20.1403(e) of the NRC's lax 1997 LTR for license termination under institution control should such control be lost. *The dose analysis of the 1996 DEIS showed radiation dose levels far in excess of the maximum dose levels that would allow license termination under the subsequent 1997 LTR.*

The hundreds of comments received on the site-wide 1996 DEIS were shabbily treated and disregarded. Many comments were ignored. Sentences were taken out of context and rephrased, and the presumed intent, therefore, often was misinterpreted. This treatment of the 1996 DEIS public comments is an insult to all of the people and organizations who took the time and energy to deal seriously and convincingly with the 1996 DEIS. All of these comments should be addressed individually and thoroughly and that review process legitimately concluded with an FEIS and ROD.

The Coalition by reference incorporates the entirety of the 1996 Comments into this comment. For sustainability reasons, the document is not reproduced here.

The Coalition asserts that the scoping comments preceding the site-wide 1996 DEIS and the public comments submitted on the site-wide 1996 DEIS do not represent or constitute NEPA requirements of public participation in the scoping and comment period for the 2008 DEIS. The charge for 1987 scoping and site-wide 1996 DEIS comments was for Cleanup and Closure, not for Long-Term Stewardship and a phased decision process.

We have absolutely no guarantee or hope that comments submitted in response to this

⁴ 2008 DEIS Summary Document, Page 27

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Task Force sponsored by both DOE and NYSERDA was formed in 1997 and has met regularly since 1998 to discuss issues regarding facility closure and long-term management, including future site use, long-term stewardship, and regulatory issues. Further, DOE holds quarterly public meetings to discuss WNYNSC activities and progress on decommissioning of the site, including the NEPA process to further those activities.

Regardless of the title of the 2008 Revised Draft EIS, the same level of analysis and the same process for public involvement were undertaken as would have been done if this EIS had been issued as a supplemental EIS. Nothing DOE has done would be different, other than using a different title. Chapter 1, Section 1.2, of this EIS describes the history of its development including how the alternatives, analyses, regulations, and this EIS evolved over time and how the alternatives and analyses in the 1996 Draft Environmental Impact Statement for Completion of the West Valley Demonstration Project and Closure or Long-Term Management of Facilities at the Western New York Nuclear Service Center (*Cleanup and Closure Draft EIS*) were overtaken by these changing factors.

DOE and NYSERDA believe that the Phased Decisionmaking Alternative meets the requirements of NEPA and SEQR. DOE and NYSERDA have prepared this single, comprehensive EIS for the decommissioning and long-term stewardship of WNYNSC. This EIS adequately analyzes the totality of environmental impacts, including costs, of a broad spectrum of reasonable alternatives that meet the respective purposes and needs of DOE and NYSERDA (Sitewide Removal, Sitewide Close-In-Place, and Phased Decisionmaking), as well as a No Action Alternative. While the Phased Decisionmaking Alternative would temporarily defer a final decision on the disposition of the Waste Tank Farm, the NDA, and the Construction and Demolition Debris Landfill, DOE believes that the impacts of this deferred decision are adequately analyzed within this EIS.

The Notice of Intent for the 2008 Revised Draft EIS described the proposed action and the alternatives that were under consideration at that time. The alternatives changed after issuance of the Notice of Intent. Chapter 1, Section 1.2, of this EIS describes the development of the alternatives analyzed in this EIS. A Core Team comprised of the co-lead and cooperating agencies was established to address various technical issues with the analyses and the alternatives to be addressed. The 2008 Revised Draft EIS reflects the results of discussions with the Core Team regarding the alternatives to be analyzed, the nature of the analysis, and the nature of the Preferred Alternative (the Phased Decisionmaking Alternative).

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2008 DEIS document will have any impact on the FEIS. Therefore, given our position that this DEIS is illegal and our lack of confidence that public comments will be taken seriously, we advocate for yet another Draft EIS with a 6 month public comment period, before the Final EIS, to verify the seriousness with which DOE, NYSERDA and SAIC have considered the comments and suggestions. And, please, do not respond to this comment by saying that you simply are following the prescribed script of NEPA.

Derelictions, Pecadilloes, Inefficiencies and Failings of the 2008 DEIS

The Coalition is troubled by the fact that the 1996 DEIS shows a full site clean-up timeframe of 29 years while the 2008 DEIS shows a timeframe of 64 years for a full clean-up. If we have learned only one thing about cleaning up physically unsuitable nuclear waste sites, it is that delay usually translates into much higher cleanup costs. For example, had the Sr-90 leak in the process building been properly addressed when it occurred during NFS operations in the 1960s, or even several years later when the resulting North Plateau plume was publicly identified, the cleanup cost would have been orders of magnitude lower (perhaps less than a million dollars in the first case). A whopping \$1.5 to \$2 billion is estimated now to fully excavate this expanding area of contamination, which is reported in the 2008 DEIS to affect approximately 1 million cubic yards of contaminated soils.⁵ This is the largest single cost component of the 2008 DEIS's full cleanup alternative and represents an appalling situation which is the result of incompetent oversight of Nuclear Fuel Services' operations and waste management by the NYS public authority corporation, NYSERDA and its predecessor, and regulatory failure on the part of NRC and its predecessor, Atomic Energy Commission, and New York State's regulatory agencies, NYS Department of Health (DOH), NYS Department of Environmental Conservation (DEC) and NYS Department of Labor (DOL).

Continuation of onsite waste management at this aggressively eroding site would be extremely unsound policy that is not supported by the erosion modeling and long-term economic analysis presented in both DOE's 1996 site-wide DEIS and the 2008 independent, State-sponsored Full Cost Accounting Study.

The geology expert of the latter study, Dr. Michael Wilson, pointed out a number of weaknesses and mistaken assumptions in the 2008 DEIS concerning the site's hydrology and geology, including the following:

- 1) No estimate of the impact of climate change, i.e. prediction of 30% greater rainfall and excursionary weather events;
- 2) Avoids rapid-rate episodic removal phenomena, such as landslide removal of slopes;
- 3) 21 degree slope angle is not stable as DEIS assumes;
- 4) Franks Creek and gully profiles are currently convex up, not convex down; this means they will more rapidly and greatly cut down than predicted;
- 5) No worst case for gully initiation;
- 6) Gully heads (new gullies) are increasing at an alarming rate: dozens in recent decades as opposed to the expected dozens in 100s of years;
- 7) No estimates of increased erosion due to changes in land use, i.e. farming practices and areas, deforestation, paving etc.;
- 8) Insufficient consideration of the significance of the effects of sapping.

The 2008 DEIS greatly underestimates the necessary erosion control measures and their costs. The FCAS recommends many additional erosion measures and concludes that their costs are well more than an order of magnitude greater than those estimated in the 2008 DEIS.

In a geology presentation to the CTF, Tucker stated that the SIBERIA erosion modeling

⁵ The \$1.5 billion estimate is from the Full Cost Accounting Study and is due to an earlier start and more aggressive cleanup schedule. The \$2 billion estimate is the cost component of 2008 DEIS's full clean alternative.

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It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed the Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the DOE Record of Decision if the alternative were selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.

DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. It is DOE's intent to complete its responsibilities under the West Valley Demonstration Project Act in accordance with the decommissioning criteria prescribed by NRC. Appendix L of this EIS addresses how the Phased Decisionmaking Alternative is capable of meeting NRC and other applicable regulatory criteria.

As stated in the response to Comment no. 263-4, Chapter 1, Section 1.2, of this EIS describes the history of the evolution of this EIS.

The erosion and groundwater modeling in this EIS reflects the results of data gathering and studies performed over the years since the 1996 Cleanup and Closure Draft EIS was prepared. The erosion analysis presented in Appendix F

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used in the 2008 DEIS incorrectly predicts smoothing of the glacial terrain rather than gully incision with sharp edges retreating at a 21 degree dynamic angle. He concluded that this modeling is not capable of predicting the future topography with sufficient accuracy to meet the requirements of the LTR.⁶

The Coalition is troubled by the fact that the 1996 site-wide Closure DEIS shows an erosion estimate that breaches the burial grounds within 1000 years, while the 2008 DEIS maintains the burial grounds will remain intact. There is no clear consensus among erosion experts that support the controversial erosion estimates in the 2008 DEIS. Therefore, decisions regarding the suitability of the site for long-term storage or stewardship cannot be justified based on the current information and analyses included in the 2008 DEIS.

The Coalition understands that the Main Plant stack ventilation system does not work, that the system is reliant upon back-up ventilation and that this has been an on-going years-long condition (possibly as far back as 1996) and assert that the DEIS wordsmithed and obfuscated this situation with "Permitted portable outdoor ventilation enclosures are used to provide the ventilation necessary for the safety of personnel working with radioactive materials in areas outside permanently ventilated facilities or in areas where permanent ventilation must be augmented. One ambient air sampler continued operating in 2006 to monitor air near the onsite lag storage area." (DEIS 3.7.2). The Coalition presumes that this 'one ambient air sampler' was NOT in operation prior to 2006 and that it is now the only air sampler on duty. The ventilation system and air sampling procedures must be upgraded, fixed and guaranteed to protect workers and staff.

One aspect of living in Western New York is our unique weather patterns. Weather predictability is based on multiple models with a monumental amount of minute-by-minute readings and data in huge three-dimensional samples. Yet, weather forecasters admit that accuracy of predictability falls only within a range of four hours. Erosion modeling necessarily has to contain models of predictable weather event trends. A few days cannot be transformed to 100 or 1000 years of predictability. Tornado predictability⁶ relies on historical averages. 17 tornadoes in 20 years is not an adequate predictor of the fact that Western New York has had four tornadoes in the past month.

The onsite geomorphological impacts of recent excursionary meteorological events that occurred in August 2009 are significant. They should be carefully evaluated as part of a wider examination of the impacts that could be expected at the West Valley site from regional extreme weather events, both those that have already occurred and those that might be expected based on regional climate change trends. Such an evaluation is lacking in the 2008 DEIS, this must be corrected in the FEIS. Our comments on this issue are presented in Attachment I and are to be considered in toto as an integral part of these comments.

The Coalition is troubled by the fact that the 4 volumes (1369 pages) of the 2008 DEIS deal with less than 2% of the radioactive materials situation at West Valley nuclear facility. While minor sources of contamination are included in this 2%, the Coalition expected a site-wide EIS

⁶ 2008 DEIS Chapter 3. The frequency and intensity of tornadoes in western New York are low in comparison to many other parts of the United States. An average of about two tornadoes of short and narrow path length strike New York each year. From 1950 to 1990, 17 tornadoes were reported within 80 kilometers (50 miles) of the WNYNSC (WVNS 2004a). The probability of a tornado striking a 2.6-square kilometer (1-square mile) section of the WNYNSC was estimated to occur once every 10,000 years. For wind speeds less than or equal to 54 meters per second (121 miles per hour) (or a hazard probability level of 2.5×10^{-5}), straight-line winds are the more likely cause; for higher wind speeds, tornadoes are more likely. Straight-line winds are the dominant form of severe weather at recurrence intervals of less than 100,000 years (McDonald 1981).

of this EIS is considered to be scientifically defensible and, consistent with NEPA requirements, uses a theoretical approach that is accepted in the scientific community for evaluating long-term erosion.

DOE will remain on site until it completes its responsibilities as assigned under the West Valley Demonstration Project Act. DOE would not leave the site after completion of the Phase 1 actions because it would not have completed the actions required under the Act. The description of the Phased Decisionmaking Alternative in Chapter 2 of this EIS has been revised to clarify this.

There are multiple reasons for differences in the long-term dose estimates. The major changes are improved inventory estimates, improved hydrologic and erosion models, and changes in the closure designs. This EIS describes and provides references that are the basis of the analysis.

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- of this EIS is considered to be scientifically defensible and, consistent with NEPA requirements, uses a theoretical approach that is accepted in the scientific community for evaluating long-term erosion.
- DOE will remain on site until it completes its responsibilities as assigned under the West Valley Demonstration Project Act. DOE would not leave the site after completion of the Phase 1 actions because it would not have completed the actions required under the Act. The description of the Phased Decisionmaking Alternative in Chapter 2 of this EIS has been revised to clarify this.
- There are multiple reasons for differences in the long-term dose estimates. The major changes are improved inventory estimates, improved hydrologic and erosion models, and changes in the closure designs. This EIS describes and provides references that are the basis of the analysis.
- Chapter 1, Section 1.2, of this EIS describes the history of the development of this EIS. This issue was the subject of a lawsuit, *Coalition On West Valley Nuclear Wastes, Joanne E. Hameister, v. Steven Chu, Secretary, Department Of Energy, United States Of America*. On August 31, 2009, a Federal appeals court ruled that DOE did not violate Federal environmental law by breaking its cleanup of a nuclear service center into two parts. The U.S. Court of Appeals for the Second Circuit affirmed a lower court's decision that DOE had not violated either NEPA or the stipulation of compromise settlement. DOE is committed to proper completion of its responsibilities under the West Valley Demonstration Project Act.
- The comments on the 1996 *Cleanup and Closure Draft EIS* are addressed in Appendix A of this EIS. Following a thorough review of the comments, a good faith effort was made to capture the substance of the comments in the 13 categories shown in Appendix A. These comments were considered in developing this EIS.
- As described in Chapter 1, Section 1.2, of this EIS, DOE and NYSERDA published Notices in the *Federal Register* and the *New York State Environmental Notice Bulletin* announcing that they would jointly prepare an EIS for decommissioning and/or long-term stewardship of WNYNSC, which would revise the 1996 *Cleanup and Closure Draft EIS*. Scoping meetings for this EIS were held in early 2003.
- DOE and NYSERDA note the comment. There are no plans to issue another draft before finalizing this EIS. Chapter 1, Section 1.8, of this EIS describes the changes made to the document between the Revised Draft EIS and this Final EIS. This

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that addresses, rather than leaves open and unresolved, waste disposition for more than 98% of the site's wastes. Every source of contamination is significant and a threat to public health and safety and the integrity of the environment.

Cost estimates for 2008 DEIS alternatives DO NOT mention and we assume DO NOT include a basic Cost/Benefit Analysis item of an asset referred to as Cost Avoidance, as in the case of dealing with a catastrophic release of radioactivity from the WV site. The noticeable absence of this item skews the possible true costs of an errant, stubborn strontium plume and aggressive erosion of the burial grounds, in particular.

In 1983, the Coalition was informed of a plutonium/kerosene leak from the NDA. We later learned that 11,000 gallons of this concentrated plutonium-laden kerosene had been buried in the NDA in the 1960's. DOE, in 1986, exhumed two holes and retrieved dry drums with ruptured welds and originally sealed with duct tape. We would like to know where that plutonium went and how many other drums and holes contain the same or other radioactive brews.

The decision-process for the illegitimate "Phase 2" is non-existent

The Supplemental Analysis, presumably being developed currently by DOE, is not mentioned in the 2008 DEIS as a decision tool, let alone whether any NEPA public participation will be accorded it. Given the unjustified termination of the 1996 site-wide DEIS, we can reasonably presume that any Supplemental Analysis will be formulated to justify DOE/NYSERDA's continuation of their "interim actions" (both prior to and after the illegitimate 2003 Waste Management DEIS) which are not part of the 1996 DEIS and improper under NEPA. Together with the 2008 DEIS's planned "phase 1" onsite waste management activities, these "interim actions" constitute a *de facto* onsite waste management decision, which will easily lead to a publicly unreviewable final decision of onsite disposal in "phase 2" of the 2008 DEIS.

There is no evidence of a commitment to any further degree or level of clean up or decommissioning beyond the use of institutional control in "phase 2".

Public participation opportunities during Phase 2 are not provided, indeed are not even mentioned. DOE's refusal to commit to a full NEPA review process for the final determination most of the site's wastes under this "wait until later" approach, in the face of a serious human health and environment threat, is not only unconscionable but does not satisfy NEPA or the 1987 SOCS.

NRC/DOE application of the lax LTR provisions will allow the West Valley site to be "decommissioned" (i.e., the license to be terminated) under that rule's long-term "stewardship" provisions with little or no further waste removal from the site, other than the high-level glass logs. In contrast, the 1982 LLRW disposal facility site performance regulations 10 CFR 61, which include a prohibition on the use of institutional control as a waste management tool for a period greater than 100 years, would not have allowed use of the site for radioactive waste disposal. Onsite "stewardship" may have a more marketable connotation than "disposal," but they are no different in the event of loss of future funding and/or institutional control.

The Coalition is troubled by the fact that NYSERDA has so many significant problems with this document (ref. Forward in the DEIS) and, yet, subscribes to and defends it. This public authority corporation has not acted responsibly or in good faith with the people of New York State. NYSERDA's Quantitative Risk Analysis details the probabilities only for the 30-year period for Phase 2 decision-making. It also does not commit to a clean-up decision thereafter. The extensive computations of probabilities do not deal subjectively or judiciously with the possibilities of climate change or potential subsequent catastrophic weather-related events. In fact, New Orleans survived hurricane Katrina, but suffered greatly because of the failure of the levees (engineered barriers).

- CRD identifies where changes have been made to this EIS in response to specific comments.
- As stated in Chapter 2, Section 2.4.1.4, of this EIS, the duration of approximately 60 years for the Sitewide Removal Alternative is based on assumptions about funding levels and task sequencing.
- Please refer to the Issue Summaries for "Conclusions of the *Synapse Report*" and "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for DOE's and NYSERDA's responses to issues such as those raised in this comment regarding climate change, erosion, and long-term economic costs.
- The analysis in this EIS recognizes the potential for climate change to influence the long-term consequences of waste management. Climate changes, whether natural or influenced by human actions, could change the nature and amount of precipitation. Appendix H, Section H.3.1, of both the Revised Draft EIS and the Final EIS discusses the sensitivity of groundwater flow to changes in annual precipitation. The revised erosion prediction used for the unmitigated erosion dose analysis is based on the assumption that storms could occur more frequently than is currently estimated. This prediction includes the effects of storms of greater severity than the one that occurred in the region in August 2009. The use of this higher erosion rate associated with an elevated precipitation rate is discussed in Appendix H, Section H.2.2.1. Chapter 4, Section 4.3.5, has been revised to include a discussion of how the uncertainties about future climate change are addressed in this EIS.
- The erosion analysis has been revised for the Final EIS. The SIBERIA code is not used. Please refer to the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD and to Appendix F of this EIS for further discussion of the models used.
- The 1996 *Cleanup and Closure Draft EIS* erosion analysis and the erosion analysis in this EIS are very different, use fundamentally different mathematical concepts, and take very different approaches to model calibration. The erosion and groundwater modeling in this EIS reflects the results of data gathering and studies performed over the years since the *Cleanup and Closure Draft EIS* was prepared. The erosion analysis presented in Appendix F of this EIS is considered to be scientifically defensible and, consistent with NEPA requirements, uses a theoretical approach that is accepted in the scientific community for evaluating long-term

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Similarly, the Paterson administration's principal State agencies charged with protecting the public interest at this site, namely the DOL (previously), the DOI, and the DEC, have not acted to ensure that both DOE and NYSERDA adhere to existing, applicable environmental laws and regulations. The LTR should not have been allowed to be applied at West Valley. Knowing full well that the generic EIS which supported the NRC's LTR rulemaking did not consider West Valley's unique problems, and that the 1980 WVDPA calls for a site-specific clean-up criteria determination by NRC, these agencies did not challenge NRC's 2002 final policy statement which applied the LTR to the West Valley site. Instead they let the far more stringent, pre-LTR Atomic Energy Act decommissioning framework, previously applicable to West Valley and which essentially required thorough site cleanups for unrestricted future use prior to license termination, fall by the wayside. Given the fundamental failures of proper procedure by governmental agencies, represented by the Sr-90 plume and the improper manipulation of the review process at this site, we are not optimistic about the future performance of these agencies.

According to NYSERDA's Source Term Analysis, the original commercial low level waste deposited in the SDA essentially has been "held for decay" in unlined, unengineered clay trenches and has been losing its toxicity more rapidly than have the DOE and defense wastes.

	TOD Curies	1993 Curies	2093 Curie Est.
	"Time of Deposit"		
Commercial	1,030,000	172,000	35,000
	73.1%	71.1%	56.6%
DOE	188,000	49,800	21,200
	13.3%	20.8%	34.3%
Fed	65,800	6,640	1,890
	4.7%	2.7%	3.1%
State/Loc	1,869	639	177
	0.1%	0.3%	0.3%
Unknown	124,000	12,800	3,570
	8.8%	5.3%	5.8%
	1,409,669	241,879	61,837
	100.0%	100.0%	100.0%

The percentage of DOE and defense waste is increasing percentage-wise and, therefore, puts the SDA in the questionable status of becoming a larger responsibility of the federal government, and a diminishing responsibility of NYS. Whether or not DOE considers the SDA to be a critical responsibility under WVDPA, DOE and, therefore, DOD are responsible for a growing share of the SDA radioactive contents. That responsibility for those DOE and DOD defense wastes cannot be deeded to NYS. In fact, the United States in the form of the DOD and DOE cannot escape continuing liability as PRP's under CERCLA for this waste until it is properly remediated. We, therefore, demand that the SDA should NOT be carved out of the DOE decommissioning plan and the environmental impact process, as it has been with the 2008 DEIS, which is not the NEPA-required *site-wide* analysis.

DOE submitted an alarming "WVDP Phase 1 Decommissioning Plan Dose Modeling" proposal to NRC last October that independently assigns predicted acceptable doses (on the order of 25 mrem) to individual "areas of interest" (e.g., stream bed sediments) using an unspecified exposure scenario. This "limited dose assessment" proposal contained proposed DCGIs and cleanup level goals "as if the area of interest would be the only area to which a future resident or recreationist might be exposed." [Recreationist (i.e. parkland exposure)]

erosion. DOE believes that the analyses in this EIS are adequate to support decisionmaking.

- 263-23 263-15 As indicated in the cited paragraph in Chapter 3, Section 3.7.2, of this EIS, a number of emission sources are monitored at the site, including the stack for the Main Plant ventilation system. The referenced ambient air sampler is a sampler that was installed a number of years ago specifically to monitor air near the lag storage building.
- 263-24 263-16 This EIS evaluates the environmental impacts of a range of alternatives for the decommissioning and/or long-term stewardship of WNYNSC. It is assumed that the comment refers to the Preferred Alternative, the Phased Decisionmaking Alternative. If this alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. Regarding the percentage of waste requiring disposition, as stated in the response to Comment no. 263-4, it is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.
- 263-25 263-17 The commentor's assumption is correct. The cost analysis did not account for cost avoidance that would be associated with unexpected events such as catastrophic releases from the site.
- The cost-benefit analysis in the Revised Draft EIS is consistent with the NRC as low as is reasonably achievable (ALARA) guidelines provided in NUREG-1757, "NRC Consolidated Decommissioning Guidance." The analysis considers a range

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scenario) and resident (farmer) are the low and high extremes of the exposure scenario range.] The NRC must not allow any Decommissioning Plan proposal made by DOE to proceed outside of or prior to the conclusion in the form of a ROD of the legally required NEPA site-wide dose assessment covering all areas and wastes that are onsite, i.e. the 1996 site-wide DEIS."

In general and with specific reference to Appendix N, "N-2 N.3 Scenarios Considered but Not Analyzed", the Coalition since 1980 has been objecting to presented probabilities that either are "Low Risk-High Consequence" or "High Risk-Low Consequence", when in fact the possibilities are somewhere in between the extreme end points. This practice of presenting risk extremes seems to have taken an even more extreme twist, namely, that of not dealing with risks to the public at all.

With reference to Appendix N, the DEIS contains a scenario regarding a commercial aircraft crash, but does not offer a scenario regarding a military flight. There are daily and multiple contrails over western New York indicating that military flight patterns do exist. When a member of the Coalition questioned a NYSERDA director about an airplane crash, the answer was "But, it is a no-fly zone" and then stated further that "it is unlikely because the impacted radioactive site would have to be vaporized to be dangerous". The World Trade Center and the Pentagon were no-fly zones. The 911 crashes in Pennsylvania and the February 2009 plane crash in Clarence created infernos that smoldered for days. We think NYSERDA's casual dismissal of this potentially serious threat demonstrates a lack of prudence and discretion that should be accorded to the taxpayers and citizens of New York State.

The 2008 DEIS incorrectly defines West Valley TRU wastes as having a concentration of 100 nCi/g or greater. While the 1970 definition of TRU as 10 nCi/g or greater was raised to 100 nCi/g in the 1984 Amendments to the Nuclear Waste Policy Act, the 1980 WVPA defines TRU waste as 10 nCi/g or greater. This TRU concentration definition remains applicable to all Project TRU wastes. For example, the Drum Cell facility contained drums that assayed above this 10 nCi/g threshold. (This information was provided at a quarterly VIP meeting.) Were any of these drums shipped offsite as LLRW during the "interim actions"?

Two LLRW disposal options are offered for the wastes removed from the site: use of both DOE and commercial waste facilities, and an all-commercial waste facilities option. We favor a third option: an all federal disposal facility option, using the most physically suitable federal sites for long-term waste storage. For example, the Nevada Test Site is a more physically suitable long-term storage site than is the Waste Control Specialists facility (WCS) in Andrews, TX which, lying above the edge of the Ogallala aquifer, has stirred scientific controversy within the state regulator over its suitability for long-term waste disposal. Why should less physically optimal, private disposal sites, such as Harold Simmons' WCS facility, be sited for long-term waste disposal and profit from high upfront fees when, after a short 30 year period of waste disposal operations, these sites will become government responsibilities with the taxpayers assuming all the long-term waste management costs anyway? Political connections and large political campaign contributions appear to figure prominently in the answer to this question.

This DEIS perpetuates the misleading concept of "orphan waste"; these are wastes for which it is supposed that no waste storage facility is available. This "orphan waste" myth is being used as the main excuse in DOE's contention that it is not possible to implement the site-wide full cleanup option now. We don't believe this "orphan waste" claim is completely honest in regard to GTCC wastes. We say this because other sites with GTCC wastes have been closed.

For example, the silos at DOE's huge Fernald site contained large activities of "K-65 residues". These very hot, radium-bearing residues resulted from highly concentrated uranium ores (the Belgian Congo's Shinkolobwe pitchblende). They are in essence GTCC wastes. Some of these Manhattan Project/Cold War residues were also left in a silo at the NFSSA. A NAS/NRC

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of the discount assumptions to investigate the effect of discount rate on ALARA compliance conclusions. The cost-benefit analysis presented in Chapter 4, Section 4.2, of the Revised Draft EIS was conducted to support NRC's request for cost-benefit information according to the ALARA analysis guidelines. Section 4.2 has been revised in this Final EIS to present the results of sensitivity analyses using different discount rates. If cost-benefit considerations are part of the agency rationale for decisionmaking, this will be acknowledged and discussed in DOE's Record of Decision and NYSERDA's Findings Statement.

263-18 Contamination associated with the spent solvent tanks was detected in groundwater within the boundary of the NDA. Eight solvent tanks identified as the source of the original contamination were removed for offsite disposal. The best available information on the inventory and the location of the radionuclides in the NDA is summarized in Appendix C, Section C.2.7, of this EIS.

As discussed in Chapter 2, Section 2.4, of this EIS, if it is unclear whether a supplemental EIS is needed for Phase 2 decisionmaking, DOE would prepare a supplement analysis in accordance with 10 CFR 1021.314(c) and make this analysis and the resulting determination available to the public. A supplement analysis would discuss the circumstances that are pertinent to deciding whether to prepare a supplemental EIS.

Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until a final decision is made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate the Phase 2 decision for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

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expert panel, convened at the request of former Congressman John LaFalce, concluded in their 1995 report entitled "Long-Term Management of the K-65 Residues at the Niagara Falls Storage Site" that the K-65 residues are "indistinguishable in hazard from high-level waste". This panel also recommended that these high activity wastes be stabilized by vitrification or other equally durable means.

After vehement public opposition in Utah forced Envirocare (now Energy Solutions) to remove its Clive facility from DOE consideration as a disposal site for the GTCC "K-65 residues", DOE turned to Nevada for disposal of these wastes, which prompted the Nevada Attorney General to threaten a lawsuit to prevent use of the NTS. With the 2006 Fernald site closure deadline approaching and Fernald contractor Fluor Daniel anxious to pocket a \$288 million work acceleration bonus, in 2005 DOE contracted with WCS for "temporary storage" of the Fernald K-65 residues even though the WCS facility did not have a disposal license. Three years later, in May of 2008, the State of Texas granted WCS a disposal license for these GTCC, stabilized (cement-flyash) Fernald wastes.

The purpose of this example is not to condone DOE's site selection in this case but to point out that where there's the will there usually is a way, including a proper way to treat and relocate wastes in a timely fashion from physically unsuitable sites, among which West Valley is uniquely unsuitable, to the most physically suitable sites.

The Environmental Impact Process for West Valley has been tortuous. A 1987 scoping did not result in a Draft EIS until 1996. We suspect that 9 years is some kind of a record, not necessarily one to be proud of. Thirteen years later, that draft is resurrected and presumed to be a revision. We disagree. In the meantime, an ill-conceived segmentation of the process results in a new Draft EIS on Waste Management in March 2003, an FEIS in January 2004 and another record - 17 months until a Record of Decision is issued. We do not think that DOE and NYSERDA want to do anything more than persist in spending taxpayer money by studying the nuclear site and hope that in the meantime we will go away. We have not and we will not go away until the West Valley tanks and burial grounds and lagoons and strontium plume are exhumed and secured in monitored, retrievable above-ground storage.

If DOE is going to put people, future generations and the Lakes Erie and Ontario environments at risk, DOE is morally obliged to tell these involuntary risk bearers the purpose(s) for which they will be exposed to the hazards from West Valley. Lacking any forthcoming explanation or policy statement, the Coalition rightfully assumes that if DOE's purpose is to minimize only the short-term cost, but not the long-term risks and costs, of dealing with nuclear waste in order to promote nuclear energy, the taxpayers should be accorded the right to expect honesty and forthrightness from their decision makers.

The Coalition is submitting the bulk of its comments on September 8, 2009, but has advised both DOE and NYSERDA of our intention to 'revise and extend' our comments once the additional information requests previously made to DOE and NYSERDA are responded to under the terms of the 1987 Stipulation of Compromise Settlement. The Coalition expects full NEPA consideration of these additional comments, per our earlier advisements.

Steering Committee for the Coalition on West Valley Nuclear Wastes

Joanne Hameister, Chair
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East Aurora, NY 14052
jhameister@roadrunner.com

4/17/ 1979 Entry in Carol Mongerson's Journal regarding radiation leak.
"Civilization will die so slowly that no one generation will know what they have missed."

Attachment: Recent Excursionary Events

<p>263-29 <i>cont'd</i></p> <p>263-7 <i>cont'd</i></p> <p>263-30</p>	<p>263-20 DOE intends for the decision on Phase 2 actions to complete the required WVDP decommissioning activities at the site. Please see the response to Comment no. 263-11.</p> <p>263-21 The License Termination Rule requirements were developed through an NRC rule-making process that involved public participation. These standards will be applied to the NRC-regulated portion of WNYNSC. No determination has been made as to whether any of the areas will be managed with the waste in place.</p> <p>263-22 NYSERDA's 2008 draft SDA Quantitative Risk Assessment (QRA) (summarized as Appendix P of the Revised Draft EIS) did not formally address the issue of climate change. However, the QRA supporting meteorological data were derived from more than 80 years of historical records from three regional weather stations and 17 years of records from the West Valley meteorological tower. The QRA exceedance frequencies for severe storms explicitly quantified uncertainties that accounted for variability in localized storms throughout the region, as well as variations in weather patterns over nearly a century of historical data.</p> <p>The QRA models explicitly accounted for releases caused directly by severe storm damage at the site (e.g., from episodic high winds, tornadoes, extreme rainfall, etc.). The analyses also accounted for storm-related damage that could leave the site vulnerable to effects from additional, subsequent storms (e.g., during the time required to repair wind damage to the geomembranes).</p> <p>NYSERDA's 2009 updated SDA QRA (summarized as Appendix P of this Final EIS) contains a sensitivity study that examines the potential risk impacts from postulated dramatic climate changes during the 30-year SDA operating period. The sensitivity analyses account for increased frequencies of severe high winds, tornadoes, and precipitation. In particular, the analyses evaluate the effects from postulated conditions that would apply at the site if all meteorological parameters were assumed to persist at the 95th percentiles of their current uncertainty ranges throughout the next 30 years. In other words, based on the historical data, NYSERDA is 95 percent confident that the actual meteorological conditions at the site will be less severe than those used in the sensitivity analyses.</p> <p>The QRA team does not believe that the extreme meteorological conditions evaluated by these analyses will evolve over the next 30 years. However, even if these conditions were to apply throughout the 30-year study period beginning in 2010, the mean total SDA risk may increase by a factor of only approximately 2.3, compared to the baseline risk assessment. Approximately 75 percent of the</p>
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Attachment 1 – Recent Excursionary Events

Knowing that WVES does not have reliable – 24/7/365 – weather data collection equipment, NYSERDA has been negligent to depend on the DOE (WVES) for collection of onsite weather data (needed to evaluate climate change). NYSERDA has no weather equipment of its own. Storm-related utility power outages combined with blown breakers onsite and inadequate battery backup of the DOE contractor's rain gauge (only 1.5 hours according to an 8/19/09 WVES event timeline) resulted in the loss of rainfall data for over 15 hours during the most intense thunderstorms of Sunday afternoon and Sunday night into Monday morning. In response to a NYSERDA email request for precipitation data following the storms, a WVES staffer responded that the storm total was unknown due to site-wide power outage, and concluded that "(t)hese power outages are killing my met data records. No Storm water sampling this week." This is a frank admission that the DOE weather station is not only set up to miss the most important precipitation data of violent, heavy thunderstorms (when utility power is most likely to go out) because it lacks adequate power backup, but that this has happened often enough over the years to render this station's precipitation data virtually useless for the purpose of evaluating erosion impacts, let alone making a contribution to regional climate change studies.

The region-wide collection of complete weather datasets that capture all such excursionary events is essential to enable the NEPA-required, accurate prediction of long-term erosion impacts at this site. As the site owner from the site's inception, NYSERDA should have ensured that this site's weather data collection, if by powered devices, was not interrupted by power outages, i.e., that reliable backup power sources were in place to cover extended utility power outages. NYSERDA should have had its own equipment to collect the site's weather data. Why has NYSERDA depended on DOE for this important site data, knowing the collection failings?

According to the Albany, New York National Weather Service office, the universal (spring-powered) weighing rain gauge is optimal for climatology use. This is because of a vacuum that accounts for the effects of wind, allowing more of the actual rainfall to enter the gauge. These gauges are very precise in measuring rainfall intensity as the weighing mechanism at the bottom of the collector can be used to measure depth and time simultaneously. Recording is carried out much in the same way as the older versions of the tipping bucket gauges.

The 3-day August 8-10, 2009 thunderstorms event in the Cattaraugus Creek watershed produced excursionary rainfall intensities and totals for the local area. A new high flow record for Cattaraugus Creek was set; this was accompanied by a 5-foot flood surge that swept downstream through Gowanda. The 3-day event was preceded by approximately 2" of rainfall (exactly 1.81" onsite) on Wednesday 8/5/09 which left area soils well-wetted, if not saturated – a very important factor in what was to follow.

Doppler radar data collected by the National Weather Service Buffalo Office estimated that approximately 4" of rain fell in the West Valley area during the 8/9 Sunday 24 hour period.⁷ However, doppler rainfall estimates can be in error by as much as 50% or more.⁸

Fortunately, a conscientious NWS spotter located 20 miles to the west in Perrysburg in the western Cattaraugus Creek corridor where the greatest rainfall intensity occurred during this 3-day storm event, using an official NWS manual rain gauge, determined that 5.98^a" of rain fell in a single hour and a half period Sunday evening, and a total of 7.27" fell for the 24

⁷ initial conversation of Jim Rauch with Steve McLaughlin, NWS Buffalo

⁸ Jim Rauch conversation with David Zaff, NWS Buffalo, 9/3/09

263-31

potential risk increase is attributed to trench overflow (Scenario 3-4), which is particularly sensitive to moderate- to high-precipitation conditions. Groundwater release Scenario 1-2 accounts for essentially all of the remaining difference, due primarily to the increased probability that trench water levels would be at the weathered Lavery till/unweathered Lavery till interface. Even if these extreme conditions were to develop very rapidly during the next few years, the sensitivity study confirms that a release resulting in a dose of 100 millirem or more to an offsite receptor within a single year remains very unlikely during the next 30 years of SDA operation.

See Section 15.3 of the updated QRA report for details of the sensitivity analyses and results. The consequences from the total Phased Decisionmaking Alternative are discussed in Chapter 2, Section 2.6, of this EIS.

263-32

DOE and NYSERDA note the comment.

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DOE's responsibility at WNYNSC is a matter of law, including the West Valley Demonstration Project Act. Radioactive decay of the inventory in the SDA does not change who is responsible for the facility.

263-25

If the Phased Decisionmaking Alternative is selected, DOE will not proceed with any decommissioning actions until it has issued a Record of Decision and has received NRC's evaluation of the *Phase 1 Decommissioning Plan for the West Valley Demonstration Project* for the actions identified in the Record of Decision.

263-26

Appendix N of this EIS addresses the potential impacts from intentional destructive acts. As discussed in Sections N.2 and N.3, the analysis was developed to address a range of potential scenarios, while certain scenarios were excluded due to their low expected probability or consequences (compared to the scenarios analyzed). With respect to a commercial or military aircraft impact on the Main Plant Process Building or high-level radioactive waste tanks, the height and area of these facilities make the likelihood of a successful strike low. With respect to aircraft impacts at disposal areas, they also represent a small target. The distribution of radioactive material over a wide area underground and the amount of soil overburden that would mix with released radioactive material would, in essence, result in dilution of the concentration of airborne radioactive material. Other intentional destructive acts analyzed in Appendix N are expected to have larger impacts.

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hour period Sunday. The maximum intensity was estimated by NWS Buffalo to be approximately 5" per hour; this rate was based on the ground truth measurements by the spotter in Perrysburg which enabled NWS Buffalo to adjust its radar image storm total estimates upward by approximately +1 inch. Based on this adjustment, the West Valley nuclear site received between 6" and 7" of rainfall for the 3 days, Saturday through Monday.

The resulting onsite erosion damage was significant; some of these effects were personally witnessed during an 8/19/09 tour of site by representatives of the Coalition, the Seneca Nation of Indians, the WV Citizen Task Force, and the League of Women's Voters. The account (with images) of the storms and onsite damage that is posted at <http://nuclear.bfn.org/WV erosion 8-9.htm>, the Powerpoint presentation ID: 20235.ppt "WVDP Dams After August Storms Events, Photographs taken on August 10 and 11, 2009, provided to James Rauch September 4, 2009" by WVES, and the two sets of erosion photos provided by NYSERDA to Joanne Hameister on September 7, 2009 are incorporated into these comments by reference.

"Over the course of a couple of hours late Sunday evening, roughly between 1030PM and 1230AM, some of the highest short-term rainfall totals ever recorded in western New York occurred ... with as much as 5 inches per hour near Perrysburg and Silver Creek".⁹ NWS Buffalo Office meteorologist Tom Nizioł was reported in the Buffalo News to say that such intensity is more typical of hurricane areas in the southern states. This was clearly an excursionary rainfall event for this area, likely the result of climate change and indicative of worse events to come.

While the Perrysburg spotter's data are impressive, the uncorrected NWS Buffalo doppler radar storm total image indicates that the greatest rainfall total, and likely greatest intensities, for this 3-day event occurred in an area (the gray rectangle) centered on the intersection of Hopper and Hanover Roads near the Silver Creek Reservoir in Chautauqua Co., approximately 5 miles west of the Perrysburg spotter's location, where possibly just under 9" total fell (using nearby Perrysburg +1" ground truthing adjustment of the doppler estimate). See Figure 1, attached. The Perrysburg spotter's three-day total was 7.87 inches, and her August total was 13.08" (normal is ~4").

NWS Buffalo has posted two excellent summaries with photos and animations of the two exceptional Sunday storm events:
An overview - http://www.erh.noaa.gov/buf/srvwx/web_080809_Derecho/indexderecho_i.html
Flash flood - http://www.erh.noaa.gov/buf/srvwx/web_090810_Flashflood/indexflood.html

The flood event summary contains satellite photos that show the massively soil-laden runoff plumes from Cattaraugus Creek and Eighteen Mile Creek (and other smaller creeks) extending out into Lake Erie and eastward to Buffalo, down the Niagara River, and out into Lake Ontario. See Figure 2, attached. These photos demonstrate one example of the expected flow patterns that radioactive wastes from West Valley will take when the inevitable breaching of West Valley's waste facilities occurs. No opportunity for disagreement about computer simulations and predictions, just a real-world demonstration provided free of charge by "Mother Nature."

Although this was not the maximum total short-term event total possible for the Cattaraugus Creek watershed, the intensities of these thundercells were quite possibly new maxima for the local area and the associated runoff surges created a new record high flow for

⁹ NWS Buffalo, 8-31-09

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The SDA QRA explicitly accounts for the frequency and consequences from crashes of commercial, military, and general aviation aircraft. Refer to Section 5.6 of the QRA report for details of the aircraft crash analyses.

- 263-27 This EIS addresses the management of transuranic waste in the manner described in the *West Valley Demonstration Project Waste Management Environmental Impact Statement (Waste Management EIS)*. In addressing wastes and regulatory definitions, the *Waste Management EIS* explained the difference between the definitions and indicated that "[i]n the event wastes are disposed of offsite, the applicable definitions at the disposal site will be used."
- 263-28 The disposal options cited in the comment were selected to bound the impacts in the transportation analysis; they are not intended to evaluate the relative benefits of properly authorized or licensed disposal facilities. The disposal sites considered are DOE's Nevada Test Site and EnergySolutions in Clive, Utah. A portion of the low-level radioactive waste currently in the SDA is commercially generated waste and cannot be disposed of at a DOE site. Therefore, the option of all-Federal disposal cannot be considered.
- 263-29 While offsite authorized disposal capacity is available for most of the waste that would be generated from any of the EIS alternatives, it is consistent with existing practice that any waste generated that does not currently have offsite disposal capacity (referred to as orphan waste) would be safely and retrievably stored on site until such disposal capacity is available. The need to provide temporary storage of waste pending availability of offsite disposal would not prevent selection of any of the alternatives.
- 263-30 Chapter 4, Section 4.1.10, of this EIS presents analysis of the long-term human health impacts of the three decommissioning alternatives and the No Action Alternative. In addition, please see the Issue Summary for "Concerns about Potential Contamination of Water" for a discussion of the impacts of these alternatives on offsite and Great Lakes water users.
- 263-31 NYSERDA had generally not been conducting work at the SDA over the last 20 years that required (1) real-time meteorological data, or (2) data beyond what was already being collected by DOE for WVDP. As a general rule of thumb, if DOE was collecting data that NYSERDA could obtain and use, NYSERDA made use of the WVDP data to avoid the cost associated with duplicating data collection activities. Over the last 10 years or so, NYSERDA has been moving away from depending on WVDP for needed data, including meteorological data.

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Cattaraugus Creek. According to records of The Pennsylvania State Climatologist (a service of Penn State University): "On July 17, 1942, a great flood developed over the Smethport area, resulting in an estimated 34.50" of rain—in just one day, including 30.60" in only six hours, setting a world record. The official observing site, Smethport Highway Shed, reported only 13.08" for the entire month, because the flood consumed the gauge [sic] after 6.68" of rain. The total results from the substitution of the official estimated amount for the amount measured. In July 1947, portions of Erie suffered a twenty-inch one-day deluge, although the reporting site received substantially less precipitation. The most rainfall officially recorded in July at an official reporting site is 17.89" at Wild Creek Reservoir, Carbon County in 1945—also during that same decade."

[http://pasc.met.psu.edu/PA_Climatologist/fod/paex.html]

Had the one-day 20" 1947 Erie, Pa rainfall event (intensity maxima unknown) or the over 30" that fell in Smethport on July 17, 1942 (with prolonged intensities of at least 5" per hour) occurred in the West Valley vicinity last month, the onsite erosion resulting from more than three times the volume of runoff of our August event would have been much more severe. The reservoir berms, which experienced damage in the August 2009 event, may not have held, releasing a further massive surge to Buttermilk Creek; the knickpoint advances witnessed on Erdman Brook (multi-stepped lobe just a few yards from and oriented toward the foot of the SDA slope) and Franks Creek (advanced ~20 feet) would have been much greater; the slides on Buttermilk Creek would have further cut back the plateau; and so on.

In the 1950s the 30-year moving average annual precipitation for Buffalo was ~36"; it is now over 40". While part of this change may be attributed to the station's move from its downtown location to the airport location in 1943, Buffalo's climate definitely has become wetter. The latest DOE EIS for the West Valley site, unwisely approved for release by NYSERDA, does not consider or attempt to evaluate the accelerated erosion impacts resulting from such climate change. It is simply foolish to ignore climate change, especially its excursionary aspects. It is precisely these excursionary storm events that will hasten the inevitable breaching of the burial grounds and other facilities at West Valley. The 150 to 300 year worst-case predictions for breaching of the burial grounds may turn out to be conservative.

This severe erosion event should be a reality wake-up call to policymakers in Albany who for too long have ignored the unique physical unsuitability of the West Valley site for radioactive waste disposal (or "long-term management"). All attempts to control erosion in this young, unstable glacial till-filled valley will inevitably fail. That reality should prompt the State to move expeditiously to plan the complete excavation and removal of the site's radioactive materials in the near term, not ten or more years from now. Whether that plan is accomplished via federal stimulus money, a separate federal funding mechanism, a State bond act or a combination of these, a commitment to full excavation must be made without further delay.

263-32 Storms of the magnitude of the August 2009 storm in Cattaraugus County have been accounted for in the erosion analysis in Appendix F of this EIS. Please refer to the response to Comment no. 263-12 for a discussion of how climate change and changes in precipitation were addressed in this EIS.

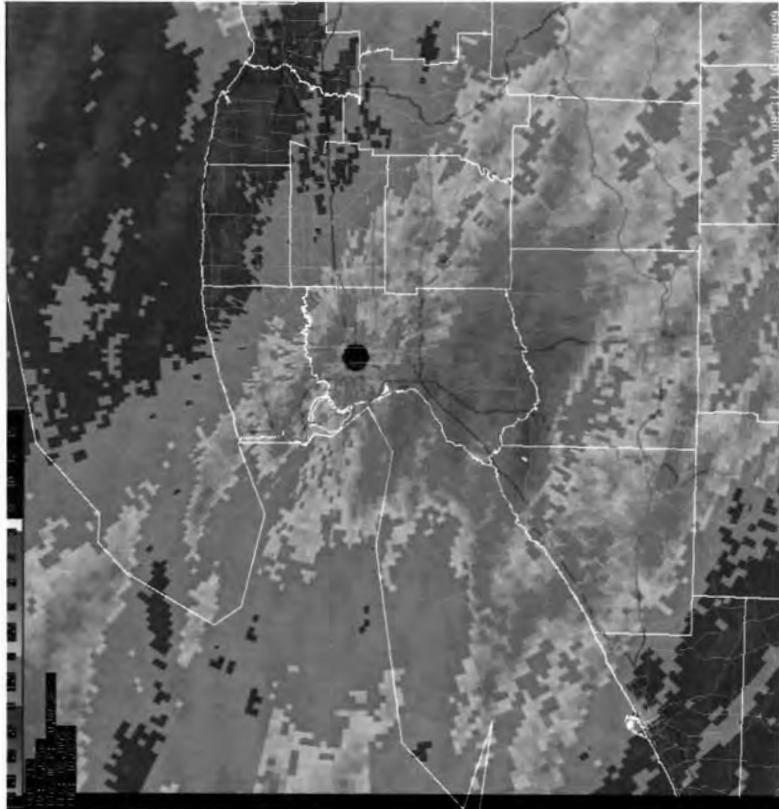
263-33 DOE and NYSERDA note the comment.

**263-32
cont'd**

263-33

**Commentor No. 263 (cont'd): Joanne Hameister, Chair,
The Coalition on West Valley Nuclear Wastes**

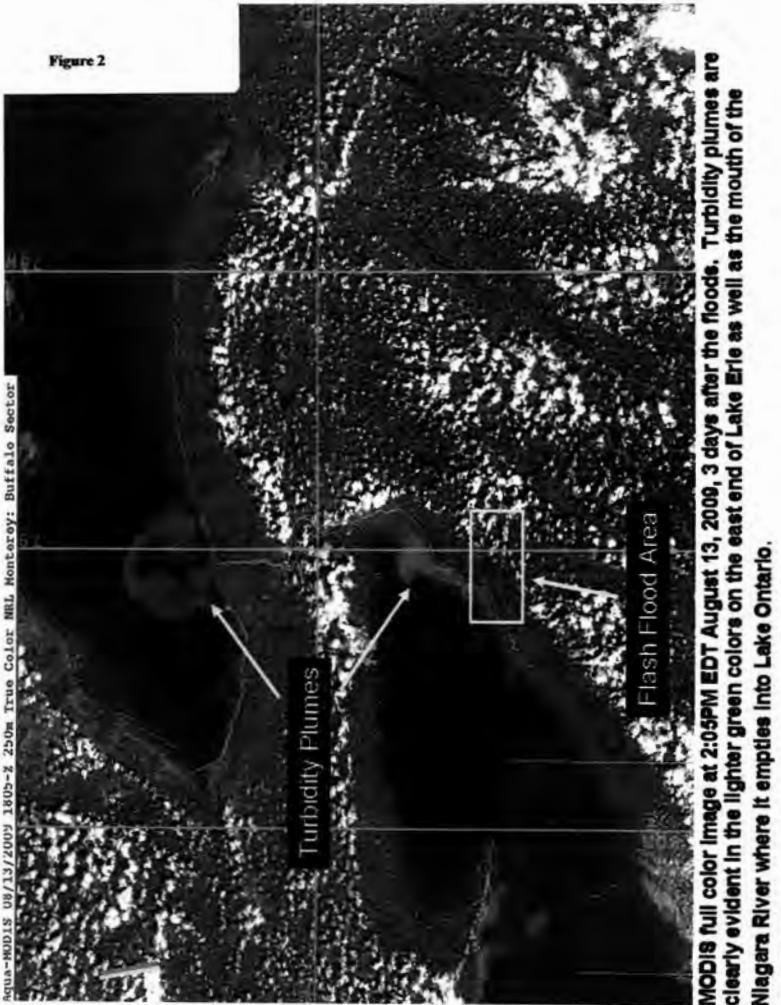
Figure 1
Uncorrected NWS Buffalo radar
from total image for 8/8/09 through
8/10/09



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The Coalition on West Valley Nuclear Wastes**

Figure 2



Middle River where it empties into Lake Ontario. Clearly evident in the higher green colors on the east end of Lake Erie as well as the mouth of the MDSN will occur before 2050 PM EDT August 19, 2000, 3 days after the floods. Tudyly flumes to mitigate river water where it empties into Lake Ontario.

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**Commentor No. 264: Marvin Resnikoff, Senior Associate,
Radioactive Waste Management Associates**



RADIOACTIVE WASTE MANAGEMENT ASSOCIATES

September 8, 2009

Ms. Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
US Department of Energy
P.O. Box 2368
Germantown, MD 20874

And

Mr. Paul J. Bembia
Project Director
West Valley Site Management Program
New York State Energy Research and Development Authority
Ashford Office Complex
9030 Route 219
West Valley, NY 14171

Dear Ms. Bohan and Mr. Bembia,

Please find enclosed comments on the "Revised Draft Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center (DOE/EIS-0226-D)" by Mina Hamilton, Research Associate at Radioactive Waste Management Associates.

Should you have any questions about this submittal, please contact Marvin Resnikoff, Senior Associate at Radioactive Waste Management Associates, at (212) 620-0526.

Sincerely yours,

A handwritten signature in black ink, appearing to read "P.P. Marvin Resnikoff".
Marvin Resnikoff
Senior Associate
Radioactive Waste Management Associates

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**Commentor No. 264 (cont'd): Marvin Resnikoff, Senior Associate,
Radioactive Waste Management Associates**

Comments on Revised Draft DOE/EIS-0226-D
RWMA

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Page 1

**Comments by Mina Hamilton, Research Associate
Radioactive Waste Management Associates**

**On the US Department of Energy Revised Draft EIS on the West Valley
Demonstration Project (DOE/EIS-0226-D-Revised).**

The proposed DOE action of dropping soil-cement-bentonite and steel sheet walls around the large plume of Strontium-90 contamination (henceforth referred to as Sr-90 plume) at the West Valley site is an inadequate response to the threat of the Sr-90 plume.

As stated by NYSERDA, the engineered barrier assumptions are "not adequately supported."¹

Furthermore, the full dimensions and nature of the Sr-90 plume are poorly delineated in the Draft EIS. What is known? That the plume is of significant extent, is moving via permeable geologic strata towards Buttermilk Creek and contains Sr-90 levels that exceed federal standards. The plume also contains various toxic and hazardous chemicals.

Finally, the DOE has made the assumption that the "sand and gravel unit" underneath the North Plateau – along which the Sr-90 is moving has 1) substantially shrunk in size since DOE's last assessment and 2) does not connect with any sand and gravel units underneath the South Plateau. Both of these assumptions are questionable.

Figure 3.3 (a copy of this Figure is attached) from a recent study by Synapse Energy Economics indicates that the Sr-90 plume has extensions that are moving not only in an eastwards direction towards Frank's and Buttermilk Creeks, but also in a northerly direction towards Quarry Creek and in a southeasterly direction towards Erdman Brook. Alarmingly, this Sr-90 plume may already have intersected Erdman Brook.

A more detailed analysis of these points follows:

1) The moving edge or boundaries of the Sr-90 plume is alarmingly close to various streams, including Erdman Creek, Quarry Creek and Frank Creek as well as Buttermilk Creek. The former three creeks are called an "integrated watershed" by NYSERDA.² They drain into Buttermilk Creek, which, in turn, drains to Cattaraugus Creek and Lake Erie.

¹ NYSERDA forward to DOE Revised Draft EIS
² DOE Revised Draft EIS, p xxi

- 264-1** The commentor appears to be reacting to statements made in the third paragraph of Appendix C, Section C.3.1.1.7, of this EIS, which discusses the installation of the sheet pile and soil-cement-bentonite slurry wall to facilitate the removal of the source area of the plume (see Section C.3.1.1.8). These structures are not intended to mitigate the nonsource area of the plume, which is addressed in Section C.3.1.13.
- 264-2** The understanding of the North Plateau Groundwater Plume has improved over the decade since it was first discovered in the early 1990s. This understanding is the result of integrating multiple geoprobe sampling campaigns, environmental monitoring data, investigations into the potential sources for the plume, and the use of hydrologic transport models to integrate the information and predict future plume movement.
- 264-1** The North Plateau Groundwater Plume is discussed in Chapter 3, Section 3.6.2.1, and Appendix C, Section C.2.13, of this EIS. The demonstration of the use of the one-dimensional model to reproduce the movement of the plume is presented in Appendix E, Section E.4.1.1. The long-term performance assessment evaluates the movement of longer-lived radionuclides estimated to have been released from the Main Plant Process Building (see Appendix C, Table C-14) and concludes that the peak dose from these radionuclides is less than the peak annual dose due to strontium-90. Monitoring of the plume has not indicated the presence of any toxic or hazardous chemical resulting from the original release from the Main Plant Process Building. Information on hazardous chemical monitoring is summarized in Chapter 3, Section 3.6.2.1.
- 264-2** *cont'd* Figure 3.3 of the *Synapse Report* provided by the commentor is not an accurate representation of the North Plateau Groundwater Plume. The figure identifies areas of Erdman Brook and Franks Creek south of the burial grounds as being part of the plume, which is incorrect. The figure also implies the plume is flowing directly towards Buttermilk Creek, which is also incorrect. Characterization of the plume as presented in this EIS is based on information included in annual reports on the plume (e.g., *Annual Summary for the North Plateau Strontium 90 Groundwater Plume October 1, 2006 – September 30, 2007*, included as a reference in Chapter 7). Chapter 3, Figure 3-24, depicts the extent of the plume based on groundwater concentrations. The annual reports on the plume also provide current information regarding the number and location of wells being used to characterize the plume.

**Commentor No. 264 (cont'd): Marvin Resnikoff, Senior Associate,
Radioactive Waste Management Associates**

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2) These seemingly small and sometimes intermittent creeks can have a significant amount of water depending upon the season. In spring when snows melt and during summer at periods of intense rain or thunderstorms, peak flows at the confluence of Quarry Creek and Franks Creek have been measured at 340 cubic feet per second.³

In the seminal study by Synapse Energy Economics, *The Real Costs of Cleaning up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site*, November 2008 (henceforth referred to as *Full Cost Accounting*) graphically shows the threat to Buttermilk Creek from the Sr-90 plume in Figure 3.3 on page 45. A copy of this Figure is attached.

The boundaries of this Sr-90 plume are also shown in Figure 3-24 in Chapter 3, page 67 and in Appendix C, p. C-45 of the DOE DEIS. Copies of these Figures are attached.

3) Figure 3.3 in the *Full Cost Accounting* study may give a false sense of security to readers who focus on the map and not the text. As stated in the text of *Full Cost Accounting*, on page 44, the "plume head is now approaching Erdman and Franks Creeks on the east side of the site and is reaching, if not having **already breached**, an area of more rapid groundwater flow in Franks Creek."⁴ [bold type added by the author] These creeks are shown in Figure 6.1 from the Executive Summary of *Full Cost Accounting*. A copy of this Figure is also attached.

4) Figure 3.3 in *Full Cost Accounting* shows that the Sr-90 plume is 400 yards from Buttermilk Creek. If the proximity of Franks Creek is taken in account, the plume is less than 100 yards or **300 feet from an intermittent stream** that moves off the West Valley site and drains into Buttermilk Creek. Already contaminated sediments have been found in both Franks Creek and Erdman Brook.⁵

5) According to Synapse Energy Economics, the delineation of the contaminated ground water plume in Figure 3.3 is based on drawings from the 2005 DEIS of the DOE, mainly Figures 3-17 (p3-41). According to Appendix C of the Revised DEIS the boundaries of the plume are based on data from 2002.⁶ This means that the Figures in the DEIS are based on out-of-date data. In the intervening 7 years, the contaminated plume has probably migrated significantly further than is represented by Figure 3.3 in the *Full Cost Accounting* report or by Figure 3-24 and C-13 from the DOE Draft EIS.

6) According to the DOE Revised DEIS, the extent of the "core area of the north plateau gross beta plume in sand and gravel unit" is based on various wells located inside the

³ DOE Revised Draft EIS, Chapter 3, page 51

⁴ As cited in Full Cost Accounting at WVDP page 44, 1996 Draft DEIS, Chapter 4, p.23

⁵ DOE Revised Draft EIS, Appendix C, p C-44

⁶ Ibid, Appendix C, p. C-44

264-3 The understanding of the sand and gravel unit on the North Plateau site has been refined in recent years as a result of additional geoprobe borings on the North Plateau, including borings within the area of the plume and modeling studies of North Plateau Groundwater Plume movement. The refined characterization is discussed in Chapter 3, Section 3.6.2.1, of this EIS.

It is noted that this refined geologic interpretation results in predictions of faster plume travel in this Final EIS in comparison to the Revised Draft EIS. The higher velocities are discussed in Appendix E, Section E.4.1.1.

**264-2
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**264-3
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**Commentor No. 264 (cont'd): Marvin Resnikoff, Senior Associate,
Radioactive Waste Management Associates**

Comments on Revised Draft DOE/EIS-0226-D
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current boundary or perimeter of the plume.⁷ (Underlining is the author's.) Figure 3-24 is attached to show the location of the wells. It is not clear from DOE's Revised DEIS whether there are any EXISTING well monitoring locations located **outside the current, presumed boundary** of the Sr-90 plume. Without wells outside the presumed boundary, it is, of course, impossible to state what, today, is the exact configuration, location and extent of the Sr-90 plume.

7) Unknown at this time, or at least not revealed in the Revised DEIS are answers to the following questions:

- a) How much further has the Sr-90 plume advanced since 2004?
- b) What is the current monitoring regime on the supposed boundaries of the Sr-90 plume? What is the location of the wells? And at what depth are samples being taken? And at what frequency?⁸
- c) What other radionuclides are present in the plume, such as Cs-137? (Appendix C of the revised DEIS states that cesium-137 is "expected" to have remained underneath the Main Plant Process Building.⁹ And although it is true the Cs-137 can be expected to bond with clay in this area, it also can be expected to move in the sandy stratum also present in the plume area.)

8) In the DOE Revised DEIS an assumption is made that the geology beneath the North and South Plateaus is radically different, in that, supposedly, there are no sandy strata in the South Plateau and DOE alleges, no connection between sandy strata in the South Plateau and the North Plateau. This assumption ignores the fact that a large body of sandy strata was located in trenches 13 and 14 in the State-licensed burial ground back in 1977.

This sandy strata, containing "coarse to very coarse sand"¹⁰ was 2 feet in thickness and extended for the length of 65 feet.¹¹ Clearly, this was a body of permeable material along which contaminants could move rapidly. (At the time of the discovery of this sandy stratum, burial was halted in the State-licensed burial ground. After the commercial operator, Nuclear Fuel Services, stated the sandy strata was limited in extent, burial operations were resumed, though many critics thought the NFS assessment was politically contaminated by the financial needs of the company.) The subsequent history of the trenches, which included significant accumulations of water in the trenches, was not reassuring regarding the stability or non-migration of the buried wastes.

⁷ DOE Draft EIS, Chapter 3, p 67, Figure 3-24

⁸ DOE Draft EIS, Chapter 3, p. 67 details that, as of January 2005, the number of wells sampled monthly for Sr-90 was reduced from 74 to 12 wells.

⁹ DOE Draft EIS, Appendix C, p C-44

¹⁰ US EPA, Region 11, Summary Report on the Low-Level Radioactive Waste Burial Site, West Valley, NY (1963-1975), EPA-902/4-77-010, p.50

¹¹ US EPA, Region 11, Summary Report on the Low-Level Radioactive Waste Burial Site, West Valley, NY (1963-1975), EPA-902/4-77-010, p.23

264-3
cont'd

264-2
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264-3
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**Commentor No. 264 (cont'd): Marvin Resnikoff, Senior Associate,
Radioactive Waste Management Associates**

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Table 3-3, Stratigraphy of the West Valley Demonstration Project Premises and the State-licensed Disposal Area on page 15 of Chapter 3 should be revised to represent the presence of sandy strata in the State-licensed burial ground.

As this chart is currently written the only reference to sand underneath the South Plateau is that "till-sand...May be present in one well near northeast corner of the NDA."¹²

9)DOE also announces that data has been revised to show that data previously showing the extensive sandy strata underneath the North Plateau has been re-analyzed to show that these sandy strata are less extensive than previously believed. We find this re-analysis highly suspect.

Conclusion: The location and extent and migration rates of the Sr-90 plume, even though poorly and inadequately delineated in the Revised DOE DEIS, show a significant and dangerous contamination problem which shows no sign of stabilizing or lessening. Complete exhumation of the toxic and dangerous wastes and contaminated soils is required.

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¹² DOE Revised DEIS, Chapter 3, p 15.

**Commentor No. 264 (cont'd): Marvin Resnikoff, Senior Associate,
Radioactive Waste Management Associates**

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Figures

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**Commentor No. 264 (cont'd): Marvin Resnikoff, Senior Associate,
Radioactive Waste Management Associates**

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Figure 3.3 The Groundwater Plume Contaminated with Strontium-90 (indicated in green) is Migrating Towards Buttermilk Creek (indicated in blue)¹³

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¹³ Full Cost Accounting at WVDP, p 45

**Commentor No. 264 (cont'd): Marvin Resnikoff, Senior Associate,
Radioactive Waste Management Associates**

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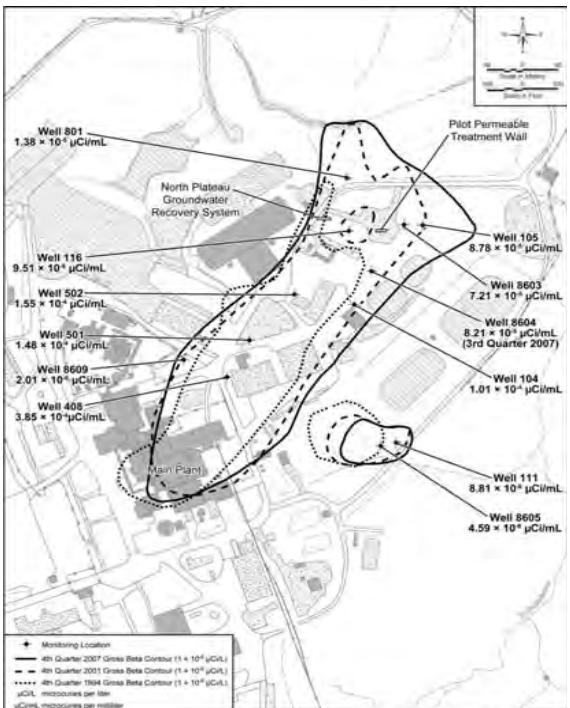


Figure 3-24 Extent of Core Area of North Plateau Gross Beta Plume in Sand and Gravel Unit¹⁴

¹⁴ DOE Draft EIS, Chapter 3, p 67

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**Commentor No. 264 (cont'd): Marvin Resnikoff, Senior Associate,
Radioactive Waste Management Associates**

Comments on Revised Draft DOE/EIS-0226-D
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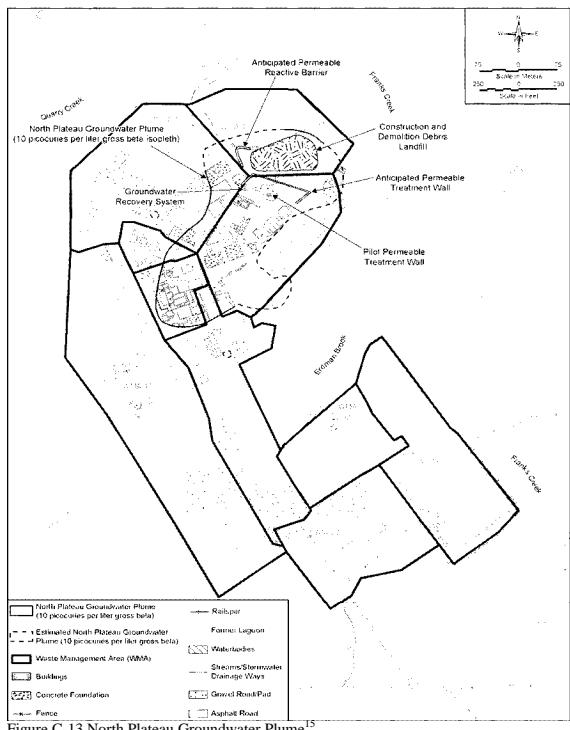


Figure C-13 North Plateau Groundwater Plume¹⁵

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¹⁵ DOE Draft EIS, Appendix C, p 45

**Commentor No. 264 (cont'd): Marvin Resnikoff, Senior Associate,
Radioactive Waste Management Associates**

Comments on Revised Draft DOE/EIS-0226-D
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Figure 6.1 West Valley Site Relative to the Local Watershed. The Local Creeks Indicated and Labeled in Blue. Both Franks and Erdman Creeks Penetrate the West Valley Waste Management Areas (in black)¹⁶

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¹⁶ Full Cost Accounting at WVDP, p 90

**Commentor No. 265: James Rauch,
FACTS, Inc.**

WestValleyEIS@wv.doe.gov

From: J Rauch [mailto:jm_rauch@yahoo.com]
Sent: Tuesday, September 08, 2009 4:45 PM
To: WestvalleyEIS
Cc: James Rauch
Subject: Comments on DOE/EIS-0226-D [Revised]

Dear Ms. Bohan:

Attached are F. A. C. T. S. (For A Clean Tonawanda Site) Inc.'s comments on DOE/EIS-0226-D [Revised].

James Rauch
Secy
FACTS, Inc.

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**Commentor No. 265 (cont'd): James Rauch,
FACTS, Inc.**

Comments on the 2008 West Valley DEIS (DOE/EIS-0226-D [Revised])

by James Rauch
F. A. C. T. S. (For A Clean Tonawanda Site) Inc.
September 8, 2009

Background

The National Environmental Policy Act of 1969 (NEPA) was enacted by the 91st Congress to bring a thorough scientific evaluation of the environmental impacts of federal actions into the decision process before the implementation phase of all major federal activities. The vehicle for this analysis is the Environmental Impact Statement (EIS).

The federal Energy Department's (DOE) record in satisfying the intent and substantive requirements of NEPA at its large nuclear sites has been quite poor, especially in recent times when the full scope and huge costs of properly managing legacy wastes from the Manhattan Project and Cold War periods has been realized and has met with resistance both in-house and in Congress. DOE's poor legacy waste management practices received national media attention in a USA Today series:
<http://www.usatoday.com/news/poison/cover.htm>, incorporated by reference into these comments.

In the WNY area, DOE's performance has been abysmal. In the 1990s, Tonawanda's Manhattan Project site (a FUSRAP site [Formerly Utilized Sites Remedial Action Program]), where the refining of uranium used in the Hiroshima bomb took place) was the subject of a \$6 million DOE environmental review study that identified a soils cleanup level for uranium of 60 pCi/g. The NRC cleanup level for an area subject to intensive human use, as is the case at Tonawanda, is 10 pCi/g. Before the soils were addressed, several very costly attempts were unwisely made to decontaminate the waste-saturated uranium refinery buildings (tens of millions of dollars), which had been improperly transferred in the 1950s from federal control to private industry (now Praxair). These attempts all failed; the buildings were subsequently demolished and removed. As at the NFSS, Congress transferred cleanup responsibility to the Army Corps in 1998 and instructed the Corps to ignore the established NRC radioactive waste regulatory regime, and to remediate the properties under CERCLA ("Superfund"). This resulted in the Army Corps' selection of grossly sub-standard cleanup criteria for the refinery's contaminated soils: 600 pCi/g surface soils, 3000 pCi/g subsurface soils.

The requirements of NEPA were trashed by DOE in the mid-1980s when the highly-radioactive, radium-bearing wastes (K-65 residues) stored in a Manhattan Project silo at the DOE-owned Niagara Falls Storage Site (NFSS) in the Towns of Lewiston and Porter (another FUSRAP site, near Niagara Falls, NY) were slurried into nearby wartime building basements and, together with large amounts of other radioactive wastes that were scraped up from the various contamination sites and drainages, became the contents of a large landfill (or tumulus) called the "Interim Waste Containment Structure" (IWCS). DOE's after-the-fact EIS in 1986 was to decide whether or not to put a final clay cap on

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**Commentor No. 265 (cont'd): James Rauch,
FACTS, Inc.**

the "IWCS," a tumulus that did not, and does not, satisfy the applicable Nuclear Regulatory Commission (NRC) requirements (10 CFR 40 Appendix A) for such radioactive wastes. That question remains open, and in the hands of the Army Corps of Engineers since 1998, because Congress continues to not want to spend the funds necessary to properly deal with this and other sites' wastes. And so, 23 years after DOE trashed the NEPA process at NFSS, 2000 Curies of Ra-226, an amount sufficient to contaminate a volume of water the size of Lake Erie to levels above the federal drinking water standard, remain in a sub-standard landfill. Recent reports indicate that the unlined landfill is likely to be leaking. Short-term savings were realized but the proper long-term management of these deadly wastes, which must be achieved to avoid large environmental consequences, was rendered much more difficult and much more costly (see the 1995 NAS report "Safety of the High-Level Uranium Ore Residues at the Niagara Falls Storage Site, Lewiston, New York" which also stigmatized these residues as "indistinguishable from high-level waste," incorporated by reference into these comments).

At West Valley, the federal Energy Department and an irresponsible NYS site owner, NYSERDA (a public authority corporation of New York State), are proceeding down the same irrational path already tried at the Niagara Falls Storage Site, employing "onsite interim actions" in a shortsighted, cost-saving attempt to manage huge quantities of long-lived, dangerous radioactive wastes *in situ* at an unsuitable physical location, this time at a uniquely unsuitable location on a rapidly eroding small plateau within a steep, unconsolidated glacial till-filled valley that drains via Cattaraugus Creek into Lake Erie, an irrepleaceable freshwater resource.

New York State and federal DOE officials have backed indefinite onsite management of the wastes, not because it will save money and avoid environmental disaster in the long term, but simply because it is less costly in current budget years. Public expectations that the "Change We Can Believe In" Obama Administration would bring rigorous, scientific decision-making to DOE activities have not been realized. Apparently, the Obama Administration has no problem spending trillions of public dollars to bail out the ersatz investment vehicles of corrupt investment bankers, but prefers to sit by and watch as the unraveling of physically unsuitable major nuclear waste sites, such as West Valley, contaminates precious drinking water supplies. Sadly, it appears that a calculation has been made both in Albany and Washington that no immediate political harm will result if the failing federal nuclear waste management approach and practices are simply continued.

And so, in this latest DEIS, the DOE and site owner NYSERDA want the long-overdue, 1987 court-ordered, site-wide NEPA decision at West Valley, NY to be delayed thirty more years, preferring instead a NEPA-illegitimate (i.e. non-sitewide) "phased decision making" proposal that lacks any provision for further site-wide NEPA review but implements onsite waste management "interim actions," including the already identified slurry walls and plastic covers over the burial grounds. The proposed NEPA non-decision which addresses only a fraction of the site's wastes is simply a prologue to a future CERCLA ("Superfund") morass, following the established pattern of Tonawanda and the NFSS, and represents a colossal failure of State leadership that even surpasses the original siting blunder of a naive Nelson Rockefeller. Such a NEPA non-decision will

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This EIS evaluates the environmental impacts of a range of alternatives for the decommissioning and/or long-term stewardship of WNYNSC. It is assumed that the comment refers to the Preferred Alternative, the Phased Decisionmaking Alternative. If this alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements.

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed the Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the DOE Record of Decision if the alternative were selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.

**Commentor No. 265 (cont'd): James Rauch,
FACTS, Inc.**

again result in State and federal governments throwing away more public money, this time in the billions, trying to maintain waste isolation at this untenable location. As already noted, the DOE employed the same NEPA-evasion strategy at the Niagara Falls Storage Site in the 1980s, squandering tens of millions on a faulty "interim" tumultus that otherwise would never have been sited; see a detailed description of the NFSS story at <http://nuclear.bfn.org/nfss.htm>, incorporated by reference.

The Spitzer administration did not offer to join the Coalition on West Valley Nuclear Wastes in its unsuccessful 2005 complaint against DOE for a lawful NEPA site-wide cleanup process and decision at West Valley. Instead the State joined DOE's "Core Team" and secretly planned this NEPA-illegitimate "interim end state" proposal. The recent federal appeals court decision denying the Coalition's claim means that this DEIS's preferred non-decision alternative may proceed and the Coalition's 1987 court-ordered, NEPA site-wide closure process is likely terminated, an unconscionable situation for long-time public interest stakeholders.

A NYSERDA complaint against DOE (http://nuclear.bfn.org/NYSERDA_COMPLAINT_FINAL.pdf, incorporated by reference) brought in 2006 was "tentatively" concluded in June, 2009; the terms of the proposed settlement have been withheld from the public, presumably until after the close of this DEIS's comment period. Two days ago, NYSERDA's project director revealed that transfer of control over "a portion of the [WVDPA] Project Premises on the north and east sides of the SDA to NYSERDA" is being negotiated with DOE prior to the decommissioning of the Project in order to perform knickpoint erosion control work on Erdman Brook, to establish "an erosion control buffer area for the SDA ... and to meet a requirement of NYSERDA's 6 NYCRR Part 380 Permit for the SDA." He further noted that "DOE and NYSERDA are working to develop and document a mutually agreeable cost split for this work." It seems fairly obvious that early implementation of some details of the onsite waste management preference has been necessitated by the occurrence of the recent excursionary August storms event (see <http://nuclear.bfn.org/WV erosion 8-09.htm>, incorporated by reference into these comments).

Excavation and removal of the West Valley site's radioactive wastes, including the two burial grounds, the tanks, and the lagoons, is both the safest and the least costly long-term management option for New Yorkers, according to a State-sponsored study by independent experts entitled "The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste" (shortened to "Full Cost Accounting Study" or FCAS), incorporated by reference into these comments. This physically most unsuitable waste storage location would never have been selected under the subsequent federal radioactive waste facility siting regulations 10 CFR Part 61. All attempts to control erosion will inevitably fail in this steep glacial till valley; see the following photos and descriptions: <http://nuclear.bfn.org/WVslump-fr.htm> , the Powerpoint presentation ID: 20235.ppt "WVDP Dams After August Storms Events, Photographs taken on August 10 and 11, 2009, provided to James Rauch September 4, 2009" by WVES, and the two sets of NYSERDA August 2009 photos: <http://nuclear.bfn.org/WV erosion 8-09.htm#NYSERDA>, all incorporated by reference

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<i>cont'd</i></p> <p>265-2</p> <p>265-3</p> <p>265-4</p> <p>265-5</p> | <p>265-2 DOE and NYSERDA believe that this EIS meets the requirements of NEPA and SEQR. While the Phased Decisionmaking Alternative would temporarily defer a final decision on the disposition of the Waste Tank Farm, the NDA, and the Construction and Demolition Debris Landfill, DOE believes that the impacts of this deferred decision are adequately analyzed within this current EIS. The environmental impacts of implementing Phase 1 of the Phased Decisionmaking Alternative are described for each resource area in Chapter 4 of this EIS. If this alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. For each resource area, Chapter 4 discusses the impacts that would occur if either removal or close-in-place is selected for Phase 2. The chapter also discusses which alternative(s) bound the impacts in the event that continued active management is selected for the SDA. The short-term impacts of a Phase 2 decision that involves continued active management of the SDA are bounded by either the removal or close-in-place impacts. The post-decommissioning impacts of a continued active management decision for the SDA, which include staffing, occupational exposure, and waste generation related to SDA monitoring and maintenance, as well as long-term impacts on public health and safety, would be similar to the no action impacts for the SDA.</p> <p>265-3 The land transfer was primarily planned at the direction of NYSDEC to NYSERDA to maintain a buffer control area around the SDA.</p> <p>265-4 DOE and NYSERDA acknowledge the commentator's opinion on the unsuitability of WNYNSC for long-term storage or disposal of wastes and support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Conclusions of the Synapse Report" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.</p> <p>265-5 DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the</p> |
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**Commentor No. 265 (cont'd): James Rauch,
FACTS, Inc.**

into these comments. The ensuing discharge of wastes will contaminate the downstream water supplies of Cattaraugus Creek, Lake Erie, the Niagara River and Lake Ontario.

A safe, fiscally sound outcome at the West Valley site requires that New York State government take the following actions:

NYSERDA should not settle, but instead should vigorously pursue its lawsuit against the DOE. NYS Attorney General Cuomo should take all necessary legal actions to enforce completion of the legitimate site-wide NEPA process that began in 1987 and culminated in the release of the 1996 site-wide DEIS, and to assure compliance with the letter of the 1980 West Valley Demonstration Project Act including:

- 1) injunctions to stop illegal onsite waste management "interim actions" being conducted by DOE before the legitimate NEPA site-wide review process ROD is issued; such ROD should have been issued over ten years ago;
- 2) a declaration that DOE is responsible for exhumation of the high-level waste tanks, the NRC-licensed Disposal Area (NDA) and the federally-sourced materials in the SDA, as well as removal of the process buildings and soils; and
- 3) a declaration that NRC must not apply the generic-EIS-supported 10 CFR Part 20 Subpart E (the "LTR") to evaluate DOE's decommissioning plan for the WVDP Premises, but instead must perform a site-specific EIS to fulfill its main WVDP task: prescribing site-specific cleanup criteria (see <http://nuclear.bfn.org/WVRA-eval.htm#LTR>, incorporated by reference).

But first, the administration in Albany needs to end the State's conflict of interest at the site (see <http://nuclear.bfn.org/WVRA-eval.htm#SDA>, incorporated by reference) by declaring that the State Disposal Area (SDA) burial ground must be exhumed, even if that means a substantial share of this cost is borne by New Yorkers and bonding of the project is required.

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potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling are discussed in Appendix F. In addition to the previously cited Issue Summary, please see "Concerns about Potential Contamination of Water" and "Questions about Long-term Erosion Modeling" for further discussion of these issues and DOE's and NYSERDA's responses.

265-6 DOE and NYSERDA note the comment.

**Commentor No. 266: Brian P. Smith,
Citizens Campaign for the Environment**

WestValleyEIS@wv.doe.gov

From: Brian Smith [mailto:bsmith@citizencampaign.org]
Sent: Tuesday, September 08, 2009 4:11 PM
To: WestValleyEIS
Subject: West Valley Comments

Ms. Bohan,

Please see comments from Citizens Campaign for the Environment attached.

Sincerely,

Brian P. Smith
WNY Program Director
Citizens Campaign for the Environment
735 Delaware Rd, Box 140
Buffalo, NY 14223
(716) 831-3206
bsmith@citizencampaign.org
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**Commentor No. 266 (cont'd): Brian P. Smith,
Citizens Campaign for the Environment**



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Empowering Communities. Advocating Solutions.

Attn: Catherine Bohan
 EIS Document Manager
 West Valley Demonstration Project, U.S. Department of Energy
 P.O. Box 2368
 Germantown, MD 20874

RE: Draft Decommissioning and/or Long Term Stewardship EIS at West Valley Demonstration Project and Western New York Nuclear Service Center
Comments by Citizens Campaign for the Environment

Dear Ms. Bohan:

CCE is an 80,000 member, non-profit, non-partisan advocacy organization working to protect public health and the natural environment in NYS and Connecticut. CCE appreciates the opportunity to comment, and thanks the Department of Energy for extending the public comment period for an additional 90 days so that the public could have more time to weigh in on this important issue.

The West Valley nuclear waste site is located in the Town of Ashford, about 30 miles south of Buffalo. The site contains vast amounts of nuclear and hazardous waste, which threaten public health, our environment, economy, and quality of life. The safest, most responsible, and cost effective solution presented in the DEIS is the "Sitewide Removal" option, which will comprehensively clean up and excavate the entire waste site as soon as possible, leaving a safer site within 64 years. CCE strongly opposes the U.S. Department of Energy (DOE) and New York State Energy and Research Development Authority (NYSERDA) "preferred alternative" of phased decision-making, which will clean up only about 1% of the radioactivity now, and wait up to thirty years to decide what to do with the remaining 99% of dangerous radioactivity on site.

Erosion is a powerful and fast moving force at the West Valley site, as it sits on a geologically young, and continuously changing landscape. Scientists estimate that erosion could cause the disposal areas to be breached in less than 1000 years, and as quickly as 150 years. Flooding in West Valley in August of 2009 has demonstrated how quickly erosion can impact the landscape, with substantial erosion occurring in just one day. The DEIS fails to recognize that global climate change will lead to more frequent and intense rain events, further hastening erosion at West Valley.

Leaving nuclear waste buried on site is dangerous, threatens our Great Lakes, and passes on even greater costs to future generations.

266-1 DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative and opposition to the Preferred Alternative – Phased Decisionmaking. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

266-1

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

266-2

266-2 DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These

**Commentor No. 266 (cont'd): Brian P. Smith,
Citizens Campaign for the Environment**

Leaving nuclear waste on site threatens the Great Lakes

The Great Lakes contain 20% of the world's fresh water, over 90% of the U.S. supply, and provide drinking water to over 40 million people. They hold the key to our economy, recreational opportunities, and irreplaceable family experiences. The Great Lakes generate more than \$50 billion in economic activity to the regional economy annually from fishing, wildlife viewing, and tourism.

The West Valley nuclear waste site sits in the Great Lakes watershed, with tributaries running adjacent to the site. A breach at the site would be a catastrophic failure, leaking high concentrations of radioactive waste into the watershed and then quickly into Lake Erie. Currently, there is a large plume of contaminated groundwater moving towards Buttermilk Creek adjacent to the site. Top scientists agree that the lakes are currently on the tipping point of ecological collapse, and further toxic contamination to the lakes would be extremely detrimental to the ecosystem.

The New York State Ocean and Great Lakes Conservation Council - composed of several state agencies - is working to implement ecosystem-based management (EBM) to protect our coastal resources in New York State. EBM is a cutting edge program that looks at managing our coastal resources from a holistic approach. A recent Council report highlighted that a critical component of protecting our treasured coastal resources is to virtually eliminate persistent toxic substances from entering the lakes. Leaving waste on site and risking a breach is not consistent with the goals of the EBM plan. In addition, leaving waste on site contradicts other efforts to protect and restore the Great Lakes. Both the Great Lakes Water Quality Agreement and Great Lakes Regional Collaboration Strategy stress the need to eliminate the introduction of toxic substances into the Great Lakes as a critical component of protecting and restoring our Great Lakes.

Leaving radioactive waste on site is expensive

The Sitewide Removal option provides the most cost-effective approach over the long term, according to a recent study. An independent, state-funded study, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (FCA study)*, revealed leaving buried waste at the site is both high risk and expensive while a waste excavation cleanup presents the least risk to a large population and the lowest cost. Over 1000 years, waste excavation costs \$9.9 billion while onsite buried waste costs \$13 billion, and \$27 billion if a catastrophic release occurred.

Protection and restoration of the Great Lakes is paramount to our region's economy. A recent report by the Brookings Institution indicated that an investment in Great Lakes restoration would yield \$80-100 billion in short and long term economic gains, including \$1.1 billion to the City of Buffalo alone. Radioactive contamination of the lakes from a breach at West Valley would not only cost billions of dollars to clean up, but would also thwart economic recovery and development from ongoing and future restoration efforts.

266-3

projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. The storm cited in the comment is within the range of weather conditions used in developing the erosion model for the site. In addition to the previously cited Issue Summary, please also see the Issue Summaries for "Concerns about Potential Contamination of Water" and "Questions about Long-term Erosion Modeling" for further discussion of these issues and DOE's and NYSERDA's responses.

The analysis in this EIS recognizes the potential for climate change to influence the long-term consequences of waste management. Climate changes, whether natural or influenced by human actions, could change the nature and amount of precipitation. Appendix H, Section H.3.1, of both the Revised Draft EIS and the Final EIS discusses the sensitivity of groundwater flow to changes in annual precipitation. The revised erosion prediction used for the unmitigated erosion dose analysis is based on the assumption that storms could occur more frequently than indicated by current records. This prediction includes the effects of storms of greater severity than the one that occurred in the region in August 2009. The use of this higher erosion rate associated with an elevated precipitation rate is discussed in Appendix H, Section H.2.2.1. Chapter 4, Section 4.3.5, has been revised to include a discussion of how the uncertainties about future climate change are addressed in this EIS.

266-3

The purpose this EIS is to evaluate the environmental impacts of the various alternatives, including impacts on water resources. These impacts are presented in Chapter 4 of this EIS. As noted in the response to Comment no. 266-2, please see the Issue Summary for "Concerns about Potential Contamination of Water" for further discussion of this issue and DOE's and NYSERDA's response.

266-4

DOE and NYSERDA have considered the referenced report in the preparation of the EIS. In addition to the previously cited Issue Summaries, please see the "Conclusions of the Synapse Report" Issue Summary in Section 2 of this CRD for further discussion of the report's issues and DOE's and NYSERDA's response.

**Commentor No. 266 (cont'd): Brian P. Smith,
Citizens Campaign for the Environment**

President Obama is supporting unprecedeted funding for Great Lakes protection and restoration in the \$475 million Great Lakes Restoration Initiative in his annual budget proposal, which is currently being considered by Congress. Leaving waste on site, and risking catastrophic contamination of the Great Lakes, works against this effort and the billions of dollars that have been spent and that will be spent at the local, state, and federal level on Great Lakes protection and restoration.

Leaving waste onsite is dangerous

According to the FCA study, there is no safe level of exposure to radioactive waste – every exposure increases the risk of serious adverse health impacts, including cancer, reproductive disorders, and neurological effects. We must not pass along this burden to future generations. It is irresponsible, immoral, and costly.

Every day that we wait, the risk of human and environmental exposure increases, and the solutions become more costly. CCE strongly supports the safest, most cost effective solution to the West Valley nuclear waste site- the Sitewide Removal option, which will ensure comprehensive cleanup and excavation of the entire site as soon as possible.

Thank you for your thoughtful consideration of our comments.

Sincerely,

Brian P. Smith
WNY Program Director
Citizens Campaign for the Environment

266-5

266-5

266-1
cont'd

The commentor is correct that scientific studies have not clearly demonstrated the existence of a threshold below which exposure to ionizing radiation conveys no risk of health effects. By assuming that the risk of health effects at low doses is proportional to the exposure (i.e., doubling the exposure also doubles the risk), regulatory agencies such as EPA and NRC have adopted a prudent approach to establishing standards to protect human health and the environment from the effects of ionizing radiation. EPA typically regulates radiation exposure based on a lifetime cancer risk of 1×10^{-6} to 1×10^{-4} (1 in a million to 1 in 10,000), consistent with its approach for chemical carcinogens. NRC's license termination dose criterion of 25 millirem per year total effective dose equivalent is consistent with the recommendations of advisory bodies such as the International Commission on Radiological Protection to limit exposures to members of the public from individual sources of radiation. Estimated exposures from the alternatives considered in this EIS are presented throughout this document in a manner that allows a comparison with these levels of protection.

**Commentor No. 267: Adrian Stevens,
Seneca Nation of Indians**

WestValleyEIS@wv.doe.gov

From: Anthony Memmo [mailto:anthony.memmo@sni.org]
Sent: Tuesday, September 08, 2009 10:52 AM
To: WestValleyEIS
Cc: Adrian Stevens
Subject: Comments

Hello Cathy, here is a statement from The Seneca Nation of Indians for the extended comment period, Tony.

Response side of this page intentionally left blank.

**Commentor No. 267 (cont'd): Adrian Stevens,
Seneca Nation of Indians**



SENECA NATION OF INDIANS
Environmental Protection Department



84 Iroquois Drive, IRVING, NY 14081 ▶ PH: 716-532-2546 ▶ FAX: 716-532-8322

Assistant Secretary Ines Triay
Department of Energy

Frank Murray
President, New York Energy Research and Development Authority

In the matter of the extended comment period for the Draft Environmental Impact Statement for the Decommissioning and / or Long Term Stewardship at the West Valley Demonstration Project, the Seneca Nation of Indians would like to enter a comment into the record at this time.

The Seneca Nation of Indians believes the site to be unsuitable for the long term storage of the types of materials present.

The Seneca Nation of Indians stands by the Council Resolution read into record by Councilor Todd Gates at the March 31st, 2009 public comment meeting held in the William Seneca Building on the Cattaraugus Territory. That Resolution advocates for a Site Wide Removal.

Thank You

Adrian Stevens
Director, Environmental Protection Department
Seneca Nation of Indians

267-1

267-1

DOE and NYSERDA acknowledge the commentor's opinion that the WNYNSC site is unsuitable for long-term storage or disposal of wastes and support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response. The resolution read into the record is included as Comment nos. 601-1 through 601-8 in this CRD. Please refer to the responses to that comment document.

***Commentor No. 268: Chris Collins, County Executive,
County of Erie***



COUNTY OF ERIE

CHRIS COLLINS
COUNTY EXECUTIVE

September 9, 2009

Catherine Bohan, EIS Document Manager
West Valley Demonstration Project
US Department of Energy
P.O. Box 2368
Germantown, MD 20874

Dear Ms Bohan:

Erie County, encompassing the City of Buffalo and 43 surrounding Cities, Towns and Villages, is the second largest metropolitan area in New York State. It is home to almost one million residents and is adjacent to Lake Erie, part of the largest fresh water reservoir in the world. Erie County is also adjacent to the West Valley Demonstration Project (WVDP) and the Western New York State Nuclear Services Center.

The US Department of Energy (DOE), in cooperation with the New York State Energy Research and Development Authority (NYSERDA) recently issued a Revised Draft Environmental Impact Statement for Decommissioning and/or Long Term Stewardship at the West Valley Demonstration project and the Western New York Nuclear Services Center (DEIS). The DEIS states that the preferred alternative for the site include decommissioning in two phases including near term removal actions, with decisions on the remainder of decommissioning actions deferred until the completion of further study and evaluation.

As County Executive, it is my duty to state that, due to the sensitive and hazardous nature of the radioactive contaminants at the site and, due to the risks to public health and the environment, the selection of the complete Sitewide Removal should be the preferred alternative and ultimate goal for all actions taken by the DOE at the WVDP. In addition, with the extension of Route 219 and other economic development initiatives in this area, any decision other than complete sitewide removal will indicate a lack of commitment on the part of the DOE, and the site will act as an impediment, rather than a catalyst, for future economic growth.

It is my expectation that the DOE will take this opportunity to make the proper and correct decision to select Sitewide Removal as the preferred alternative for the remediation and restoration of the WVDP site.

Sincerely,

 CHRIS COLLINS
 Erie County Executive

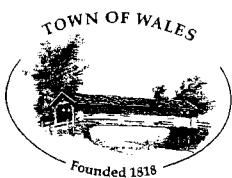
RATH BUILDING • 95 FRANKLIN STREET • BUFFALO, N.Y. • 14202 • (716) 858-6000 • WWW.LRIE.GOV

268-1

268-1

DOE and NYSERDA acknowledge the commentator's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. As indicated in the EIS, DOE intends to meet the criteria in the NRC License Termination Rule and/or Final Policy Statement on decommissioning for whichever alternative is selected and implemented. The criteria were developed to provide protection to the public. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Commentor No. 269: Sharon Marfurt,
Town of Wales



File, BCB, CRR,
MM, PBU



September 10, 2009

Enclosed is a certified copy of a Resolution adopted by the Wales Town Board at their regular meeting held on September 8, 2009.

Very truly yours,

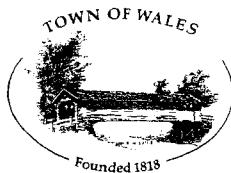
Sharon Marfurt
Sharon Marfurt
Wales Town Clerk

Response side of this page intentionally left blank.

(451.2.10)
101326

12345 BIG TREE ROAD, P.O. BOX 264, WALES CENTER, NEW YORK 14169-0264 (716) 652-0539

**Commentor No. 269 (cont'd): Sharon Marfurt,
Town of Wales**



RESOLUTION ON WEST VALLEY NUCLEAR SITE CLEANUP

Whereas, thirty miles south of Buffalo, NY, the West Valley nuclear waste site, located in Cattaraugus County, is burdened with vast amounts of toxic and radioactive wastes, many of which will remain radioactive for tens of thousands of years, some for millions of years, including plutonium, uranium, strontium-90 and iodine-129, and can cause leukemia and cancer at low doses; and

Whereas, the site is the nation's only venture into commercial reprocessing of irradiated nuclear fuel, was operated by Nuclear Fuel Services and ended in a total failure in 1976 with the company leaving and passing on cleanup responsibility to the government and taxpayers; and

Whereas, the site sits on top of a sole source aquifer and has been plagued with problems, such as radioactive contaminated groundwater, and radioactivity from the site has been found as far away as the shore at the juncture of the Niagara River and Lake Ontario demonstrating a potential for the leaking site to contaminate drinking water supplies for millions of people; and

Whereas, the Department of Energy and NYS Energy Research & Development Authority are proposing to leave buried waste on site, (including high level radioactive waste tanks when such tanks are at the end of their useful lives and could leak contamination at any time), and delay final cleanup decisions for up to 30 years; and

Whereas, economists and scientists recently released a first-ever study on the long-term cleanup costs, The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site, funded by a New York State grant sponsored by Senator Catharine Young (R-Olean), and the study was conducted by Synapse Energy Economics, experts from Tufts University, SUNY Fredonia and radioactive Waste Management Associates; and

Whereas, the study investigated the costs of digging up radioactive waste versus leaving waste buried onsite for the next 1,000 years and found that a full waste excavation cleanup costs less, at \$9.9 billion, and presents the least risk to the population. Leaving buried waste onsite, which is expensive, at \$13 billion, carries high risks, and could also cost an additional \$27 billion or more if a catastrophic release of radioactive waste contaminated drinking water supplies; and

12045 BIG TREE ROAD, P.O. BOX 264, WALES CENTER, NEW YORK 14769-0264 (716) 352-0569

269-1 WNYNSC has inventories of radionuclides and hazardous chemical constituents in the facilities (buildings, lagoons, and waste disposal areas) as well as environmental contamination from past facility operations (e.g., in the North Plateau Groundwater Plume). A description of the facilities and inventories of the radionuclides and hazardous chemical constituents is included in Appendix C of this EIS. This EIS was prepared to evaluate the potential environmental impacts, including impacts from radiological and hazardous chemical constituents, of alternatives for decommissioning and/or long-term stewardship of the site.

The commentor is correct that scientific studies have not clearly demonstrated the existence of a threshold below which exposure to ionizing radiation conveys no risk of health effects. By assuming that the risk of health effects at low doses is proportional to the exposure (i.e., doubling the exposure also doubles the risk), regulatory agencies such as EPA and NRC have adopted a prudent approach to establishing standards to protect human health and the environment from the effects of ionizing radiation. EPA typically regulates radiation exposure based on a lifetime cancer risk of 1×10^{-6} to 1×10^{-4} (1 in a million to 1 in 10,000), consistent with its approach for chemical carcinogens. NRC's license termination dose criterion of 25 millirem per year total effective dose equivalent is consistent with the recommendations of advisory bodies such as the International Commission on Radiological Protection to limit exposures to members of the public from individual sources of radiation. Estimated exposures from the alternatives considered in this EIS are presented throughout this document in a manner that allows a comparison with these levels of protection.

269-2 Chapter 1 of this EIS summarizes the history of WNYNSC. Section 1.1 provides an accurate history of the development of the site and how DOE and NYSERDA became responsible for their respective roles.

269-3 Chapter 3, Section 3.6.2.1, of this EIS addresses groundwater at WNYNSC that was contaminated due to past activities (for example, the North Plateau Groundwater Plume). This EIS was prepared to evaluate the environmental impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC. Under all of the action alternatives, DOE would either remove contamination sources, mitigate their impacts to groundwater, or both. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the North Plateau Groundwater Plume. Potential groundwater impacts associated with the EIS alternatives are discussed in Chapter 4, Sections 4.1.4 and 4.1.10, and Appendix H of this Final EIS.

***Commentor No. 269 (cont'd): Sharon Marfurt,
Town of Wales***

Whereas, scientists found that erosion is powerful and fast moving in the region, and leaving buried waste on site poses a risk to people if controls fail and dangerous radioactive waste pollutes local, regional and international waterways into Lake Erie, the Niagara River and beyond; and

Whereas, scientists found the site poses a significant danger to people who live along nearby creeks, Buffalo residents and people living along the shores of Lake Erie and Ontario, and if just 1% of radioactivity leaked from the site, lake Erie waters users would be exposed to substantial radiation, causing hundreds of cancer deaths, and Buffalo and Erie County water replacement would cost hundreds of millions of dollars; and

Whereas, the residents of the Town of Wales, while not currently consumers of Lake Erie water, most probably will be at some point in the future; and

Whereas, scientists and economist concluded that if wastes are left buried at West Valley and a release occurs, it can have expensive and disastrous consequences irreparably contaminating the precious Great Lakes region, and the costs of maintaining buried waste in an attempt to thwart future disaster will be far more expensive and far more risky than excavating the radioactive waste which is the safest, precautionary approach.

Now Therefore. Be it Resolved that the Town Board of the Town of Wales supports the full cleanup of the entire West valley nuclear waste site (also known as the Western NY Nuclear Service Center & Demonstration Project) through waste excavation; and

Be It Further Resolved, that the Town Board of the Town of Wales supports cleanup standards that are at least as protective as current state radiation standards and unrestricted use toxic standards, and are fully protective of vulnerable populations, including children, fish wildlife and water, and

Be it further Resolved, copies of this Resolution are to be sent to:
 Joanne Hameister, Chair Chad Glenn, Project Manager
 Steering Committee NRC MS T-7-F27
 1051 Sweet Road 11555 Rockville Pike
 East Aurora, NY 14052 Rockville, MD 20852

Bryan Bower, DOE Director	Paul Bembia, Program Director
Dept. of Energy	NYS Energy Research & Development
West Valley Demonstration Project	West Valley Demonstration Project
10282 Rock Springs Road	10282 Rock Springs Road
West Valley, NY 14171-9799	West Valley, NY 14171-9799

Tim Rice, Division of Solid & Hazardous Materials NYSDEC	Gary Baker
625 Broadway, 9 Floor	NYS Dept. of Health
Albany, NY 12233-7255	217 South Salina St.
	Syracuse, NY 13202

269-7

269-4

269-8

269-9

269-10

The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program.

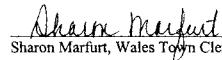
Some of the alternatives evaluated in this EIS, including the Preferred Alternative (Phased Decisionmaking), could result in some facilities and waste remaining on the site, including the high-level radioactive waste tanks. Under the Phased Decisionmaking Alternative, action would be undertaken during Phase 1 for all facilities except the Waste Tank Farm, NDA, SDA, and Construction and Demolition Debris Landfill. Options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close in place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. DOE is required by the West Valley Demonstration Project Act to decontaminate and decommission the waste storage tanks and facilities used to solidify high-level radioactive waste, as well as any material and hardware used in connection with the WVDP, in accordance with such requirements as NRC may prescribe.

DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE has developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flows into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being

**Commentor No. 269 (cont'd): Sharon Marfurt,
Town of Wales**

This is to certify that I, Sharon Marfurt, Clerk of the Town of Wales, have compared the above excerpts to the original minutes of the Wales Town Board meeting held on September 8, 2009 and that the above is a true and correct transcript of such original.

In witness whereof, I have set my hand and affixed the seal of said Town of Wales this 10th day of September, 2009


Sharon Marfurt, Wales Town Clerk

further reduced by tank drying. Additionally, much of the residual contamination in the tanks is attached (i.e., “fixed”) to metal surfaces and is not readily mobile.

- 269-5** Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed the Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.
- 269-6** DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for “Conclusions of the *Synapse Report*” in Section 2 of this CRD for a discussion of the report’s issues and DOE’s and NYSERDA’s response.
- 269-7** DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in this EIS. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. In addition to the previously cited Issue Summaries, please see the Issue Summary for “Questions about Long-term Erosion Modeling” in Section 2 of this CRD for further discussion of this issue and DOE’s and NYSERDA’s response.
- 269-8** DOE and NYSERDA note that the impacts of a release of 1 percent of the site radioactivity referred to by the commentor are taken from the *Synapse Report*. Please see the Issue Summary for “Conclusions of the *Synapse Report*” in Section 2

**Commentor No. 269 (cont'd): Sharon Marfurt,
Town of Wales**

of this CRD for a discussion of the report's issues and DOE's and NYSERDA's response. See also the response to Comment no. 269-7 regarding the long-term impacts analysis addressed in this EIS.

- 269-9** The conclusions referenced in the comment are taken from the *Synapse Report*. As noted above, please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for a discussion of the report's issues and DOE's and NYSERDA's response.
- 269-10** DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.
- Agency actions will comply with the applicable cleanup and decommissioning criteria for WNYNSC that are embodied in Federal and New York State environmental, safety, and health regulatory requirements promulgated under various statutory authorities (see Chapter 5 of this Final EIS). As summarized in Chapter 1, Section 1.3, of this EIS, these regulatory requirements include RCRA permitting and corrective actions under New York State and/or EPA requirements, decommissioning according to NRC requirements in its License Termination Rule, and EPA assessments of compliance with National Emission Standards for Hazardous Air Pollutants.

Campaign A

- (1.) Complete removal NOW of the radioactive material at West Valley.
(2.) An extension of the deadline to file objections from June 8, 2009 to December 2009."

|| **A-1**
|| **A-2**

A-1

DOE and NYSERDA acknowledge the commentors' preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

A-2

In response to requests from the public, DOE and NYSERDA extended the original 6-month comment period (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE) for an additional 90 days, through September 8, 2009.

Campaign A (cont'd)

Individuals submitting this campaign:

Anthony Agnello
Joe Agnello
Grace Modica Amore
Lukia Costello
Paul Lefebvre
Jake Mabee
L. Rigo
Orlando Rigo
Michael Sobczyk
David Wollaber

Response side of this page intentionally left blank.



Campaign B

NEW YORK INTERFAITH POWER & LIGHT

57 Hillside Terrace
Irvington, New York 10533
Office Phone: (914) 321-5058
Mobile Phone: (914) 325-0058
E-mail: nsod@earthlink.net
Website: www.nyipl.org

June 2, 2009

Catherine Bohan, EIS Document Manager
West Valley Demonstration Project

U.S. Department of Energy
P.O. Box 2368
Germantown, MD 20874

Dear Ms. Bohan:

We humans have a moral obligation to care for God's good creation and to clean up our mess before handing the work off to our descendants.

Therefore, we are writing you in support of the Sitewide Removal Alternative (full waste excavation cleanup) for the West Valley Demonstration Project (WVDP) as described in the Draft Environmental Impact Statement issued by the DOE and the NYS Energy & Research Authority in December, 2008.

We oppose the Preferred Alternative because it would delay the final cleanup decision for the majority of the wastes for another 30 years, leaving most of the nuclear waste on the site.

Such delay is irresponsible because the DOE knows now what needs to be done. The site is geologically unstable, featuring significant surface erosion. The WVDP has found nuclear waste contaminating the ground water in a plume that is moving toward the local streams. Radioactivity from the site has been found already at the juncture of the Niagara River and Lake Ontario. The work to be done is clear, and any delay in the decision process simply exacerbates known threats to human health and safety.

Therefore, we support the Sitewide Removal Alternative because it provides a permanent and safe solution and removes the radioactive waste from an unstable site with serious erosion problems and provides the most cost-effective approach, according to a recent independent study (see *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site*).

The choice of the Sitewide Removal Alternative empowers the DOE with a clear directive: to focus now on excavating all nuclear wastes and preparing them properly for eventual storage at a safe location. To do otherwise is immoral and shirks our responsibility to both present and future generations.

Sincerely,

Nicola Coddington
Executive Director
cc: Congress, President Obama

~ Printed on 100% Post Consumer Waste (PCW), 100% Processed Chlorine Free (PCF) paper ~

B-1

DOE and NYSERDA acknowledge the commentors' preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement.

B-1

DOE and NYSERDA have reviewed *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Site (Synapse Report)* by Synapse Energy Economics, Inc., and have addressed this report in this CRD consistent with the Council on Environmental Quality's NEPA regulations. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Conclusions of the Synapse Report" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

B-2

DOE and NYSERDA acknowledge the commentor's opposition to the Preferred Alternative, Phased Decisionmaking. Note that the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

**B-1
cont'd**

B-3

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling are

Campaign B (cont'd)

Individuals submitting this campaign:

Geri Chapman Aird
Joanne Macleod Bartlett
Mary Louise Berg
Janita K. Byars, Ed. D.
Craig C. Chapman
Nicola Coddington
Joyce L. Dailey
Fanne M. Divine
Gladys Gifford
Jean B. Harper
L. Hayms
Elaine Hotelling
Jeanne Kelly
Marilyn Koszarek
Connie M. Lockwood
Esther M. Lunde
Mary Ann Mache
Ken and Phyllis Margrey
Mary Myers
New York Interfaith Power and Light
Gladys Newton
Priscilla O'Brien
Marilyn H. Plache
Richard Weiskopf MD
Presbyterian Women of Western New York
Elaine Swaine
Patricia K. Townsend

discussed in Appendix F. In addition to the previously cited Issue Summaries, please see "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program.

Regarding the additional topics included in this comment, please see the Issue Summaries cited above in the response to Comment no. B-1, as well as "the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Campaign C

I strongly urge the Department of Energy and the NYS Energy Research & Development Authority to select the Sitewide Removal Alternative as it is a complete waste excavation and clean up of the West Valley nuclear site. A complete cleanup is much safer because it eliminates the potential for further environmental contamination and health impacts.

I oppose any option which would leave radioactive waste buried on the site, included preferred Phased Decision Making Alternative. This preferred plan cleans up too little of the dangerous radioactivity on site. This is completely unacceptable as it could lead to further contamination of adjacent waterways, the Great Lakes.

I strongly recommend that the DOE and NYSRDA select the Sitewide removal alternative (Complete Excavation and Clean up) as it is the ONLY approach that will protect the precious Great Lakes of Erie and Ontario.

We have an obligation to our children, families, communities our country to keep this valuable natural resource clean and safe for the future generations.

C-I

C-1

DOE and NYSERDA acknowledge the commentors' support for the Sitewide Removal Alternative and opposition to any alternative that would leave waste on site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Campaign C (cont'd)

Individuals submitting this campaign:

Ken Ahlstrom
Jane Chew
Jack Jordaan
Rosa Rojas
Don Shelters
Angela Steward

Response side of this page intentionally left blank.

Campaign D

May 17, 2009

Catherine Bohan, EIS Document Manager
 West Valley Demonstration Project
 U.S. Department of Energy
 P.O. Box 2368
 Germantown, MD 20874 (Fax 866-306-9094)

Dear Ms. Bohan:

The Jewish and Christian scriptures teach us that "The earth is the Lord's and all that is in it" (Psalm 24:1). This means that we have a moral obligation to care for God's good creation and to clean up our mess before handing the work off to our descendants.

Therefore, I am writing you in support of the Sitewide Removal Alternative (full waste excavation cleanup) for the West Valley Demonstration Project (WVDP) as described in the Draft Environmental Impact Statement issued by the DOE and the NYS Energy & Research Authority in December, 2008.

I oppose the Preferred Alternative because it would delay the final cleanup decision for the majority of the wastes for another 30 years, leaving most of the nuclear waste on the site.

Such delay is irresponsible because the DOE knows now what needs to be done.

The site is geologically unstable, featuring significant surface erosion. The WVDP has found nuclear waste contaminating the ground water in a plume that is moving toward the local streams. The work to be done is clear, and any delay in the decision process simply exacerbates known threats to human health and safety.

Therefore, I support the Sitewide Removal Alternative because it provides a permanent and safe solution and removes the radioactive waste from an unstable site with serious erosion problems and provides the most cost-effective approach, according to a recent independent study, (see *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site*).

The choice of the Sitewide Removal Alternative empowers the DOE with a clear directive: to focus now on excavating all nuclear wastes and preparing them properly for eventual storage at a safe location.

Sincerely yours,

Campaign D

- | | |
|--|--|
| <p>D-1</p> <p>DOE and NYSERDA acknowledge the commentors' preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement.</p> <p>DOE and NYSERDA have reviewed <i>The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Site (Synapse Report)</i> by Synapse Energy Economics, Inc., and have addressed this report in this CRD consistent with the Council on Environmental Quality's NEPA regulations. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Conclusions of the <i>Synapse Report</i>" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.</p> | <p>D-2</p> <p>DOE and NYSERDA acknowledge the commentors' opposition to the Preferred Alternative, Phased Decisionmaking. Note that the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.</p> |
| <p>D-3</p> <p>D-1 cont'd</p> | <p>D-3</p> <p>DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling</p> |

Campaign D (cont'd)

Individuals submitting this campaign:

Joanne Alderfer
Neil Arnold
Kerri Bigler
Charlotte M. Boyer
Susan D'Angelo
William M. DiRoo, Ph.D.
Ann J. Eisenlord
Edward R. Eisenlord
Marlene Harrington
Shelby A. Harrington
Betty Heckman
Beth Hennessy
William T. Hennessy
Elaine C. Hurst
Mary Jane Kibby
Janet Maggio
Byron Moehlhe
Martha Shafer
Lauren Stirling
William Townsend
Jeffrey Weaver

are discussed in Appendix F. Please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program.

Regarding the additional topics included in this comment, please see the Issue Summaries cited above in the response to Comment no. D-1 and the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Campaign E

I support a Great Lakes-protective cleanup with full waste excavation for the West Valley site. Scientists found that over time leaking nuclear waste from the site can pollute Lakes Erie and Ontario and harm public health and the economy in the U.S. and Canada.

E-I**E-1**

DOE and NYSERDA acknowledge the commentors' preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes," "Conclusions of the *Synapse Report*," and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues, including potential impacts on Great Lakes water users, and DOE's and NYSERDA's responses.

Campaign E (cont'd)

Individuals submitting this campaign:

Dinda Evans
Bonnie Faith-Smith
Mark M. Giese
Patricia Murphy
Thomas Nelson
Christine Pasmore

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Campaign F

August 7, 2009

Catherine M. Bohan
EIS Document Manager
West Valley Demonstration Project
US Department of Energy
PO Box 2368
Germantown, MD 20874

Re: Draft Decommissioning and/or Long term Stewardship West Valley EIS Comments

Dear Ms Bohan,

I strongly urge the Department of Energy and the NYS Energy Research & Development Authority to select the Sitewide Removal Alternative, as it is a complete waste excavation and cleanup of the West Valley nuclear site. A recent independent study, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Site*, found that complete excavation and cleanup is actually less expensive than trying to contain radioactivity over long time periods, \$10 Billion versus \$13-27 Billion. Erosion could result in catastrophic releases of radioactivity and could cost over \$27 billion dollars to provide alternate sources of drinking water. A complete cleanup is much safer because it eliminates the potential for further environmental contamination and health impacts. Sitewide Removal is also the only alternative adequately studied and disclosed to the public in the Environmental Impact Statement, EIS.

I oppose any option leaving radioactive waste buried on the site, including the preferred Phased Decision Making Alternative. This preferred plan cleans up too little of the dangerous radioactivity on site, only about 1%, delays a decision on the other 99% for 30 more years and leaves the public out of the final decision-making. This is completely unacceptable as it could lead to further contamination of adjacent waterways, the Great Lakes, and drinking water impacting public health.

The site has been plagued with problems, such as radioactive contaminated groundwater, severe erosion and radioactive migration. It sits on top of a sole-source aquifer. Controls at the site have failed to contain radioactive contamination in the past, yet instead of ACTION NOW, more delay and inaction are being proposed.

I strongly recommend that the DOE and NYSERDA select the Sitewide Removal Alternative (Complete Excavation and Cleanup) as it is the only approach that will protect the precious Great Lakes of Erie and Ontario arguably are most valued resource in Western New York.

I am attaching a penny to this letter because a 1% cleanup won't protect the Great Lakes, a priceless freshwater resource. Leaving 99% of the dangerous radioactive waste in the ground at West Valley jeopardizes our health and that of future generations. A penny represents this unacceptable 1% cleanup.

F-1

F-2

F-1
cont'd

F-1

DOE and NYSERDA acknowledge the commentors' support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

DOE and NYSERDA have reviewed *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Site (Synapse Report)* by Synapse Energy Economics, Inc., and have addressed this report in this CRD consistent with the Council on Environmental Quality's NEPA regulations. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Conclusions of the Synapse Report" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling are discussed in Appendix F. Please see "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Campaign F (cont'd)

2

I am attaching a Penny here to emphasize—**1 percent cleanup is NOT ENOUGH**



Please add your own additional comments here:

Sincerely,

Signature

Printed Name

Full Address

[[You may also submit comments by email-- go to www.westvalleyeis.com]]

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Campaign F (cont'd)

As the saying goes, pay me now or pay me later. I'd rather pay now for a full clean up.

For the sake of our most valuable resources, which make this country so great, please seriously consider a full clean up at the West Valley nuclear site.

Sincerely,

Larry V. Snider
69 Burdette Drive
Cheektowaga, New York 14225
(■) ■■■■■

Please add your own additional comments here:

The flood of Aug 9 greatly eroded the land around West Valley, increasing instability of the site, and increasing worries about nuclear contamination of our Great Lakes. Please clean up all 100% of West Valley NOW!! Thank you!
Sincerely,

Signature *Ann Ingberman*,

Printed Name *Ann Ingberman*

Full Address *123 Thistle Lea
Williamsville, NY 14221*

F1-1

F1-1

DOE and NYSERDA acknowledge the commentors' support for the Sitewide Removal Alternative. The decisions on the selected course of action and supporting rationale will be provided in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA have reviewed *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Site (Synapse Report)* by Synapse Energy Economics, Inc., and do not agree with its conclusions. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Conclusions of the Synapse Report" in Section 2 of this CRD for further discussion of these issues.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling are discussed in Appendix F. In addition to the previously cited Issue Summary, please see "Questions about Long-term Erosion Modeling."

F2-1

Please see the responses to Comment nos. F-1 and F-2. Note that the revised erosion prediction used for the unmitigated erosion dose analysis addressed in the response to Comment no. F-1 is based on the assumption that storms could occur more frequently than indicated by current records. This prediction includes the effects of storms of greater severity than the one that occurred in the region on August 2009. The use of this higher erosion rate associated with an elevated precipitation rate is discussed in Appendix H, Section H.2.2.1. Chapter 4, Section 4.3.5, has been revised to include a discussion of how the uncertainties about future climate change are addressed in this EIS. Also, see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD.

Campaign F (cont'd)

Please add your own additional comments here:

We need to protect the Great Lakes by adopting the Sitewide Removal Alternative - a complete waste excavation and clean-up of the West Valley nuclear site. Our health and that of future generations requires a Total Cleanup.

Sincerely, *Judy M. Smith*
Judy M. Smith

Signature *Judy M. Smith*
Printed Name Judy M. Smith

Full Address 170 Broadmoor Drive
Tonawanda, New York
142150

F3-1

F3-1

Please see the responses to Comment no. F-1. Also, see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD.

Campaign F (cont'd)

Individuals submitting this campaign:

Jacob Bajdas
Crystal Dunning
Catherine Glasgow
Ann Ingleman
Elizabeth J. McGowan
Judy M. Smith
Larry V. Snider
Karilyn Valesko
Rebekah A. Williams

[Note: 10 additional names included in campaign but asked not to be published]

Response side of this page intentionally left blank.

Campaign G

I strongly urge the Department of Energy and NYS Energy Research & Development Authority to select the Sitewide Removal Alternative as it provides a full cleanup for the West Valley nuclear waste site. Sitewide Removal is the safest solution by ultimately removing radioactive waste from an unstable site with serious erosion problems. It is the only alternative that will prevent catastrophic releases which can cause severe damage to communities, drinking water supplies and Lakes Erie and Ontario.

I oppose any option which would leave radioactive waste buried on the site, including the preferred Phased Decision Making Alternative. All of the new cleanup work under this alternative addresses only 1.2% of the total radioactivity on the site, leaving decisions on the vast majority of the waste to be made over 30 years posing an unacceptable delay. Leaving wastes buried onsite does not protect the environment due to serious erosion problems, and it poses a significant risk to New Yorkers if controls fail and waste pollutes drinking water. The site sits on top of a sole-source aquifer and has been plagued with problems, such as radioactive contaminated groundwater.

I strongly recommend that the Final Environmental Impact Statement select the Sitewide Removal Alternative as it is the only remedial approach that will protect the precious Great Lakes of Erie and Ontario.

Thanks for considering my views.

- | | |
|------------|---|
| G-1 | DOE and NYSERDA acknowledge the commentors' support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.. |
| G-2 | It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below). |
| G-3 | Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected. |
| G-3 | DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds |

Campaign G (cont'd)

Individuals submitting this campaign:

Dawn M. Bartlett
 Zachary Bernstein
 Kenneth L. Bird
 Edward Butler
 Marjorie Campagne
 Barbara A. Carder
 Sister James Christopher
 Barbara Chutroo
 Gerarda E. Cook
 Anne Crowen
 Heather Derrah
 Lee Diggs
 Janet M. Donovan
 Ken Dow
 Roseanne Duffy
 Margaret Faney
 Sister Patricia C. Fielese
 Sister Concilia Flaherty
 Bobbie Dee Flowers
 Edgar Freud
 Carolyn Friedman
 Sarah Gallagher
 Elaine Gardner
 Rose M. Gilmore
 Megan M. Gregory
 Carl Gutman
 H D
 Eric S. Hahn
 David Hermanns
 Sister Kathleen F. Hove
 J. Y.
 Teresa M. Joyce
 Therese Joyce
 Harvey Kaiser
 Judith Karpova
 Sister Mary Ellen Keady
 Sister Ann Kelly
 Shelly Kerker
 Julie Parisi Kirby
 Donna Knipp
 James Kricker
 Tom Kunz

Mary Lou Lafferty
 Mary Laffey
 Rebecca Landy
 Cecile Lawrence
 Gerson & Debbie Lesser
 Gerson Lesser, MD
 Rose Marie Lucente
 Margaret Mahoney
 James Mammarella
 Sister Ann Peter Matt
 Kelly Maurer
 Virginia May
 Clare McMaster
 Suku Menon
 Annette Merio
 Irene Marie Mulholland
 Jean Marie Naples
 Sharon L. O'Neil
 S. Perrin
 Suz Perrin
 Debbie Peters
 Kate Pilletteri
 Anna Rathmeir
 Jen Savage
 Agnes A. Scanlan
 Sister Ellen Michael Schafa
 Mariam R. Schneible
 Melissa Scholl
 Olga Sekulich
 Stephen Merrill Smith
 Barry Spielvogel
 Robert Tell
 Rita Tomasulo
 Christine Vogel
 Teresa A. Waldron
 Paul F. Walker
 Paul Walker
 Elinor Weiss
 Eric Wessman

of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling are discussed in Appendix F. Please see "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Campaign H

September 2, 2009

Dear Secretary Chu,

I am a person of faith, a member of the Franciscan Sisters of St. Joseph and an American citizen. I believe it is essential that our government acts responsibly in its decision to cleanup West Valley nuclear waste site. I strongly recommend that the Department of Energy and New York State Energy and Research and Development Authority select Site-wide Removal Alternative. Site-wide Removal provides the safest solution by ultimately removing all radioactive waste from the unstable erosion problems as soon as possible. This prevents catastrophic releases which very likely could cause severe damage to the major source of fresh water in the nation, the Great Lakes.

I oppose the Phased Decision Making Alternative option which would leave radioactive waste buried on the site for possibly 30 years before clean up would happen.

I strongly urge the Department of Energy and New York State Energy Research & Development Authority to select the full cleanup of the West Valley nuclear waste site as outlined in the Site-wide Removal Alternative. Site-wide Removal is the safest solution because it removes radioactive waste from an unstable site with serious erosion problems. It is the only alternative that will prevent catastrophic releases which can cause severe damage to communities and the fresh water supplies of the Great Lakes, especially Lake Erie.

The only answers to the questions of how much of the nuclear waste at West Valley site should be removed and when should it be removed are the moral answers - all of it should be removed and remove it now

Sincerely,

5286 South Park Avenue
Hamburg, NY 14075

H-1

H-1

DOE and NYSERDA acknowledge the commentors' support for the Sitewide Removal Alternative and opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

The Final EIS analyzes the long-term (over several hundreds of years) consequences of unmitigated erosion for local as well as Lake Erie and Niagara River water users. The estimated human health impacts for the unmitigated erosion scenario are presented in Chapter 4, Section 4.1.10.3.3, of this EIS. The development of the erosion predictions used in the analysis is discussed in Appendix F. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Campaign H (cont'd)

Individuals submitting this campaign:

Sister Emily T. Bloom
Sister Jean Cherry
Sister M. Genevieve
Sister Sharon Goodremote
Sister Joyce Kubiniec
Sister Marvina Kupiszewski
Sister M. Odilia Majcher
Sister Frances Angela Olszewski
Sister Martha Olszewski
Sister Helen Therese Pels
Sister Judith E. Salzman
Sister Catherine Smith
Sister Marie Stachowiak
Sister Mary Telesphore
Sister Anzelma Thomas
Sister M. Regis Zboch

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Comments from the Albany, New York, Public Hearing (March 30, 2009)

1
2
3 WEST VALLEY DRAFT EIS
4 PUBLIC HEARING
5
6 Crowne Plaza Hotel
7 Albany, New York
8 March 30, 2009
9
10
11 CORRECTED TRANSCRIPT
12 MAY 20, 2009
13
14 FORMAL COMMENT PERIOD
15
16 BRYAN BOWER West Valley Program Director,
17 Department of Energy
18 PAUL BEMBIA West Valley Program Director,
19 NYSERDA
20 CATHY BOHAN EIS Document Manager, Department
21 of Energy
22 LINDA ROBINSON Moderator
23
24 ATKINSON-BAKER, INC.
25 COURT REPORTERS
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25 REPORTED BY: MARLENE K. PRESSMAN

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Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 FORMAL PUBLIC COMMENTS

2 MODERATOR ROBINSON: So we will move
3 right on then to the public comment part of
4 the meeting. I will remind you that the
5 subject matter experts that were outside
6 earlier will still be available after this
7 meeting if you decide you have a question
8 later.

9 Now that we're in the next phase, keep
10 in mind that comments given during this
11 segment will not be responded to here
12 tonight but will be taken into account in
13 the Final Environmental Impact Statement in
14 the Comment Response Document portion of it.

15 Cathy Bohan represents DOE, and Paul
16 Bembia represents NYSERDA, and they will be
17 listening and accepting your comments. I
18 ask that you direct your comments to them.

19 The court reporter here is Marlene, and
20 her objective is to produce a complete and
21 accurate transcript of the oral comments
22 tonight. Verbatim transcripts will be
23 included in the Comment Response portion of
24 the Final Environmental Impact Statement.

25 I now will call on commentors in the

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Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 order registered. I have a list right here.
2 I'll name two people at a time so that the
3 second person can realize they're going to
4 be up soon, and when it's your turn, please
5 go to the microphone to speak. I believe
6 it's been turned on. If not, we'll check
7 it. The first person up, tap it, and we'll
8 be sure it's turned on.

9 You may give your name and your
10 organization that you represent, if any, so
11 that the court reporter can hear it. If you
12 speak for as long as four minutes, I will
13 hold up this card (indicating) at the end of
14 your four minutes to let you know you've
15 done that and to remind you to wrap up
16 within the next one minute. After that time
17 I will ask you to cease speaking, though you
18 could come back later. If you also have
19 written comments, you're welcome to turn
20 them into the registration desk. Some
21 people bring written of the same thing that
22 they're reading, and we will accept them
23 both.

24 I have a stopwatch, so I'll be timing
25 with it, using my red card.

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Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 The first two people signed up to speak
2 will be Barbara Warren, followed by William
3 Cooke.
4 So, Barbara Warren, I welcome you.
5 MS. WARREN: Good evening. My name is
6 Barbara Warren. I'm Executive Director of
7 the Citizens' Environmental Coalition.
8 In December we released an independent,
9 state-funded study, "The Real Costs of
10 Cleaning Up Nuclear Waste: A Full Cost
11 Accounting of Cleanup Options for West
12 Valley." That study revealed leaving buried
13 waste at the site is both high risk and
14 expensive, while a waste excavation cleanup
15 presents the least risk and the lowest cost.
16 Over 1,000 years, waste excavation costs
17 between 9.7 and 9.9 billion, while leaving
18 dangerous buried radioactive waste onsite
19 costs 13 billion to 27 billion if a
20 catastrophic release occurred. We are
21 putting that full report into the record. I
22 have that with me. I'll provide that to you
23 for the hearing.
24 The Full Cost Accounting Study analysis
25 is actually supported by the extensive

|||
501-1

501-1

The report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for discussion of the report's issues and DOE's and NYSERDA's response.

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 comments of NYSERDA in the Foreword to the
 2 Environmental Impact Statement. There
 3 NYSERDA questions the long-term analyses
 4 done by DOE saying they are seriously flawed
 5 and scientifically indefensible, and,
 6 therefore, cannot be relied on for
 7 predicting public radiation doses.

I want to talk to you about toxic
 assets. The recent debacle of the financial
 industry has resulted in lots of talk about
 toxic assets and what to do about them.
 Several trillion dollars have been allocated
 to restoring the soundness of financial
 institutions because of these so-called
 toxic assets. Well, at West Valley we have
 the real deal. We have real toxic assets,
 and the government must find the money to
 dig them up and safely contain them for
 thousands of years. Whatever the cost, it's
 the government's responsibility to do so.
 Leaving the buried waste in the ground to
 leach into the sole source aquifer or to be
 released catastrophically by the forces of
 erosion and contaminating the Great Lakes is
 unacceptable. Fully cleaning up the

501-2

501-3

501-3

DOE disagrees with many of the points raised in NYSERDA's View, which is included as the Foreword to this EIS. At the core, differences between DOE and NYSERDA center on different views about the nature of analysis required for an EIS and the attendant level of acceptable risk associated with any uncertainties in that analysis as it relates to decisionmaking. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, this EIS (1) acknowledges the information limitation and its relevance to environmental consequence, (2) summarizes existing credible scientific evidence, and (3) presents an analysis using a theoretical approach that is generally accepted by the scientific community involved in such analyses. This Final EIS contains text boxes in the relevant subject matter areas that acknowledge the differences of opinion between DOE and NYSERDA. In general, DOE's position is that the Agency spent much time and effort engaging highly qualified and respected experts in hydrology and hydrological transport, landscape evolution (erosion), human health and environmental risk analysis, and other technical fields, and stands behind the analyses performed for this EIS.

Regarding funding of cleanup at WNYNSC, this EIS was prepared to evaluate the environmental impacts of the alternatives for decommissioning and/or long-term stewardship of WNYNSC, a legally required step to support a decision on a course of action. The U.S. Congress and the President are responsible for establishing funding levels for various Federal Government programs, while the New York State Legislature and the Governor are responsible for establishing funding levels for state government programs. Implementation of decisions made in DOE's Record of Decision and NYSERDA's Findings Statement is contingent on the level of funding allocated.

The preliminary cost-benefit analysis presented in Chapter 4, Section 4.2, of the Revised Draft EIS was prepared at NRC's request and in a manner consistent with NRC's as low as is reasonably achievable (ALARA) guidance. The analysis was updated and clarified in this Final EIS. If cost-benefit considerations are part of

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 radioactive waste at West Valley sounds like
 2 a bargain, in fact, at under \$10 billion
 3 when compared to over a hundred billion
 4 that's been given to individual banks.

5 We want to remind you that prevention
 6 is usually a fraction of the cost of
 7 response, remediation and cleanup.
 8 Protecting New Orleans from storms and
 9 flooding would have prevented hundreds of
 10 billions of dollars in damages from
 11 Hurricane Katrina. Your use of cost-benefit
 12 analysis undervalues all prevention
 13 activities, which prevent future harm.

14 Tonight I'm going to focus on some of
 15 the major problems with the EIS and the
 16 Decommissioning Plan, particularly the
 17 Preferred Alternative, or "1 Percent
 18 Solution," as we are now calling it. Phase
 19 1 will handle just 1.2 percent of the buried
 20 radioactive waste on site. The other 99
 21 percent of the radioactivity will possibly
 22 be dealt with 30 years from now in Phase 2,
 23 but we know almost nothing about Phase 2.
 24 If they only do one percent of the
 25 radioactivity in each Phase, we might need

the basis for agency decisionmaking, this will be acknowledged and discussed in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Questions about Cost-Benefit Analysis" Issue Summary in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

**501-3
cont'd**

501-4

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (please also see the response to Comment no. 501-8).

501-4

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 another 99 Phases to complete the cleanup.
 2 Now, I want to turn to what an
 3 Environmental Impact Statement should
 4 contain. It should have three major and
 5 essential elements:
 6 One, it should be a complete plan or a
 7 project, and it should have full public
 8 disclosure. An EIS should start with a
 9 complete plan or project and then fully
 10 describe and disclose all the elements of
 11 that project.
 12 Two, it should identify all the
 13 potential environmental impacts and then
 14 fully analyze all of those impacts.
 15 A legitimate public process with
 16 information made available and an adequate
 17 opportunity for the public to influence the
 18 decisions that are made.
 19 Unfortunately, we have very incomplete
 20 plans for all of the alternatives except for
 21 one, sitewide removal. The preferred
 22 alternative with its two phases is the most
 23 incomplete of the plans. The major areas of
 24 incompleteness include:
 25 One, monitor the containment and leaks.

- | | |
|-------------------------|--|
| 501-4
cont'd | 501-5
DOE and NYSERDA believe that this EIS complies with the requirements of NEPA and SEQR.

1. This EIS has been prepared in accordance with the requirements of NEPA and SEQR. DOE and NYSERDA have prepared this single, comprehensive EIS for the decommissioning and long-term stewardship of WNYNSC. As required by NEPA and SEQR, it analyzes the environmental impacts of a broad spectrum of reasonable alternatives that meet the respective purposes and needs of DOE and NYSERDA (Sitewide Removal, Sitewide Close-In-Place, and Phased Decisionmaking), as well as the No Action Alternative. A detailed work plan is not required to complete an EIS, and normally is not developed until a decision is made.

2. This EIS adequately analyzes the totality of environmental impacts, including costs, for the identified alternatives. These impacts are presented in Chapter 4 of this EIS.

3. The public comment process for this EIS meets the requirements of NEPA and SEQR. The Revised Draft EIS was issued for public review and comment on December 8, 2009. DOE's Notice of Availability announced a 6-month public comment period (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE) and three public hearings. In response to requests from the public, DOE and NYSERDA extended the original public comment period for an additional 90 days, through September 8, 2009. An additional public hearing was held in Albany, New York, and the hearing originally scheduled for Blasdell, New York, was moved to a more central downtown Buffalo, New York, location. DOE and NYSERDA held the public hearings to provide interested members of the public with opportunities to learn more about the content of the Revised Draft EIS from exhibits, factsheets, and other materials; to hear DOE and NYSERDA representatives present the results of the EIS analyses; to ask clarifying questions; and to provide oral or written comments. A website (http://www.westvalleyeis.com) was established to further inform the public about the Revised Draft EIS, how to submit comments, the public hearings, and other pertinent information. Comment submission mechanisms and public hearing dates, times, and locations were announced in the <i>Federal Register</i> and New York State Environmental Notice Bulletin notices, in local newspapers, and on the website. Members of the public who expressed interest and are on the DOE and NYSERDA mailing list for the |
| 501-5 | |
| 501-6 | |

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 There is no detailed description of
 2 monitoring, no disclosure to the public, no
 3 assessment of the environmental impacts
 4 associated with the failure to identify a
 5 containment failure, and as a result, no
 6 legitimate public process for this critical
 7 element.

8 All of the alternatives that leave
 9 buried radioactive waste materials on site
 10 require ongoing monitoring to ensure that
 11 containment is maintained and dangerous
 12 radioactive materials are not contaminating
 13 ground and surface water and spreading off
 14 site. In the case of the sitewide removal
 15 alternative, we are told that all
 16 contamination will be removed, so there is
 17 no need for monitoring. In the case of all
 18 the other alternatives, monitoring is not
 19 described. Monitoring is an essential
 20 element of long-term containment and
 21 control. An inadequate monitoring plan can
 22 result in widespread contamination and
 23 jeopardize public health. In other words,
 24 it could have serious environmental impacts.
 25 Therefore, a detailed monitoring plan should

Revised Draft EIS were notified by U.S. mail regarding hearing dates, times, and locations.

501-6

**501-6
(cont'd)**

As acknowledged in this EIS, long-term monitoring and maintenance would be implemented for alternatives that would leave waste on site. This EIS provides a summary description of current and potential future environmental monitoring programs. The descriptions of the alternatives were revised to further describe the use of engineered barriers and long-term monitoring and maintenance. Long-term monitoring and maintenance are described in Chapter 2, Sections 2.4.2.6 and 2.4.3.8. Long-term monitoring and institutional controls are also discussed in Chapter 6. Additional information about current and proposed monitoring and institutional controls is provided in Appendices C, H, and I. Chapter 2, Table 2-4, includes estimates of the environmental consequences if (1) monitoring and maintenance are successful (institutional controls remain in place) and (2) monitoring and maintenance programs fail (institutional controls are lost). Chapter 4, Section 4.2, of this EIS includes monitoring and maintenance costs for the alternatives that would leave waste on site.

Detailed information regarding long-term monitoring and maintenance programs and institutional controls under alternatives that would leave waste on site has not been specifically defined at this time. Such definition would occur after an alternative is selected for implementation and would include consultation with appropriate regulatory authorities.

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1 have been disclosed to the public in the EIS
2 so we could comment on its adequacy and the
3 potential impacts of an inadequate
4 monitoring plan analyzed. As a result, the
5 EIS is seriously flawed.

6 That's just one of the problems, and
7 I'll finish later.

8 MR. COOKE: I would like to yield two
9 minutes of my time to Barbara. She can
10 continue. Point of order.

11 MODERATOR ROBINSON: I will offer it to
12 Barbara.

13 MR. COOKE: Thank you.

14 MODERATOR ROBINSON: Are you certain?

15 MR. COOKE: I'm so certain.

16 MODERATOR ROBINSON: I would like to
17 offer it to you if you would like. Since we
18 don't have a lot of speakers tonight, you
19 can have another whole shot at this at the
20 end of the other people.

21 MR. COOKE: Can I have your attention,
22 please? Point of order. I'll yield two
23 minutes to her. Thank you.

24 MODERATOR ROBINSON: You would like to
25 do it. I'm sorry, what is your name so

501-6
cont'd

Response side of this page intentionally left blank.

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 I can --
2 MR. COOKE: My name is William Cooke.
3 MODERATOR ROBINSON: William Cooke. So
4 you're the next speaker?
5 MR. COOKE: Yes, ma'am, I am. Thank
6 you.
7 MODERATOR ROBINSON: And you're willing
8 to speak for --
9 MR. COOKE: I'm willing to yield two
10 minutes of my time at this time.
11 MODERATOR ROBINSON: That would be just
12 lovely.
13 MS. WARREN: Thank you.
14 MODERATOR ROBINSON: Go ahead.
15 MS. WARREN: Okay, so to finish
16 monitoring. Data Collection. One of the
17 primary objectives -- these are all the
18 problems -- one of the primary objectives of
19 the so-called Phased Decision-Making
20 Alternative is to collect more data on the
21 site. Data collection is supposedly a
22 critical part of the future decisions that
23 will be made regarding what projects will be
24 undertaken in Phase 2. Yet the public is
25 not provided any detail regarding the data

501-7

501-7

Chapter 2, Section 2.4.3, of this EIS describes decommissioning activities under the Phased Decisionmaking Alternative and provides a discussion of the data collection, studies, and monitoring to be performed during implementation of Phase 1 and the purpose of each of these activities. The overall intent of these Phase 1 activities is to further characterize the site and to research technology developments and engineering to aid consensus decisionmaking for Phase 2. Section 2.4.3.3 explains how the additional data and studies would be used in making decisions for potential future activities. The intent of this EIS is to provide a description of the environmental impacts of each of the alternatives to inform the agency decisionmakers.

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1 collection. Thus, there's no public
 2 disclosure, no ability for the public to
 3 evaluate the adequacy of the planned data
 4 collection in setting the stage for
 5 responsible decision-making, and no ability
 6 for the public to provide comments on this
 7 critical element of Phase 1.
 8 The Phased Decision-Making Alternative
 9 leaves the public out. What we now have is
 10 an unknown process in which agencies will
 11 decide on how much monitoring and how much
 12 data collection is needed. Over the next 30
 13 years, federal and state agencies will make
 14 decisions with no public process or
 15 involvement. Then the US Department of
 16 Energy will leave the West Valley nuclear
 17 site prior to the beginning of Phase 2.
 18 That's in the decommissioning plan, by the
 19 way, not in the EIS. I don't know why there
 20 is a discrepancy in these documents, but
 21 there is. Thus, New York State will be left
 22 for the entire responsibility and the bill
 23 for cleaning up the rest of the radioactive
 24 mess from federal nuclear waste and a
 25 national program of nuclear reprocessing.

**501-7
cont'd****501-8**

501-8 Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until a final decision is made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate the Phase 2 decision for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

DOE will remain on site until it completes its responsibilities as assigned under the West Valley Demonstration Project Act. DOE would not leave the site after completion of the Phase 1 actions because it would not have completed the actions required under the Act. The description of the Phased Decisionmaking Alternative in Chapter 2 of the EIS has been revised to clarify this, and the wording in the *Phase 1 Decommissioning Plan for the West Valley Demonstration Project* (*Phase 1 Decommissioning Plan*) has been revised to avoid any implication that DOE would leave the site at the end of Phase 1.

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Because Phased Decision-Making leaves decisions about what to do with 99 percent of site radioactivity, the majority of the environmental impacts are unstudied in this alternative. The NRC disposal site and the state disposal site are left for Phase 2, as are the high level waste tanks. The inadequacies of the EIS are best illustrated by focusing on these tanks. These tanks are made of carbon steel, subject to corrosion and are currently at the end of their useful lives, a fact not mentioned in the EIS by the way. Their ability to contain any radioactivity over the next few years is questionable, much less for the next 30. The EIS not only fails to describe the monitoring in and around these tanks but fails to examine the potential impact of a failure and leakage from these tanks on the sole source aquifer and the nearby creeks.

But the Decommissioning Plan stands alone in its lack of honesty when it claims that the tanks are both empty while describing the contrary situation of the tanks containing 320,000 curies of

12

501-9

501-9

This EIS presents the impacts of Phase 1 and Phase 2 of the Phased Decisionmaking Alternative. The environmental impacts of implementing Phase 1 of the Phased Decisionmaking Alternative are described for each resource area in Chapter 4 of this EIS. If this alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. For each resource area, Chapter 4 discusses the impacts that would occur if either removal or close-in-place is selected for Phase 2. The chapter also discusses which alternative(s) bound the impacts in the event that continued active management is selected for the SDA. The short-term impacts of a Phase 2 decision that involves continued active management of the SDA are bounded by either the removal or close-in-place impacts. The post-decommissioning impacts of a continued active management decision for the SDA, which include staffing, occupational exposure, and waste generation related to SDA monitoring and maintenance, as well as long-term impacts on public health and safety, would be similar to the no action impacts for the SDA.

DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flow is into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being further reduced by tank drying. Longer-term monitoring at the site is addressed in the response to Comment no. 501-6.

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1 radioactivity.
 2 I'll have to finish this later. Thank
 3 you.
 4 MODERATOR ROBINSON: Thank you,
 5 Barbara.
 6 Our next speaker will be William Cooke,
 7 and following him will be Tom Ellis.
 8 MR. COOKE: Ladies and gentlemen,
 9 William Cooke, Citizens Campaign for the
 10 Environment, Director of Government
 11 Relations. We represent 80,000 members
 12 across New York. We work on public health
 13 and environmental advocacy.
 14 I want to thank the first speaker very
 15 kindly for her personal comments and her
 16 work on this issue and that of the work of
 17 her organization, Citizens' Environmental
 18 Coalition. My organization supports what
 19 she had to say and just wishes she could
 20 have finished.
 21 CCE strongly opposes the Department of
 22 Energy and the State of New York's NYSERDA
 23 advancing a preferred alternative that will
 24 address one percent of the radioactivity now
 25 and leave the rest, 99 percent, for 30

|| 501-9
cont'd

Additionally, much of the residual contamination in the tanks is attached (i.e., "fixed") to metal surfaces and is not readily mobile. Chapter 2, Section 2.3.1, of this EIS, as well as text in the *Phase 1 Decommissioning Plan*, have been clarified to acknowledge that there are liquids remaining in the tanks that will be dried as a result of installation and operation of the tank and vault drying system and that this drying will be complete before any Waste Tank Farm decommissioning actions are initiated.

502-1 DOE and NYSERDA acknowledge the commentor's opposition to the Phased Decisionmaking Alternative. It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

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1 years. Coincidentally, in 30 years looking
2 around, pretty much everybody in this room
3 will be either very old or dead.

4 I talked to a gentleman before I came
5 in who did some research on this on how to
6 clean it up, and his graduate work, his
7 master's work on cleaning this up, he wrote
8 the paper on it 30 years ago. So 30 years
9 ago we knew what to do. Now we're here
10 talking about what we should do, and in 30
11 years we're going to talk about what we
12 should do.

13 Folks, this is unbelievably easy to us.
14 We think you clean it up. Now, does DOE
15 want to? No. We all know DOE. We know
16 what the deal is. So you come up with a
17 great idea, nice slides, good pictures, good
18 thick stuff. We're going to clean up --
19 we're going to clean up one percent, and
20 then in three decades -- thank God, I'll be
21 gone -- we're going to think about doing
22 some more.

23 So I'm sitting around with my kids
24 explaining this mess to my children, because
25 I'm one of those guys that actually explains

**502-1
cont'd**

Response side of this page intentionally left blank.

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1 stuff to the kids, and my nine-year-old says
2 to me, "So, Dad, can I, like, clean up one
3 percent of the mess in my room and then,
4 like, in 30 years do the rest?" I said,
5 "No, that ain't okay." So my 17-year-old
6 says, "Whoa, Dad, what if we study it? What
7 if we clean up one percent, and then we
8 study it?" I got a nine-year-old kid who
9 gets it. I got a 17-year-old, yeah, not so
10 much.

11 And I got to come here on my time and
12 explain to DOE, you got it wrong. Now, I'm
13 sure the people here aren't the decision
14 makers, but you're the only ones here.
15 Folks, what we want is we want it cleaned
16 up. We don't want you to start in 30 years.
17 We don't want you to do one percent. We
18 want it cleaned up. Get it?

19 Now, the 80,000 of my members couldn't
20 be here tonight. They're working for a
21 living. Like most people, they just don't
22 have the time. So they ask folks like me to
23 take our time to go in and speak to you,
24 okay. What don't you get?

25 MODERATOR ROBINSON: Thank you,

**502-I
cont'd**

502-2 502-2

DOE and NYSERDA acknowledge the commentor's desire for prompt action to address cleanup at the site and preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 Mr. Cooke.
2 Our next speaker will be Tom Ellis,
3 followed by Roger Downs.
4 MR. ELLIS: Good evening, everybody.
5 My name is Tom Ellis, E-l-l-i-s. I live in
6 Albany at 43 North Pine Ave.
7 And I want to thank the DOE for holding
8 a hearing here in Albany. Makes it easy for
9 me to get to.
10 Just a little background about myself.
11 From 1980 to 1986, I attended New York State
12 Public Service Commission hearings in an
13 unsuccessful effort to try to convince the
14 PSC that neither Niagara Mohawk nor its
15 customers could afford Niagara Mohawk's
16 nuclear power program.
17 From 1988 to 1994, I helped lead a
18 group called "Don't Waste New York," and we
19 defeated the New York State Low Level
20 Radioactive Waste Siting Commission and the
21 Nuclear Utilities of New York in their
22 effort to site a low level radioactive waste
23 facility in the rural areas of New York.
24 And then from 1982 to the present, I've
25 worked with a community group called The

Response side of this page intentionally left blank.

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 Community Concerned about NL. NL stands for
2 National Lead Industries. They had an
3 armaments plant about four miles -- about
4 three miles from here. They polluted the
5 whole neighborhood with uranium. They just
6 basically put uranium into a fireplace and
7 burned it. It went up the stacks. About
8 five tons of it landed in the community, and
9 I observed the Department of Energy and the
10 Army Corps of Engineers, and they did a 23
11 year cleanup of that site, spent 190 million
12 dollars on it.

13 I know that cleaning up radioactive
14 properties takes a long time. It takes a
15 lot of money to do it, and there is a lot of
16 studies involved in it, and I know that West
17 Valley is a much more complicated site than
18 the NL site was.

19 So I have some experience dealing with
20 the policy aspects of nuclear waste and the
21 community aspects of it. I think that we
22 are faced with a very difficult pollution
23 situation that cannot be easily repaired no
24 matter what we do.

25 To me it is a matter of common sense

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Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 that it is better to clean up pollution
2 sooner rather than later, today, instead of
3 a generation or two from now, and in the
4 near future rather than possibly never.
5 This is especially so with West Valley
6 because delay allows the radioactive wastes
7 to spread further, to contaminate more land
8 and water and thus increases the cost and
9 difficulties of a real cleanup, whenever
10 that occurs. The primary danger with delay
11 in cleanup is the potential for major leaks
12 of radioactivity that would flow downstream
13 into Lake Erie, over Niagara Falls, into
14 Lake Ontario and out the St. Lawrence River.
15 These are huge water resources that are at
16 risk. Lake Erie and Lake Ontario are among
17 the largest lakes on Earth, and the St.
18 Lawrence River is the second largest river
19 on the planet. Millions of people benefit
20 from these water resources. Should the
21 lakes and the St. Lawrence become highly
22 contaminated with West Valley nuclear
23 wastes, the economic and social impacts
24 would be considerable and possibly
25 irreversible.

503-1 503-1

DOE and NYSERDA acknowledge the commentor's concern about the protection of water resources. Please see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response. The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term) and Section 4.1.10 (long-term). Chapter 4, Section 4.1.6, of this EIS also presents the results of an ecological risk assessment showing the projected long-term ecological impacts of the alternatives. The results of the human health and ecological impacts analysis imply that any economic impacts on the Great Lakes and St. Lawrence River region would be negligible.

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 I have seen photographs of waste being
2 dumped into the West Valley trenches. These
3 trenches are huge, long and deep. I recall
4 several photos of the trenches partially
5 filled with water and with boxes and barrels
6 of wastes. The waste began poisoning the
7 ground water the day they were dumped or
8 placed into the trenches. The drinking
9 water supply of western New York residents
10 is already at risk. The cost of providing
11 safe water to hundreds and thousands of
12 people for long periods of time would be
13 huge, and it is an expense that is best
14 avoided. Delaying a cleanup considerably
15 enhances the likelihood of severe,
16 widespread and long-lasting radioactive
17 pollution.

18 I strongly recommend that the decision
19 makers adopt the statewide removal
20 alternative. I recognize that excavating
21 massive quantities of radioactive waste is a
22 huge and dangerous undertaking. Finding a
23 place where the long-lasting waste can be
24 taken to will not be easy either. In
25 disposing of the waste in a manner that

503-1
cont'd

503-2

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling are discussed in Appendix F.

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 prevents a repeat of what occurred at West
 2 Valley will be a Herculean, technical
 3 challenge, but it is best if the waste can
 4 be placed in a geologically stable and dry
 5 place, wherever that may be. And West
 6 Valley is neither geologically stable nor
 7 dry.
 8 I also believe that excavating the
 9 radioactive waste in the near future and
 10 managing them correctly will have a lower
 11 impact on human health over the long run
 12 than leaving the waste in the soggy ground,
 13 taking some mitigation steps and hoping for
 14 the best.
 15 And, finally, the phased
 16 decision-making alternative is unacceptable
 17 because it would allow 99 percent of the
 18 radioactivity in West Valley to remain for
 19 several additional decades. The high level
 20 of radioactive waste tanks with 300,000
 21 curies are at the end of their life span and
 22 should be remediated now. Thank you.
 23 MODERATOR ROBINSON: Thank you, sir.
 24 That was Tom Ellis. Now we have Roger
 25 Downs followed by Jim Travers.

- | | |
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| 503-2
<i>cont'd</i> | 503-3 It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below). |
| 503-3 | The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected. |
| 503-4 | 503-4 DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE has developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State, or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flow is into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the |

Comments from the Albany, New York, Public Hearing (March 30, 2009)

groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being further reduced by tank drying.

Additionally, much of the residual contamination in the tanks is attached (i.e., “fixed”) to metal surfaces and is not readily mobile. Chapter 2, Section 2.3.1, of this EIS, as well as text in the *Phase 1 Decommissioning Plan for the West Valley Demonstration Project (Phase 1 Decommissioning Plan)*, have been clarified to acknowledge that the liquids remaining in the tanks will be dried as a result of installation and operation of the tank and vault drying system and that this drying will be complete before any Waste Tank Farm decommissioning actions are initiated.

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 MR. DOWNS: My name is Roger Downs.
 2 I'm the acting Conservation Director for the
 3 Sierra Club Atlantic Chapter. We are a
 4 volunteer led environmental organization
 5 with 40,000 members statewide, committed to
 6 the preservation and protection of our lands
 7 and air and water.

8 We have reviewed the Department of
 9 Energy and NYSERDA's Draft Environmental
 10 Impact Statement focused on the cleanup of
 11 the West Valley Nuclear Waste Site. In
 12 consideration of all available and analyzed
 13 options, we find that a complete site wide
 14 removal of this historic radioactive waste
 15 deposit is far superior to the preferred
 16 alternative, which is for the one percent
 17 option, which essentially is to wait 30
 18 years on a final cleanup decision while the
 19 plume of waste continues its subsurface
 20 migration.

21 Clearly, the site wide removal option
 22 provides us the benefit of a complete and
 23 comprehensive cleanup from a site with
 24 serious erosion problems, earthquake
 25 hazards, all above a sole source aquifer.

504-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

504-1

504-2

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Note that during the implementation of Phase 1 of the Phased Decisionmaking Alternative, the source area of the North Plateau Groundwater Plume would be removed. As described in Chapter 2, Section 2.4.3, of this EIS, a permeable treatment wall would be constructed to mitigate the impacts of the non-source area of the plume.

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 Ultimately, we would like to remove any
 2 possibility of a catastrophic release into
 3 community drinking water supplies, including
 4 the Great Lakes, potentially costing
 5 billions in human and ecological losses.
 6 The Sierra Club Atlantic Chapter has
 7 also reviewed the document that Barbara
 8 spoke of, "The Real Costs of Cleaning Up
 9 Nuclear Waste," and we are compelled by the
 10 findings. Essentially leaving buried waste
 11 at the site has more adverse environmental
 12 outcomes and at a greater cost, whereas a
 13 complete site wide cleanup presents the
 14 least risk to the broader population and is
 15 the least expensive long-term option, and
 16 the figures they use are, as Barbara cited,
 17 which is about 9.9 billion for the on-site
 18 cleanup. The site wide cleanup, if we do it
 19 rapidly, whereas the on-site burial will be
 20 13 billion, and I don't know exactly how we
 21 can account for, you know, the exact costs
 22 of contamination or contamination in the
 23 Great Lakes, but it would be in the tens of
 24 billions certainly.
 25 While it is difficult to think in

504-2
cont'd

504-3

504-3

504-2
cont'd

504-2 DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling are discussed in Appendix F. In addition to the previously cited Issue Summaries, please see "Questions about Long-term Erosion Modeling" for further discussion of this issue and DOE's and NYSERDA's response.

DOE and NYSERDA acknowledge the commentor's concern about the protection of water resources. Please see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response. The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term) and Section 4.1.10 (long-term). Chapter 4, Section 4.1.6, of this EIS also presents the results of an ecological risk assessment showing the projected long-term ecological impacts of the alternatives.

504-3 DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for a discussion of the report's issues and DOE's and NYSERDA's response.

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 geologic time, we are convinced that the
 2 West Valley site is fatally vulnerable to
 3 erosion, and that a long-time storage
 4 strategy of radioactive waste is certain to
 5 result in the Great Lakes contamination over
 6 the centuries. The responsibility of
 7 maintaining this site in perpetuity over
 8 hundreds if not thousands of years cannot be
 9 remotely guaranteed. New York State and the
 10 Department of Energy have control over the
 11 present, and in spite of the staggering
 12 cost, full comprehensive cleanup now will be
 13 the bargain of the millennium.

14 We are appreciative of NYSERDA's
 15 separate and critical analysis of the DEIS
 16 and the findings that they claimed were
 17 unscientific and hope that moving forward
 18 meaningful changes will be made to the
 19 document to include clarification on public
 20 disclosure, monitoring protocols and future
 21 obligations under SEQRA. Looking at the
 22 Phase 1, one percent, Phase 2, potentially
 23 99 percent for another 30 years of one
 24 percent, we feel that that constitutes
 25 segmentation under SEQRA. The public is

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| 504-2
<i>cont'd</i> | 504-4 DOE disagrees with many of the points raised in NYSERDA's View, which is included as the Foreword to this EIS. At the core, differences between DOE and NYSERDA center on different views about the nature of analysis required for an EIS and the attendant level of acceptable risk associated with any uncertainties in that analysis as it relates to decisionmaking. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, this EIS (1) acknowledges the information limitation and its relevance to environmental consequence, (2) summarizes existing credible scientific evidence, and (3) presents an analysis using a theoretical approach that is generally accepted by the scientific community involved in such analyses. This Final EIS contains text boxes in the relevant subject matter areas that acknowledge the differences of opinion between DOE and NYSERDA. In general, DOE's position is that the Agency spent much time and effort engaging highly qualified and respected experts in hydrology and hydrological transport, landscape evolution (erosion), human health and environmental risk analysis, and other technical fields, and stands behind the analyses performed for this EIS. |
| 504-1
<i>cont'd</i> | 504-5 DOE and NYSERDA believe the commentor is referring to the fact that the decision to clean up the site will occur in separate phases (Phased Decisionmaking). DOE has not segmented, but instead, has prepared a single, comprehensive EIS for the decommissioning and long-term stewardship of WNYNSC. This EIS adequately analyzes the totality of environmental impacts, including costs, of a broad spectrum of reasonable alternatives that meet the respective purposes and needs of DOE and NYSERDA (Sitewide Close-In-Place, Phased Decisionmaking, and Sitewide Removal), as well as the No Action Alternative. |
| 504-4 | While the Phased Decisionmaking Alternative temporarily defers a final decision on the disposition of the Waste Tank Farm, the NDA, and the Construction and Demolition Debris Landfill, DOE believes that the impacts of this deferred decision are adequately analyzed within this current EIS. Of course, as with all tiered decisions, DOE would continue to assess the results of any site-specific studies along with any emerging technologies to ascertain whether or not a Supplemental EIS is warranted prior to any Phase 2 decision. Based upon data available to date, however, DOE believes this EIS adequately evaluates the environmental impacts associated with the range of reasonable alternatives and the Agency has vigorously resisted all efforts to "segment" this single comprehensive decommissioning EIS into separate NEPA documents. |
| 504-5 | |

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 shut out essentially. Will the public have
 2 more options to comment? It is unclear, but
 3 we feel that it does not live up to the
 4 spirit of SEQRA or NEPA.

5 While we understand the complexity of
 6 this cleanup and the perceived need for a
 7 phased approach to allow for the best
 8 information to guide the process, we find
 9 the current preferred alternative deficient
 10 in its lack of commitment to public
 11 participation, expeditious cleanups and
 12 clarity as to who will eventually fund the
 13 vast majority of those cleanups.

14 Again, we urge the Department of Energy
 15 to take responsibility, while we still can,
 16 and fund the total cleanup of the West
 17 Valley Nuclear Waste Site.

18 Thank you.

19 MODERATOR ROBINSON: Thank you, sir.

20 We have Jim Travers, followed by Jim
 21 Amidon.

22 MR. TRAVERS: Hi. My name is Jim
 23 Travers. I live in Rensselaer, New York. I'm a
 24 member of Save the Pine Bush in Albany, New
 25 York, and a member of

504-6

It is NYSERDA's position that segmentation refers to the improper division of one project into multiple smaller projects in an effort to circumvent NEPA (or SEQR) requirements. NYSERDA does not believe that improper segmentation has occurred in this case because the Phase 1 actions proposed under the Preferred Alternative are independent of and will not bias actions conducted in Phase 2. In other words, the actions proposed under Phase 1 will not automatically trigger certain actions to take place under Phase 2; to the contrary, NYSERDA can opt for any alternative or combination of alternatives during Phase 2. The test for improper segmentation is whether or not projects (in this case Phase 1 and Phase 2) are interdependent. In this case, they are clearly not.

With respect to the 30-year timeframe cited by the commentator, please see the response to Comment no. 504-1.

504-7

Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until a final decision is made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate the Phase 2 decision for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

504-7

DOE notes that its responsibility at WNYNSC is established and defined in the West Valley Demonstration Project Act. It is not within the scope of the EIS to address funding of the alternatives. The U.S. Congress and the President are responsible for establishing funding levels for various Federal Government programs, while the New York State Legislature and the Governor are responsible for establishing funding levels for state government programs. Implementation of the decision made in DOE's Record of Decision and NYSERDA's Findings Statement is contingent on the level of funding allocated.

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 Selkirk-Coeymans-Ravena Against Pollution.
 2 I would have to agree with our last
 3 speakers. Quite frankly, we need this to be
 4 cleaned up immediately. We can't put off
 5 these decisions indefinitely. You've had 60
 6 years to play with this stuff, and you still
 7 haven't gotten it right. You still don't
 8 know what you're doing, and it's poisoned
 9 for thousands and thousands of years. It's
 10 just not fair to the future to delay this by
 11 one iota.
 12 It's not cost effective. You've seen
 13 the cost analysis. It's more cost effective
 14 to clean this up completely now to reduce
 15 the human risk and the great, great risk to
 16 the Great Lakes. I would urge that they be
 17 cleaned up now.
 18 Mr. Downs mentioned segmentation.
 19 That's something to be considered here if
 20 you go with this two option plan. It might
 21 be a little binding by New York State
 22 environmental conservation law to segment
 23 this into more than one project.
 24 It's unconscionable that we're talking
 25 about money and stimulating new energy

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| 505-1 | <p>505-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.</p> <p>505-2 DOE and NYSERDA assume that the commentor is referring to the report, <i>The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)</i> by Synapse Energy Economics, Inc. Please see the Issue Summary for "Conclusions of the Synapse Report" in Section 2 of this CRD for further discussion of the issue and DOE's and NYSERDA's response.</p> <p>505-3 The commentor is referring to the fact that the decision to clean up the site would occur in separate phases (Phased Decisionmaking). DOE has not segmented, but instead, has prepared a single, comprehensive EIS for the decommissioning and long-term stewardship of WNYNSC. This EIS adequately analyzes the totality of environmental impacts, including costs, of a broad spectrum of reasonable alternatives that meet the respective purposes and needs of DOE and NYSERDA (Sitewide Close-In-Place, Phased Decisionmaking, and Sitewide Removal), as well as the No Action Alternative.</p> <p>While the Phased Decisionmaking Alternative temporarily defers a final decision on the disposition of the Waste Tank Farm, the NDA, and the Construction and Demolition Debris Landfill, DOE believes that the impacts of this deferred decision are adequately analyzed within this current EIS. Of course, as with all tiered decisions, DOE would continue to assess the results of any site-specific studies along with any emerging technologies to ascertain whether or not a Supplemental EIS is warranted prior to any Phase 2 decision. Based upon data available to date, however, DOE believes this EIS adequately evaluates the environmental impacts associated with the range of reasonable alternatives and the Agency has vigorously resisted all efforts to "segment" this single comprehensive decommissioning EIS into separate NEPA documents.</p> <p>It is NYSERDA's position that segmentation refers to the improper division of one project into multiple smaller projects in an effort to circumvent NEPA (or SEQR) requirements. NYSERDA does not believe that improper segmentation has occurred in this case because the Phase 1 actions proposed under the Preferred</p> |
| 505-2 | |
| 505-3 | |

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 production of nuclear power plants. I mean,
2 we have created such terrible messes
3 wherever these sites are. There are many of
4 them throughout the country. If you want to
5 wait 30 years, get to work. Thirty years
6 will pass. It's going to be here for a long
7 time doing this, and whatever technology
8 comes along in the future that's going to be
9 useful, just pick it up and run with it from
10 that point on. Let's not wait another 30
11 years. It's going to take you several years
12 just to clean up the one percent. Let's get
13 going. Thank you.

14 MODERATOR ROBINSON: Thank you, sir.

15 The next speaker is John Amidon, and
16 I'll let you know that no one else has
17 signed up. So after Mr. Amidon has
18 finished, I will reopen this to additional
19 speakers.

20 MR. AMIDON: Good evening. My name is
21 John Amidon. I'm a citizen here in Albany,
22 New York, and I'm a member of Veterans for
23 Peace, and the Interfaith Alliance of New
24 York State, and also the Nevada Desert
25 Experience.

Alternative are independent of and would not bias actions conducted in Phase 2. In other words, the actions proposed under Phase 1 would not automatically trigger certain actions to take place under Phase 2; to the contrary, NYSERDA could opt for any alternative or combination of alternatives during Phase 2. The test for improper segmentation is whether or not projects (in this case Phase 1 and Phase 2) are interdependent. In this case, they are clearly not.

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 I think it's vitally important that the
2 West Valley site be cleaned up immediately.
3 There should be no hesitation whatsoever,
4 per the remarks of the previous three
5 gentlemen, Tom Ellis and the Sierra Club
6 spokesperson.
7 We have a huge environmental
8 catastrophe that can be prevented to some
9 degree. We can't make a nuclear waste
10 disappear, but certainly we can store it in
11 an environmentally safer method. I don't
12 know that there is any truly safe
13 containment technology for the types of
14 nuclear waste we've developed; however,
15 there are short-term prevention scenarios
16 which are vitally important for the
17 well-being of our citizens here -- and I
18 speak from living in the city of Albany
19 where we had NL Industries where radioactive
20 tailings from millings were thrown into
21 ponds next door, buried on the electric
22 company's land. It made it into the air and
23 we have about three and a half miles down
24 the road, four miles down the road a super
25 fund cleanup site which has been designated

||| 506-1

506-1

DOE and NYSERDA acknowledge the commentor's desire for prompt action to address site cleanup and preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 clean, but it's not really clean. A hundred
2 eighty million dollars for eleven acres --
3 11.1 acres here in our city -- and people
4 sick, and not the type of environmental
5 studies on our citizens that we needed.

6 So there is a very strong heartfelt
7 interest because I know from my own
8 experience living in this city here how
9 irresponsible the nuclear industry has been
10 as a whole and across the country.

11 Now, here is a chance for the
12 Department of Energy working with citizens
13 and New York State to be truly responsible,
14 as much as might be after the fact because
15 we have known that this waste has been there
16 for a considerable amount of time and there
17 has been litigation to get the Department of
18 Energy to work on this cleanup, but we can't
19 not do it. Our drinking water is at risk.

20 There are other factors, too, involved.
21 We have, as one of the previous gentlemen
22 mentioned, nuclear waste sites all over the
23 country. I was reading about Hanford on the
24 Columbia River. I'm sure you've heard of
25 it. It is mind-boggling that the government

506-2 506-2

DOE and NYSERDA acknowledge the commentor's concern about the protection of water resources. Please see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 and the Department of Energy and other
2 responsible agencies could allow sites like
3 these to happen. Where is the moral
4 responsibility? Don't we as citizens and
5 our own government care about our children
6 and grandchildren?

7 So for all of the above-mentioned
8 reasons, we absolutely have to do this
9 cleanup, and it has to be started
10 immediately. It's already past due. So
11 many places in the country, and we're
12 talking about one specific one.

13 So let's get going. Thank you.

14 MODERATOR ROBINSON: Thank you, sir.

15 Okay, we are in the luxury right now of
16 having more time, and what we will do is I
17 will first open this to anyone who didn't
18 sign up to speak but would now like to.

19 Are there any such people in the room?

20 (No response).

21 MODERATOR ROBINSON: Okay. Then we'll
22 open it up to anybody who already spoke who
23 would like additional opportunity. I think
24 since we are in such a luxury of time, we
25 can allow more than five minutes. So you'll

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**506-I
cont'd**

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Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 know, the reason that we do is because we
2 want to make all the different hearings
3 equal to each other and not allow other
4 people less time to talk. So I think if I
5 probably find agreement here, we will allow
6 you more time than five if you would like
7 that, but before you proceed, though, are
8 there others in the room who want to do it
9 so I make sure we don't shut anybody out or
10 short change anybody.

11 So you're it, ma'am. Tell me how long
12 you would like to speak.

13 MS. WARREN: I don't have that much
14 more to say.

15 MODERATOR ROBINSON: Ten minutes or 15
16 minutes?

17 MS. WARREN: I was in the midst -- if
18 you can remember, I was in the midst of
19 describing the problems with the
20 Environmental Impact Statement, but
21 particularly related to the phased
22 decision-making. So I'm going to continue
23 from where I left off.

24 Another objective of Phase 1 is
25 supposedly to "not prejudice decisions for

501-10

- 501-10** DOE and NYSERDA acknowledge the commentor's concerns that the removal of facilities under Phase I of the Phased Decisionmaking Alternative could affect a future decision on site cleanup.

The decision has already been made to remove many of the facilities and areas identified by the commentor down to their floor slabs or to grade prior to the start of any decommissioning actions (see Chapter 2, Section 2.3.1 of this EIS). These include the Administration Building and Expanded Environmental Laboratory in Waste Management Area 10, as well as most of the facilities in Waste Management Area 5. The decision regarding which facilities would be removed to achieve the interim end state (the EIS starting point) was developed by DOE and NYSERDA after careful consideration of all facilities and areas on WNYNSC. None of the facilities to be closed at the starting point of this EIS are expected, either individually or collectively, to be needed for any decommissioning alternative. None of them would be needed to safely monitor and maintain or support future removal of the vitrified high-level radioactive waste on the site or to assist in other aspects of site decommissioning. Leaving the unneeded facilities in place would require continued maintenance and monitoring, resulting in unnecessary expense. The only facility specifically identified by the commentor that will not have been removed prior to the EIS starting point is the New Warehouse in Waste Management Area 10. The New Warehouse and other facilities and storage areas that would be removed from the site during Phase 1 of the Phased Decommissioning Alternative, if that alternative is selected in DOE's Record of Decision and NYSERDA's Findings Statement, are addressed in Chapter 2, Section 2.4.3.1, of this EIS.

Facilities that would be required for full excavation and cleanup of all site facilities (Sitetwide Removal) are described in the discussion in Chapter 2, Sections 2.4.1.1 and 2.4.1.3, and Appendix C, Section C.3.1, of this EIS.

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 Phase 2." I have no idea what that means;
2 however, it is not clear to me why
3 facilities that have not been impacted by
4 radioactivity are a priority for removal
5 under Phase 1 of the Preferred Alternative
6 such as the new warehouse in Waste
7 Management Area 10. We are concerned that
8 eliminating this facility and others could
9 hinder a full excavation and cleanup of the
10 NDA and the SDA in the future. Also
11 included in this area and slated for
12 demolition are an administration building,
13 an environmental laboratory and a waste
14 management storage area. Where will you
15 store equipment and materials for the
16 planned activities at the site? Where will
17 workers change their clothing and store
18 protective equipment? Where will emergency
19 medical supplies and equipment be stored?
20 We have received none of the rationale for
21 the choice of certain facilities for
22 demolition and not others. There's no
23 description of the future work that's going
24 to be done and in what facilities you're
25 going to need. Why is remote handling

**501-10
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Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 equipment being removed? Will it be needed
 2 to remove the canisters of vitrified high
 3 level waste? At the same time, we don't
 4 have a work plan that describes fully what
 5 facilities will be needed for the work to be
 6 accomplished, including full excavation and
 7 cleanup of all site facilities containing 99
 8 percent of the radioactivity. So we object
 9 to any buildings, facilities or equipment
 10 being removed in Phase 1 that pose no
 11 radioactive or hazardous material problem
 12 unless we're provided with some rationale,
 13 because we can see no benefit to
 14 prioritizing such facilities for removal,
 15 and we fear it will foreclose reasonable and
 16 cost-effective options for full cleanup
 17 later.

18 The Phased Decision-Making Alternative
 19 is an incomplete plan, with inadequate basic
 20 information available to the public, and,
 21 therefore, inadequate environmental
 22 analysis. The current public process fails
 23 the test for public involvement, and there
 24 is no plan laid out for future public
 25 involvement. In fact, under the State

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501-10
cont'd

501-11

501-11 Regarding the adequacy of the environmental analysis performed for the Phased Decisionmaking Alternative, please see the response to Comment no. 501-9. Regarding continued public involvement in Phase 2 decisionmaking under the Phased Decisionmaking Alternative, please see the response to Comment no. 501-8.

Concerning the rest of this comment, DOE and NYSERDA believe the commentator is referring to the fact that the decision to clean up the site would occur in separate phases under the Phased Decisionmaking Alternative. DOE has not segmented, but, instead, has prepared a single, comprehensive EIS for the decommissioning and long-term stewardship of WNYNSC. This EIS adequately analyzes the totality of environmental impacts, including costs, of a broad spectrum of reasonable alternatives that meet the respective purposes and needs of DOE and NYSERDA (Sitewide Close-In-Place, Phased Decisionmaking, and Sitewide Removal), as well as the No Action Alternative.

While the Phased Decisionmaking Alternative temporarily defers a final decision on the disposition of the Waste Tank Farm, the NDA, and the Construction and Demolition Debris Landfill, DOE believes that the impacts of this deferred decision are adequately analyzed within this current EIS. Of course, as with all tiered decisions, DOE would continue to assess the results of any site-specific studies along with any emerging technologies to ascertain whether or not a Supplemental EIS is warranted prior to any Phase 2 decision. Based upon data available to date, however, DOE believes this EIS adequately evaluates the environmental impacts associated with the range of reasonable alternatives and the Agency has vigorously resisted all efforts to "segment" this single comprehensive decommissioning EIS into separate NEPA documents.

It is NYSERDA's position that segmentation refers to the improper division of one project into multiple smaller projects in an effort to circumvent NEPA (or SEQR) requirements. NYSERDA does not believe that improper segmentation has occurred in this case because the Phase 1 actions proposed under the Preferred Alternative are independent of and will not bias actions conducted in Phase 2. In other words, the actions proposed under Phase 1 will not automatically trigger certain actions to take place under Phase 2; to the contrary, NYSERDA can opt for any alternative or combination of alternatives during Phase 2. The test for improper segmentation is whether or not projects (in this case Phase 1 and Phase 2) are interdependent. In this case, they are clearly not.

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 Environmental Quality Review Act, a
 2 segmented plan rather than the complete plan
 3 is prohibited.
 4 The Sitewide Removal Alternative --
 5 full excavation and cleanup -- is the only
 6 alternative that constitutes a complete plan
 7 and that has been adequately described to
 8 the public. The only missing element we can
 9 identify is that RCRA hazardous waste was
 10 not dealt with, but that was not dealt with
 11 for this alternative or for any other
 12 alternative. So right now as it stands the
 13 Site Wide Removal Alternative is the most
 14 complete.
 15 Thank you.
 16 MODERATOR ROBINSON: Thank you,
 17 Barbara. Appreciate that.
 18 MS. WARREN: I'll submit this to you.
 19 MODERATOR ROBINSON: Yes.
 20 Are there any other speakers? Any
 21 commentors?
 22 (No response).
 23 MODERATOR ROBINSON: Okay, then I thank
 24 you all for your participation tonight.
 25 (Whereupon, the public comment portion

501-11
cont'd

501-12

501-12 DOE acknowledges the commentor's support for the Sitewide Removal Alternative. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD. Both the Revised Draft EIS and the Final EIS address management and disposal of RCRA hazardous waste. Chapter 1, Section 1.2, discusses the RCRA background of the site. Chapter 4, Section 4.1.11 and Table 4-46, address the disposition of hazardous waste under each of the alternatives. The long-term performance assessment in Appendix H analyzes the human health consequences of known hazardous constituents. Agency actions would comply with the applicable cleanup and decommissioning criteria for WNYNSC embodied in Federal and New York State environmental, safety, and health regulatory requirements promulgated under various statutory authorities (see Chapter 5 of this Final EIS). As summarized in Chapter 1, Section 1.3, of this Final EIS, these regulatory requirements include, in part, RCRA permitting and corrective actions under New York State and/or EPA requirements, decommissioning according to NRC requirements in its License Termination Rule, and EPA assessments of compliance with National Emission Standards for Hazardous Air Pollutants.

Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 of the public hearing was concluded).
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Comments from the Albany, New York, Public Hearing (March 30, 2009)

1 C E R T I F I C A T I O N
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5 I, MARLENE K. PRESSMAN, a Shorthand
6 Reporter and Notary Public in and for the
7 State of New York, do hereby CERTIFY that
8 the foregoing record taken by me at the time
9 and place as noted in the heading hereof is
10 a true and an accurate transcript of the
11 same, to the best of my ability and belief.
12
13
14

16 MARLENE K. PRESSMAN
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18 DATED:
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Comments from the Seneca Nation of Indians, Irving, New York, Public Hearing (March 31, 2009)

Page 1

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Page 1

REVISED DRAFT
NTAL IMPACT STATEMENT for
OMMISSIONING and/or
ERM STEWARDSHIP at the
DEMONSTRATION PROJECT and
YORK NUCLEAR SERVICE CENTER

Public Comment portion of the Public
Hearing in the above-captioned proceeding held at
the Seneca Nations of Indians, 12837 Route 438,
Irving, New York 14081, on March 31, 2009, 7:00 p.m.

20 REPORTED BY:
21 DOREEN M. SHARICK, Court Reporter
22 EDITH E. FORBES COURT REPORTING SERVICE
23 21 Woodcrest Drive
24 Batavia, New York 14020

EDITH E. FORBES (585) 343-8612

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Comments from the Seneca Nation of Indians, Irving, New York, Public Hearing (March 31, 2009)

1
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3 APPEARANCES:
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5 PAUL BEMBIA,
6 NYSERDA;
7 CATHERINE BOHAN,
8 U.S. Department of Energy;
9 BRYAN BOWER,
10 U.S. Department of Energy;
11 LINDA ROBINSON,
12 Moderator.
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Comments from the Seneca Nation of Indians, Irving, New York, Public Hearing (March 31, 2009)

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25			

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(Presentation commenced and
terminated.)

MS. ROBINSON: Okay. This is the formal period. We will now have the court reporter recording what is said and that will appear in the Comment Response Document of the Environmental Impact Statement, the final one.

Kathy Bohan, the representative of DOE, and Paul Bembia, the representative of NYSERDA, are here to receive and hear your comments. I would appreciate you addressing them as opposed to me.

The court reporter is Doreen Sharick. And her objective is to produce a complete and accurate transcript of the oral comments tonight and the verbatim transcript will be what her product is.

We have as our first speaker tonight from the public, Todd Gates, from the Seneca Nation of Indian Council.

MR. GATES: Todd Gates. I have a resolution here from the Seneca Nation of Indians Tribal Council at the regular session Council held at the Seneca Nation of Indians

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Page 5

March 14th, 2009, at the G.R. Plummer Building
on the Allegany Territory, Salamanca, New
York, to support the West Valley cleanup.

Motion by J. C. Conrad Seneca,
seconded by Donald John, Tribal Council
approves the following resolution:

Whereas, the Seneca Nation of
Indians is a Sovereign Nation recognized by
the United States as such pursuant to the
Treaty of November 11th, 1794, occupying five
territories in Western New York; and

Whereas, the West Valley nuclear
waste site, located 17 miles upstream from the
Nation's Cattaraugus Territory along the
Cattaraugus Creek, is burdened with the vast
amounts of toxic and radioactive wastes, many
of which will remain radioactive for tens of
thousands of years, some for millions,
including plutonium, uranium, strontium-90,
and iodine-129, which can cause leukemia and
cancer at low doses; and

Whereas, the West Valley nuclear
site is the United States' only venture into
commercial reprocessing of irradiated nuclear

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601-1 WNYNSC has inventories of radionuclides and hazardous chemical constituents in the facilities (buildings, lagoons, and waste disposal areas) as well as environmental contamination from past facility operations (e.g., in the North Plateau Groundwater Plume). A description of the facilities and inventories of the radionuclides and hazardous chemical constituents is included in Appendix C of this EIS. This EIS was prepared to evaluate the potential environmental impacts, including impacts from radiological and hazardous chemical constituents, of alternatives for decommissioning and/or long-term stewardship of the site.

The commentor is correct that scientific studies have not clearly demonstrated the existence of a threshold below which exposure to ionizing radiation conveys no risk of health effects. By assuming that the risk of health effects at low doses is proportional to the exposure (i.e., doubling the exposure also doubles the risk), regulatory agencies such as EPA and NRC have adopted a prudent approach to establishing standards to protect human health and the environment from the effects of ionizing radiation. EPA typically regulates radiation exposure based on a lifetime cancer risk of 1×10^{-6} to 1×10^{-4} (1 in a million to 1 in 10,000), consistent with its approach for chemical carcinogens. NRC's license termination dose criterion of 25 millirem per year total effective dose equivalent is consistent with the recommendations of advisory bodies such as the International Commission on Radiological Protection to limit exposures to members of the public from individual sources of radiation. Estimated exposures from the alternatives considered in this EIS are presented throughout this document in a manner that allows a comparison with these levels of protection.

601-2 Chapter 1 of this EIS summarizes the history of WNYNSC. Section 1.1 provides an accurate history of the development of the site and how DOE and NYSERDA became responsible for their respective roles.

Comments from the Seneca Nation of Indians, Irving, New York, Public Hearing (March 31, 2009)

1 fuel, which was operated by Nuclear Fuel
2 Services and resulted in a complete failure in
3 1976 with the company leaving and passing on
4 cleanup responsibilities to the United States
5 Government; and

Whereas, the West Valley site sits
on top of a sole source aquifer that has been
plagued with problems, such as radioactive
contaminated groundwater, radioactivity from
the site has been found as far away as the
shore at the juncture of the Niagara River and
Lake Ontario demonstrating a potential for the
leaking site to contaminate waters flowing
through the Nation's Territories -- this is
close to my heart. That river is our life
blood. And demonstrating the potential for
leaking into the contaminated water supplies
through the Nation's Territories, affecting
the lives of the Seneca people; and

Whereas, the Department of Energy
and New York State Energy Research and
Development Authority are proposing to leave
buried waste onsite, including high level
radioactive waste tanks when such tanks are at

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601-2
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601-3

601-4

- 601-3** Chapter 3, Section 3.6.2.1, of this EIS addresses groundwater at WNYNSC that was contaminated due to past activities (for example, the North Plateau Groundwater Plume). This EIS was prepared to evaluate the environmental impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC. Under all of the action alternatives, DOE would either remove contamination sources, mitigate their impacts to groundwater, or both. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the North Plateau Groundwater Plume. Potential groundwater impacts associated with the EIS alternatives are discussed in Chapter 4, Sections 4.1.4 and 4.1.10, and Appendix H of this Final EIS.

The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program.

601-4 Some of the alternatives evaluated in this EIS, including the Preferred Alternative (Phased Decisionmaking), could result in some facilities and waste remaining on the site, including the high-level radioactive waste tanks. Under the Phased Decisionmaking Alternative, action would be undertaken during Phase 1 for all facilities except the Waste Tank Farm, NDA, SDA, and Construction and Demolition Debris Landfill. Options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close in place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. DOE is required by the West Valley Demonstration Project Act to decontaminate and decommission the waste storage tanks and facilities used to solidify high-level radioactive waste, as well as any material and hardware used in connection with the WVDP, in accordance with such requirements as NRC may prescribe.

DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE has developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this

Comments from the Seneca Nation of Indians, Irving, New York, Public Hearing (March 31, 2009)

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1 the end of their useful lives and could leak
2 contamination at any time and delay final
3 cleanup decisions for up to 30 years; and

4 Whereas, various economists and
5 scientists recently released the first-ever
6 study on the long-term cleanup costs, The Real
7 Cost of Cleaning Up Nuclear Waste: A Full
8 Cost Accounting of Cleanup Options for the
9 West Valley Nuclear Site, funded by the New
10 York State grant sponsored by Senator
11 Catherine Young, representing Olean area, and
12 conducted by the Synapse Energy Economics,
13 experts from Tufts University, SUNY Fredonia
14 and Radioactive Waste Management Associates;
15 and

16 Whereas, the study investigated the
17 cost of digging up radioactive waste versus
18 leaving waste buried onsite for the next 1,000
19 years and found that a full waste excavation
20 cleanup costs less, at 9.9 billion, and
21 presents the least risk to the population that
22 leaving buried waste onsite, at 13 billion,
23 and which also carries high risks to human
24 populations, including a potential cost of \$27

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601-4
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601-6

system and the drying of the tank inventories is part of the Interim End State or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flows into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being further reduced by tank drying. Additionally, much of the residual contamination in the tanks is attached (i.e., "fixed") to metal surfaces and is not readily mobile.

601-5 Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed the Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected.

601-6 DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for “Conclusions of the *Synapse Report*” in Section 2 of this CRD for a discussion of the report’s issues and DOE’s and NYSERDA’s response.

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Page 8

1 billion or more if catastrophic release of
 2 radioactive waste contaminated drinking water
 3 supplies; and
 4
 5 Whereas, scientists have found that
 6 erosion was a powerful and fast moving force
 7 in the region, which means that leaving buried
 8 radioactive waste onsite poses a risk to the
 9 Nation and its people if controls fail and
 10 dangerous radioactive waste spills and
 11 pollutes the Cattaraugus Creek; and
 12
 13 Now, therefore, be it resolved, that
 14 the Council of the Seneca Nation of Indians
 hereby supports the full cleanup of the entire
 15 West Valley nuclear waste site through waste
 excavation and adoption of cleanup standards
 16 that are at least as protective as current New
 17 York State radiation standards and
 18 unrestricted use toxic standards, and they are
 19 fully protective of vulnerable population,
 20 including children, fish, wildlife and water;
 21 and
 22 Further resolved, that the President
 23 is authorized and directed to distribute
 24 official copies of this resolution to
 25

- | | |
|-------------------------|--|
| 601-6
cont'd | 601-7 DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in this EIS. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. In addition to the previously cited Issue Summaries, please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response. |
| 601-7 | 601-8 DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response. |
| 601-8 | Agency actions will comply with the applicable cleanup and decommissioning criteria for WNYNSC embodied in Federal and New York State environmental, safety, and health regulatory requirements promulgated under various statutory authorities (see Chapter 5 of this Final EIS). As summarized in Chapter 1, Section 1.3, of this Final EIS, these regulatory requirements include RCRA permitting and corrective actions under New York State and/or EPA requirements, decommissioning according to NRC requirements in its License Termination Rule, and EPA assessments of compliance with National Emission Standards for Hazardous Air Pollutants. |

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1 appropriate United States and New York State
2 Energy officials, including the U.S.
3 Department of Energy and its New York State
4 Energy and Research Development Authority.
5 Unanimously approved.

I also want to state that it's been
a problem and it needs to be addressed. And
like I said before, as a traditional believer,
our responsibility to look out for the
subsequent generations and the radioactive
being in that water out there, there is a
plume and it's affecting not only my family,
but all these people sitting here. And it's
about time we did something about it, and I
just appreciate everyone's concern here
because it is our responsibility to look after
the earth. And there was no thinking that
took place in the -- it was irresponsible for
them to put it there. As the Seneca Nation,
we have been here for time and memorial as
responsible neighbors for a whole community of
not only Western New York but the whole Turtle
Island, I feel it is the responsibility for
the officials to cleanup that entire site in

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Comments from the Seneca Nation of Indians, Irving, New York, Public Hearing (March 31, 2009)

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1 into the desk outside and they will be taken
2 as your written comments, also. They might
3 vary some from it. Let's start. The first
4 and second people to come would be Tony Memmo,
5 first, followed by Alan Kettle.

6 MR. MEMMO: Hi, I'm Tony Memmo.
7 I'm with the Seneca Nation of Indians
8 Environmental Protection Department and I'm a
9 member of the Citizens Task Force at the West
10 Valley site. I have a prepared statement to
11 read from the West Valley Citizen Task Force.

12 The Citizens Task Force was formed
13 in 1997 to assist in the development of a
14 Preferred Alternative for the completion of
15 the West Valley Demonstration Project and
16 cleanup, closure and/or long-term management
17 of the facilities at the site. The group has
18 18 members with representatives from the
19 affected communities. After its formation,
20 the CTF met for 18 months and studied the
21 issues before releasing a report in July,
22 1998. The report details the CTF's
23 expectations with respect to Policies,
24 Priorities and Guidelines for a Preferred

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5 For more than a decade since the
6 report was issued, the CTF has been meeting
7 regularly with DOE and NYSERDA. We've also
8 received numerous presentations from the
9 regulatory agencies and advocated with elected
10 officials on behalf of cleanup at the site.
11 We believe that our ongoing active involvement
12 has been essential to a number of cleanup
13 activities underway or planned at the West
14 Valley Demonstration Project.

The CTF appreciates the project to date and the work of the Core Team agencies in arriving at a Preferred Alternative, something that was missing in the 1996 Draft EIS. The Core Team agencies are to be commended for overcoming significant differences and for working together to arrive at a Preferred Alternative.

23 The CTF also appreciates the DOE and
24 NYSERDA are planning to accomplish cleanup
25 work at the site that the CTF deems essential,

12
Page 12

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including removal of the source area of the North Plateau Groundwater Plume and a significant number of contaminated facilities.

We're actively working on written comments to be submitted later this spring. Based on our review to date of the Draft EIS, we would like DOE and NYSERDA and the public to understand in broad terms what we anticipate will be essential views expressed in those comments.

First, the proposed Preferred Alternative Phase 1 work meets the Policies and Priorities articulated in the CTF 1998 Final Report. The CTF strongly encourages that this work be completed without further delay and in a manner that enhances future decisions regarding cleanup on the site. The CTF desires that performance measurements for this work be clearly articulated and adhered to.

Second, the CTF stands by the Policies and Priorities articulated in its 1998 Final Report. Including, among other things:

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- 602-1** DOE and NYSERDA note the comment. If the Phased Decisionmaking Alternative were selected, during Phase 1, DOE would conduct additional studies and evaluations to clarify and possibly reduce technical uncertainties related to the decision on final decommissioning and long-term management of the site. During Phase 1 and prior to implementation of Phase 2, DOE and NYSERDA would seek information about improved technologies for in-place containment and for exhumation of the tanks and burial areas that may become available. DOE and NYSERDA would continue to assess the results of any site-specific studies along with any emerging technologies to support a Phase 2 decision. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement.

602-2 DOE and NYSERDA acknowledge the commentor's opinion on the unsuitability of the WNYNSC site for long-term storage or disposal of wastes. This EIS analyzes the impacts of the alternatives on the environment including human health and safety during the decommissioning timeframe and during the post-decommissioning timeframe if waste and contamination remains on site.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling are discussed in Appendix F. This EIS addresses potential impacts of climate change through sensitivity analyses, but does not attempt to address extreme global-scale climate change. The analysis of doses due to unmitigated erosion uses a gully advance rate associated with a climate that is wetter than current site conditions. Please see the Issue Summary, "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for additional discussion.

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1 The protection of human health and
2 safety of the environment is paramount.

3 Our 1998 Report states that the CTF
4 does not believe that the geological,
5 hydrologic and climate conditions of the site
6 are suitable for long-term, permanent storage
7 or disposal of long-lived radionuclides.
8 After 11 years of continued education on the
9 characteristics of the site, we are more
10 convinced of this and we feel that the level
11 of the risk from exposure is such that
12 reliance on institutional controls over a
13 prolonged period, hundreds or thousands of
14 years, is not feasible.

15 Third, decisions and studies should
16 be performed during Phase 1 that assess and
17 support the eventual goal of a full cleanup of
18 the site and reassesses the technologies and
19 volume of waste disposal associated with
20 exhumation which may alter estimates of safety
21 risks and costs.

22 Finally, if the Preferred
23 Alternative and its phased decisionmaking
24 approach is selected, we feel that the views

**602-2
cont'd**

602-3 Studies would be performed during Phase 1 of the Phased Decisionmaking Alternative for the purpose of further characterizing the site and evaluating technology developments and engineering to aid consensus decisionmaking for Phase 2 if the Phased Decisionmaking Alternative is selected. Please see the response to Comment no. 602-1.

602-4 Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until a final decision is made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate the Phase 2 decision for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input. Regulatory bodies involved in permitting and licensing activities at WNYNSC would be responsible for defining the review and public involvement process for their activities.

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1 of the public should be considered on an
2 ongoing basis. The public should be allowed
3 full opportunity for review and comment on
4 later subsequent proposals that might lead to
5 anything --

6 MS. ROBINSON: One minute. Keep
7 going. One minute.

8 MR. MEMO: Oh, I'm sorry.
9 Anything less than unrestricted release. If
10 an ongoing assessment period occurs, there
11 will be many interim decisions and site work
12 that will have far reaching impacts on human
13 health and the environment. The decision and
14 planning for the work should also be subject
15 to regular ongoing public consultation to
16 ensure that viable options are not precluded.
17 Regulatory reviews, permitting and licensing
18 should contain commitments from the
19 appropriate agencies, beyond minimal legal
20 requirements, to seek and incorporate the
21 views of the community in making decisions
22 regarding the future of the site.

23 Over the coming months the CTF will
24 be developing more detailed written comments

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**602-4
cont'd**

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**602-4
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6 MS. ROBINSON: Thank you, sir.
7 Okay. Allen Kettle, Anne Rabe. Did I
8 mispronounce?

9 MR. KETTLE: Did you call my
10 name?

11 MS. ROBINSON: Alan Kett

25 MS. ROBINSON: Thank you, sir.

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603-1

603-1 DOE and NYSERDA note the commentor's preference for cleanup of the WNYNSC site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

This EIS analyzes the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. These projected impacts are presented in Chapter 4, Section 4.1.10, and Appendix H of this EIS. Chapter 4, Section 4.1.6, of this EIS also presents the results of an ecological risk assessment showing the projected long-term ecological impacts of the alternatives. Please also see the Issue Summary for “Concerns about Potential Contamination of Water” in Section 2 of this CRD for further discussion of this issue and DOE’s and NYSERDA’s response.

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1 Next is Anne Rabe. Did I pronounce that
2 correctly?
3
4 MS. RABE: No.
5 MS. ROBINSON: Say it for me,
6 please?
7 MS. RABE: Sure. I'm Anne Rabe.
8 I'm with the national organization, the Center
9 for Health Environment and Justice.
10 MS. ROBINSON: Excuse me. I
11 didn't name the next person so they can be
12 prepared. Next will be a group, will be Don
13 Longfellow and Pat Shelly. Sorry to interrupt
14 you.
15 MS. RABE: I first want to start
16 out by saying our organization as well as a
17 number of other environmental organizations
18 has sent a number of requests to the
19 Department of Energy and NYSERDA requesting
20 that the hearing format be one that supports
21 the tenance of public participation and we're
22 deeply disappointed that the Department of
23 Energy stopped any effort to have a more
24 flexible public participation oriented public
25 hearing where people can come and speak for

604-1

604-1 DOE and NYSERDA note the comment. The public meetings on the Revised Draft EIS followed the standard format used in similar meetings for other EISs. The presentations provided by DOE and NYSERDA representatives were intended to provide necessary information regarding the proposed action to those who were less familiar with the project. Questions were allowed to help clarify the technical points of the presentations. The 5-minute time limit allotted to commentors afterward was intended to provide an opportunity for a maximum number of attendees to comment on the Revised Draft EIS. Commentors with more extensive comments that would exceed the 5-minute limit were encouraged to submit their views via paper comment sheets provided at the meeting, the EIS Internet website, U.S. mail, or a toll-free fax number. It should be noted that time was available at the end of all the public meetings for commentors with lengthier comments to speak a second time. This ensured that all speakers were able to complete their comments after everyone wishing to speak had been afforded an initial opportunity. DOE and NYSERDA have responded to all comments received on the Revised Draft EIS in this CRD.

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more than five minutes after waiting 14 years to comment on this proposal and they can speak early in the evening as opposed to being talked at, having to go an open house for the first hour and a half of the event so just another formal complaint that this is an unacceptable public participation, public hearing.

Our organization started around the
Love Canal toxic waste site in Niagara Falls.
Our director, Lois Gibbs, was a community
leader there. I've been working on the West
Valley issue with New York State Assembly and
then with environmental organizations since
the mid eighties and I'm deeply, deeply
disappointed to see NYSERDA's support of this
Department of Energy lead Preferred
Alternative for a phase decisionmaking. Our
organization calls this phase decisionmaking
the one percent punt and the reason we call it
that is because what they didn't tell you in
the presentation earlier today is that all the
new cleanup they are talking about doing in
Phase 1 addresses one percent of the new

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604-1
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604-2

- 604-2** Implementation of the Phased Decisionmaking Alternative would make an important advance in the decommissioning of WNYNSC within the initial 8 years. The cleanup that would take place during Phase 1 of the Preferred Alternative, as explained in Chapter 2, Section 2.4.3, of this EIS, would reduce or eliminate potential health or environmental impacts by removing major facilities (such as the Main Plant Process Building and lagoons). In addition, the source area for the North Plateau Groundwater Plume would be removed, thereby reducing the source of radionuclides that are potential contributors to human health or environmental impacts. If the Phased Decisionmaking Alternative is selected, the agencies intend to make the Phase 2 decision as soon as possible.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

DOE and NYSERDA assume that the commentor is referring to the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc. Please see the Issue Summaries for “Support for Sitewide Removal of All Radioactive and Hazardous Wastes” and “Conclusions of the Synapse Report” in Section 2 of this CRD for further discussion of these issues and DOE’s and NYSERDA’s responses.

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and

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1 cleanup, one percent of the site's
2 radioactivity. It leaves remaining -- it
3 punts the question of how to cleanup the
4 remaining 99 percent of the radioactivity at
5 the site. We feel that's unacceptable. We
6 feel that we have the evidence now that shows
7 exhumation is the only cost effective,
8 environmentally sound, public health
9 protective approach to protect the Great Lakes
10 Region, to protect the Seneca Nation's land.
11 It's the only acceptable approach and to punt
12 the question yet again for up to three decades
13 of whether we're going to dig up the waste at
14 West Valley, while we watch high level tanks
15 nearing the end of their life, their 50 year
16 design life, and wait and wait and wait and
17 watch contamination continuing to leak
18 potentially, it's just -- it's just kind of
19 mind boggling that our state agency, NYSERDA,
20 would support the federal Department of
21 Energy's Preferred Phase decisionmaking
22 approach.

24 We will be submitting more detailed
25 comments and we will also be testifying at the

NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

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1 other hearings later this week. So I won't go
 2 into a lot of detail. I'm just sort of giving
 3 the highlights. We obviously oppose leaving
 4 buried waste on the site because as scientists
 5 and economists discovered in their three year
 6 investigation into low cost accounting report.
 7 It was discussed earlier, the erosion at West
 8 Valley is a powerful and fast moving force.
 9 It sits on a geologic young landscape which is
 10 undergoing a relatively rapid rate of erosion.
 11 There's just no good reason why
 12 you'd even consider a No Action Alternative or
 13 a Closed-In Place Alternative. There is also
 14 no good reason why you'd consider waiting for
 15 three decades to decide whether or not to dig
 16 it up. It's clear that we need to figure out
 17 how to dig it up. If we have uncertainties,
 18 that needs to be the subject of the DEIS and
 19 we don't need a state agency signing on to the
 20 DEIS that says in the same breath in the
 21 forward of the DEIS that the Department of
 22 Energy's performance assessment for In-Place
 23 Closure is seriously flawed and scientifically
 24 indefensible. It's just -- you know, there's
 25

604-3

604-4

604-3 DOE and NYSERDA acknowledge the commentor's opposition to leaving waste on site. DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling are discussed in Appendix F. Please see the Issue Summaries, "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

604-4 DOE Response: DOE began the Core Team process in November 2006, with the agencies involved in the EIS, to work toward resolution of technical issues that were impeding progress of the document. NYSERDA agreed to join this process in March 2007. Since that time, DOE and NYSERDA have worked cooperatively to advance the NEPA process for the West Valley Site. In parallel, DOE and NYSERDA have engaged in settlement discussions, limited to issues of cost allocation, related to the December 18, 2006 legal action filed by NYSERDA.

NYSERDA Response: As explained in the Foreword to the Draft Environmental Impact Statement (DEIS), NYSERDA's view is that a defensible long-term performance assessment does not exist today for West Valley. Absent such an assessment, important decisions regarding the closure of facilities cannot be made.

NYSERDA supports the Preferred Alternative, which allows for removal of significant contamination, while further studies can be undertaken to improve our long-term analyses in support of a Phase 2 decision.

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2 a big disconnect there having our state agency
3 support a document and a Preferred Alternative
4 that's based on scientifically indefensible
5 data and assessment.

6 So clearly, there is a war going on
7 between the DOE and NYSERDA and we're, again,
8 the victims of it. We're going to have to
9 wait up to 30 years until the agencies finally
10 figure out how and when they can exhume the
11 waste at the site. It's unacceptable and I
12 think there's going to be growing public
13 outrage when people start to realize this.
14 One percent punt is not good enough and it's
15 unacceptable. Thank you.

16 MS. ROBINSON: Thank you, Anne.
17 The next person is -- there's two people and
18 there is Don Longfellow and Pat Shelly
19 followed by Diane D'Arrigo.

20 MR. LONGFELLOW: Hi, I'm number
21 one. She is DD number two and if you listen
22 to us, you'll know what to do.

23 MS. ROBINSON: I'll just suggest
24 so they can hear you if you move it, they
25 don't hear you very well. It sputters.

604-4
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MR. LONGFELLOW: Oka
Valley is a real hot potato.

MS. SHELLY: I know, a 30 year old hot potato. And in fact, even earlier. In 1963, they began burying nuclear waste on the West Valley site.

8 MR. LONGFELLOW: Yeah, and who's
9 responsible for cleaning it up? Is it New
10 York State or is it the feds?

11 MS. SHELLY: Well, that is the
12 latest hot potato. The Environmental Impact
13 Statement draft says that the feds, the
14 Department of Energy, will be involved, but
15 then could toss the potato to the State of New
16 York and leave us in New York with 99 percent
17 of the radioactive junk that's still on the
18 site, and then, not make a decision for what
19 to do with it for up to another 30 years.

20 MR. LONGFELLOW: Oh, so, what
21 does that mean for us, and for all of those
22 that are still living in the radioactivity in
23 our waters. Heck, I live 40 miles from here
24 in Buffalo. And it's reaching our water
25 supply and it even reaches Lake Ontario. So

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- 605-1** Chapter 1 of this EIS summarizes the history of WNYNSC. Section 1.1 provides an accurate history of the development of the site and how DOE and NYSERDA became responsible for their respective roles.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected (see below).

The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

DOE will remain on site until it completes its responsibilities as assigned under the West Valley Demonstration Project Act. DOE would not be leaving the site after completion of the Phase 1 actions because it would not have completed the actions required under the Act. The description of the Phased Decisionmaking Alternative in Chapter 2 of the EIS has been revised to clarify this.

605-2 The contamination at the juncture of the Niagara River and Lake Ontario was the result of releases from the site when reprocessing operations were in progress. The environmental contamination from current operations is minimal

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1 what do we want to see happen?

2
3 MS. SHELLY: It really makes the
4 most sense and is safer for us, our children,
5 our grand and great grand and great great
6 grandchildren, and all who come after us to
7 clean it up now or this potato is just going
8 to get hotter. So, what's the plan?9 MR. LONGFELLOW: Well, well, we
10 don't have any -- we don't want any plan that
11 ignores the progressive erosion at the West
12 valley site. The gullies that may breach the
13 buried waste and the increased radiation will
14 enter our land, waters, animals and fish and
15 all the humans, too. So, what is the best
16 option?17 MS. SHELLY: Don't wait 30 years
18 to go through this process again to decide
19 what needs to be done. If we cleanup West
20 Valley now, we can avoid having radioactivity
21 as a threat not to mention that the cost in 30
22 years will be that much more expensive. So,
23 sitewide removal, it's the way to go.

24 MR. LONGFELLOW: You bet.

25 MS. SHELLY: And it should

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(below established standards), as demonstrated by the results from the ongoing environmental monitoring program. Please see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

605-3 DOE and NYSERDA note the commentors' preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. Chapter 4, Section 4.1.6, of this EIS also presents the results of an ecological risk assessment showing the projected long-term ecological impacts of the alternatives.

In addition to the Issue Summary for "Concerns about Potential Contamination in Water," please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

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605-1
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2 include all site cleanup of the already leaked
3 radioactive junk.

4 MR. LONGFELLOW: Right, again.
5 And that makes for a permanent and safe
6 solution for those before the site erodes
7 further and leaks more.

8 MS. SHELLY: So, to protect our
9 health and the health of future generations we
10 cannot leave the waste buried at West Valley.

11 MR. LONGFELLOW: Or the people
12 downstream will need more than oven mitts to
13 handle this hot potato.

14 MS. SHELLY: Let's put an end to
15 it and dig it up.

16 MR. LONGFELLOW: Dig it up and
17 ship it home. Ship it out. Ship it home
18 wherever that would be. Thank you.

19 MS. SHELLY: Thank you. And we
20 do live in Buffalo and we have been concerned
21 about West Valley since 1980. We're not part
22 of an organized group. We're a group of two,
23 Downstream Denizens and we are really
24 concerned about the waterways and we are
25 really concerned about the impact as been

605-3
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1 spoken of before for the land and all its
2 peoples, and the animals, and the fish and the
3 birds and I really hope that you consider that
4 that we feel that this is urgent. That this
5 cannot go on. And that the Phase 1 and Phase
6 2 idea is a bad idea. I thank you for the
7 opportunity to testify, comment.

8
9 MS. ROBINSON: Thank you, Denizen
10 Downstreams. Next speakers will be Diane
11 D'Arrigo and followed by Barbara Warren.

12 MS. D'ARRIGO: My name is Diane
13 D'Arrigo. I'm with Nuclear Information and
14 Resource Service, which is a national
15 organization part of the growing West Valley
16 Action Network made up of dozens of
17 organizations locally here, Western New York,
18 New York State, nationally and
19 internationally. Got groups in Canada as
20 well.

21 I am a native Western New York
22 resident and grew up and have been tracking
23 this site since 1979, part of the coalition on
24 West Valley nuclear waste. The thing I think
25 what is most important is that the waste

605-3
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1 that's buried at the site not only in the
2 plume that's migrating but also in the tanks,
3 in the buildings, in the trenches and in the
4 burial holes, includes radioactivity that is
5 hazardous into the very long long time frames.
6 It's hazardous now. It will be hazardous into
7 thousands and millions of years.

8
9 We also have geological information
10 which even the Department of Energy indicated
11 in its 1996 EIS that this area is going to
12 erode into the Great Lakes in the next 1,200
13 years. The independent geologists for NYSERDA
14 and then the independent geologists from SUNY
15 Fredonia, who is part of the full cost
16 accounting study, have confirmed that and, in
17 fact, Mike Wilson has said that it could even
18 happen as soon as 150 to 300 years. There
19 could be serious erosion and movement of that
20 waste into the surrounding streams and into
21 potentially the water supplies through the
22 Cattaraugus and into Erie.

23 The fact that this could happen now
24 or that it could happen in the long-term
25 future, says to me that we don't wait to dig

606-1 606-1

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling are discussed in Appendix F. Please see the Issue Summaries for "Concerns about Potential Contamination of Water," "Questions about Long-term Erosion Modeling," and "Conclusions of the Synapse Report" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

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1 up the material. We make the decision now.
2
3 We prevent more of these plumes from
4 happening. We are told that the plume is from
5 the Process Building. The Process Building is
6 near the tanks. How do we know the tanks
7 aren't part of the source. It may be a bad
8 precedent for DOE to dig up our few tanks when
9 they have got hundreds elsewhere, but that
10 shouldn't be the excuse to not protect our
11 area.

12 So our organization supports the
13 full removal, full sitewide removal option.
14 We do have concerns about the destination
15 places where wastes would go, but we, also,
16 believe that the lesson needs to be learned
17 that the radioactive material from nuclear
18 power and from nuclear weapons does not have a
19 solution because on one hand DOE is saying we
20 can't deal with the waste. If we dig it up,
21 there's nowhere for us to send it. We can't,
22 you know, get rid of it fast enough so maybe
23 we should just leave it in the ground and
24 decide over the next 30 years. On the other
25 hand, DOE is promoting new reprocessing

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606-2 The information about the integrity of both the Main Plant Process Building and the Waste Tank Farm, as well as the information about local hydrology and the characterization of the plume composition, are all consistent with the finding that the Main Plant Process Building is the source of the North Plateau Groundwater Plume. In addition, the extensive WNYNSC environmental monitoring program, which is designed to detect possible movement of contamination on the site, as well as specialized studies, have concluded that the source of the North Plateau Groundwater Plume is the Main Plant Process Building. The plume is discussed in Chapter 3, Section 3.6.2.1, and Appendix C, Section C.2.13, of this EIS.

Regarding the amount of radioactivity addressed under the Phased Decisionmaking Alternative, it is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

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606-3 Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

DOE and NYSERDA note the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale

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1 facilities around the country under GNAP or
2 AFCI or various different acronyms and also,
3 giving taxpayer money to utilities to build
4 new nuclear plants including potentially one
5 here in New York State, which would generate
6 the exact waste that we are plagued with at
7 this site. So the lesson needs to be brought
8 home to the other parts of the Department of
9 Energy and to New York State on its decisions
10 on future energy.

11 I think that the phased alternative
12 as was said earlier, one percent of the
13 radioactivity leaving 99 percent there, of
14 course, we support the work that's being
15 proposed in Phase 1, but that ought to be just
16 done as part of the full cleanup and the whole
17 plan enacted immediately. We don't need more
18 information to determine how to dig it up or
19 when to dig it up. If we make the decision to
20 dig it up, then we proceed with how it's going
21 to be managed and we manage it responsibly
22 from there.

23 MS. ROBINSON: Thank you. Next
24 will be Barbara Warren followed by Sam Miller.
25

will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

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1 MS. WARREN: Good evening, my
2 name is Barbara Warren. I'm the executive
3 director of Citizens Environmental Coalition.
4 It's a statewide coalition for environmental
5 groups.

6
7 Tonight, I want to focus a little
8 bit more on the EIS, the Environmental Impact
9 Statement, particularly, the Preferred
10 Alternative or the one percent solution that
11 we are calling it. Phase one will handle just
12 1.2 percent of radioactivity on this site and
13 the other 99 percent would be left and we know
14 almost nothing about what would happen in
15 Phase 2.

16 I want to emphasize that when the
17 agencies presented a slide here tonight about
18 December, 2009, they would issue a ROD, a
19 Record of Decision. That's it. That's it.
20 That's the end. They've made the decision.
21 This is our opportunity. It ends June 8th.
22 We submit comments. That's the last they hear
23 from us. They issue their decision and we
24 know nothing about what's going to happen in
25 Phase 2. We weren't involved in Phase 1

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607-1 It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement if the Phased Decisionmaking Alternative is selected (see below).

The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Chapter 2, Section 2.4.3, of this EIS describes decommissioning activities under the Phased Decisionmaking Alternative and provides a discussion of the data collection, studies, and monitoring to be performed during implementation of Phase 1 and the purpose of each of these activities. The overall intent of these Phase 1 activities is to further characterize the site and to research technology developments and engineering to aid consensus decisionmaking for Phase 2. Section 2.4.3.3 explains how the additional data and studies would be used in making decisions for potential future activities. The intent of this EIS is to provide a description of the environmental impacts of each of the alternatives to inform the agency decisionmakers.

Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased

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1 because they didn't tell us anything about the
 2 data collection phase. They haven't told us
 3 what they are going to do with that whole data
 4 collection phase.

5 I want to emphasize the whole point
 6 of an Environmental Impact Statement is to
 7 develop a complete plan or a project to give
 8 full public disclosure of what an agency is
 9 going to do so that the public can
 10 participate. Once they have identified all
 11 the elements of their project, then they have
 12 to look at each and every Environmental Impact
 13 Statement and study it and tell you about it.
 14 Well, they can't tell you about it when they
 15 haven't told you what they are going to do in
 16 Phase 2. They can't even tell you what data
 17 they are going to collect in Phase 1 that's
 18 going to help them make that decision. They
 19 are going to make decisions after they leave
 20 here, after they get their comments June 8th,
 21 they are going to make decisions to collect
 22 data.

23 They are going to go to their
 24 offices and they're going to make decisions

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607-2

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Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until a final decision is made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate the Phase 2 decision for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

The purpose of an EIS under NEPA and its implementing regulations is to ensure that (1) Federal agencies consider the potential environmental impacts of proposed actions in their decisionmaking processes, (2) the potentially affected public has the opportunity to review and comment on those actions, and (3) the opinions of the public are also considered in preparing the EIS, and thus, by the decisionmakers. DOE has more than met its obligations under NEPA, both in the letter and the spirit of the law. DOE has been transparent in its conduct of NEPA activities at WNYNSC, including ensuring timely notification of proposed NEPA documents and opportunities for public participation. In addition, an 18-member Citizen Task Force sponsored by both DOE and NYSERDA was formed in 1997 and has met regularly since 1998 to discuss issues regarding facility closure and long-term management, including future site use, long-term stewardship, and regulatory issues. Further, DOE holds quarterly public meetings to discuss activities at WNYNSC and progress on decommissioning the site, including the NEPA process to further those activities.

As acknowledged in this EIS, long-term monitoring and maintenance would be required for alternatives that would leave waste on site. This EIS provides a summary description of current and potential future environmental monitoring programs. Long-term monitoring and maintenance are described in Chapter 2, Sections 2.4.2.6 and 2.4.3.8. Long-term monitoring and institutional controls are also discussed in Chapter 6. Additional information about current and proposed monitoring and institutional controls is provided in Appendices C, H, and I.

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1 without us. We are not there because we
2 weren't part of the process. They kept us in
3 the dark. They treated us like mushrooms.
4 And then they are going to be making the
5 decisions for this entire site. Now, that's a
6 problem. There is no legitimate public
7 process here. We've been left out. The phase
8 decisionmaking alternative fundamentally
9 leaves the public out and that is not a
10 legitimate Environmental Impact Statement.
11 You don't meet the fundamental criteria for
12 it.

13 The other piece of this is we can't
14 even talk about long-term stewardship when we
15 haven't decontaminated and decommissioned this
16 site. I want to mention that about some of
17 the history here. That about 50 years ago the
18 Federal government embarked on a plan to
19 reprocess the nation's nuclear waste using
20 private entities. The government was very
21 enthusiastic and optimistic that its plan
22 would work successfully and as a result, sold
23 the public and the State on the plan. 50
24 years later, it's pretty clear that the plan

Chapter 2, Table 2-4, includes estimates of the environmental consequences if (1) monitoring and maintenance are successful (institutional controls remain in place) and (2) monitoring and maintenance programs fail (institutional controls are lost).

Detailed information regarding long-term monitoring and maintenance programs and institutional controls under alternatives that would leave waste on site has not been specifically defined at this time. Such definition would occur after an alternative is selected for implementation and would include consultation with appropriate regulatory authorities. An element of the long-term programs would be the development of plans and procedures for responding to emergencies. These plans and procedures would include coordination and agreements with local police and fire departments and medical facilities.

Public involvement in the Phase 2 decisionmaking process is addressed in the response to Comment no. 607-1 above.

Chapter 1 of this EIS summarizes the history of WNYNSC. Section 1.1 provides an accurate history of the development of the site and how DOE and NYSERDA became responsible for their respective roles.

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2 was a stupendous failure. The private
3 operator walked away from the project. A long
4 list of accidents and spills have left the
5 site extensively contaminated. These are not
6 my words. These are the DOE and NYSERDA
7 words, extensively contaminated.

8 The government now has the
9 responsibility for the site. The perpetual
10 care fund, that was supposed to be a fund with
11 enough money to adequately fund and deal with
12 the massive amount of radioactive material
13 that has to be isolated and contained for
14 thousands of years. The risks to groundwater,
15 to surface water, the Great Lakes and public
16 health are enormous.

Well, this same agency, these same
agencies that were involved in all this, mind
you the site has been actively managed since
at least 1966 with multiple agencies as well
as the private operator. Now, they want to go
to a lower level of management and that
process that I just described for you for the
phased alternatives where we haven't been told
anything where they are going to make all the

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1 decisions on their own, these are the same
 2 people that have effectively contaminated all
 3 this site and created all the problems. So
 4 the public has to question, we may have been
 5 fooled once by the optimism and the
 6 salesmanship regarding reprocessing, but it
 7 really is unlikely that we are going to be
 8 fooled again.

10 MS. ROBINSON: One minute.

11 MS. WARREN: 50 years of
 12 experience went beyond the (inaudible) that
 13 undermined that trust and increased our
 14 skepticism. It is like you're trying to sell
 15 us a car right now by showing us two tires.
 16 It's just not enough. Thank you.

17 MS. ROBINSON: Thank you, ma'am.

18 Our next speaker will be Sam Miller followed
 19 by Ray Vaughan.

20 MR. MILLER: Thanks. I live in
 21 East Aurora. I drink Lake Erie water. It's
 22 my main reason for being here is the risk to
 23 the drinking water that is there for most
 24 Western New Yorkers from Lake Erie.

25 I picked up some new information

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608-1 DOE and NYSERDA acknowledge the commentor's concern about risks to drinking water. Please see the Issue Summaries for "Concerns about Potential Contamination of Water" and "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

DOE and NYSERDA would like to emphasize that there are differences between the Sitewide Removal and Phased Decisionmaking Alternatives. If the Phased Decisionmaking Alternative is selected, during Phase 1, DOE would conduct additional studies and evaluations to clarify and possibly reduce technical uncertainties related to the decision on final decommissioning and long-term management of the site. A variety of studies would be implemented to further characterize the site and to research technology developments. The information gathering conducted during Phase 1 is expected to provide data to aid consensus decisionmaking for Phase 2 activities. Phase 2 activities could include sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements.

DOE will remain on site until it completes its responsibilities as assigned under the West Valley Demonstration Project Act. DOE would not leave the site after completion of the Phase 1 actions because it would not have completed the actions required under the Act. The description of the Phased Decisionmaking Alternative in Chapter 2 of the EIS has been revised to clarify this, and the wording in the *Phase 1 Decommissioning Plan for the West Valley Demonstration Project* has been revised to avoid any implication that DOE would leave the site at the end of Phase 1.

DOE disagrees with many of the points raised in NYSERDA's View, which is included as the Foreword to this EIS. At the core, differences between DOE and NYSERDA center on different views about the nature of analysis required for an EIS and the attendant level of acceptable risk associated with any uncertainties in that analysis as it relates to decisionmaking. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, this EIS (1) acknowledges the information limitation and its relevance to environmental consequence, (2) summarizes existing credible

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scientific evidence, and (3) presents an analysis using a theoretical approach that is generally accepted by the scientific community involved in such analyses. This Final EIS contains text boxes in the relevant subject matter areas that acknowledge the differences of opinion between DOE and NYSERDA. In general, DOE's position is that the Agency spent much time and effort engaging highly qualified and respected experts in hydrology and hydrological transport, landscape evolution (erosion), human health and environmental risk analysis, and other technical fields, and stands behind the analyses performed for this EIS.

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2 MS. ROBINSON: Thank you, sir.
3 Our next speaker is Ray Vaughan followed by
4 Kathy McGoldrick.

5 MR. VAUGHAN: Good evening. I'm
6 Ray Vaughan. I'm a resident of Hamburg. I'm
7 been involved as a citizen in looking at the
8 West Valley site issues since 1978. I'm also
9 like Tony Memo a member of the West Valley
10 Citizen Task Force.

I expect to submit extensive written comments. My only comment for tonight is I think it would be appropriate for at least tomorrow night's and the next night's meetings to use up less time up front with allowing people to talk to the people at the bulletin boards and easels, less time with the presentations and not put this five minute time limit on. Most people have not gone on and on. I don't think you need to impose a time limit. I would suggest giving more time to people who have something to say. Thank you.

24 MS. ROBINSON: Thank you, sir.
25 Kathy McGoldrick and Maria Maybee following.

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609-1 **609-1** DOE and NYSERDA note the comment. The public meetings on the Revised Draft EIS followed the standard format used in similar meetings for other EISs. The presentations provided by DOE and NYSERDA representatives were intended to provide necessary information regarding the proposed action to those who were less familiar with the project. Questions were allowed to help clarify the technical points of the presentations. The 5-minute time limit allotted to commentors afterward was intended to provide an opportunity for a maximum number of attendees to comment on the Revised Draft EIS. Commentors with more extensive comments that would exceed the 5-minute limit were encouraged to submit their views via paper comment sheets provided at the meeting, the EIS Internet website, U.S. mail, or a toll-free fax number. It should be noted that time was available at the end of all the public meetings for commentors with lengthier comments to speak a second time. This ensured that all speakers were able to complete their comments after everyone wishing to speak had been afforded an initial opportunity. DOE and NYSERDA have responded to all comments received on the Revised Draft EIS in this CRD.

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1 MS. McGOLDRICK: Hi, I'm Kathy
2 McGoldrick with the West Valley Coalition on
3 Nuclear Wastes.
4
5 Historically, the Coalition on West
6 Valley Nuclear Wastes has taken the position
7 that there should be a full cleanup of the
8 West Valley nuclear site, ultimately, leaving
9 the site available for unrestricted use.
10 This, then, includes the complete exhumation
11 of the burial grounds and the high level waste
12 tanks.
13
14 We have concerns regarding the
15 Department of Energy's Preferred Alternative,
16 which calls for up to 30 years before a final
17 cleanup decision is made. We would like to
18 believe that this hesitation is truly to buy
19 the wisdom of time. However, some of us find
20 that hard to believe. Some of us have been
21 here since 1980 when Westinghouse and the DOE
22 came to West Valley to deal with the mess left
23 after only six years of reprocessing; and
24 although we have undoubtedly seen some
25 progress, we have seen little in the way of
final resolution for that once beautiful site.

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- | | |
|--------------|--|
| 610-1 | 610-1 DOE and NYSERDA note the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response. |
| 610-2 | 610-2 DOE and NYSERDA note the comment. Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected. |

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The public needs to be secure in knowing that there is every intent to cleanup the entire West Valley site, and that at the end of Phase 1, there will not be a 30 year coma after which the DOE comes to and determines to leave in-situ the high level waste tanks and the burial grounds. There must be a continuous decisionmaking process involving the public, the end result of which is removal of all the waste from West Valley. It is critical that the DOE confirm that it will continue its responsibility and commitment to fully remediate the site. There

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610-3 Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until a final decision is made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate the Phase 2 decision for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WYNNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WYNNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (please see the response to Comment no. 610-2).

It should be noted that the decision for implementation of Phase 2 could be sitewide removal of remaining facilities and contamination (Sitewide Removal Alternative), in-place closure of remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements.

DOE will remain on site until it completes its responsibilities as assigned under the West Valley Demonstration Project Act. DOE would not leave the site after

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1 must be no lapse in the process which helps us
 2 determine how to best meet the decommissioning
 3 requirements prescribed by the NRC under the
 4 West Valley Demonstration Project Act and set
 5 forth in the NRC's license termination rule.

6 After Phase 1, the West Valley site
 7 will still suffer the SDA and NDA burial
 8 grounds, the North Plateau Groundwater Plume,
 9 the Waste Tank Farm, and more likely than not,
 10 streambed sediment contamination and the
 11 cesium Prong of Surface Soil. We are
 12 concerned that the ultimate decisions made
 13 regarding these wastes will be subject to DEIS
 14 erosion analysis which is questionable. Even
 15 NYSERDA raises serious issues with the DOE's
 16 erosion study processes. It is quite likely
 17 by other analyses that the West Valley site
 18 will be subject to erosion that could allow
 19 these wastes to enter the waterways which feed
 20 into Lakes Erie and Ontario far sooner than
 21 the DEIS suggests.

22 The DEIS soil erosion analysis is
 23 not scientifically defensible over the
 24 long-term and should not be used for long-term

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completion of the Phase 1 actions because it would not have completed the actions required under the Act. The description of the Phased Decisionmaking Alternative in Chapter 2 of this EIS has been revised to clarify this, and the wording in the *Phase 1 Decommissioning Plan for the West Valley Demonstration Project* has been revised to avoid any implication that DOE would leave the site at the end of Phase 1.

610-4 DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. The erosion analysis that is presented in Appendix F of this EIS is considered to be scientifically defensible and, consistent with NEPA requirements, uses a theoretical approach that is accepted in the scientific community for evaluating long-term erosion.

DOE disagrees with many of the points raised in NYSERDA's View, which is included as the Foreword to this EIS. At the core, differences between DOE and NYSERDA center on different views about the nature of analysis required for an EIS and the attendant level of acceptable risk associated with any uncertainties in that analysis as it relates to decisionmaking. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, this EIS (1) acknowledges the information limitation and its relevance to environmental consequence, (2) summarizes existing credible scientific evidence, and (3) presents an analysis using a theoretical approach that is generally accepted by the scientific community involved in such analyses. This Final EIS contains text boxes in the relevant subject matter areas that acknowledge the differences of opinion between DOE and NYSERDA. In general, DOE's position is that the agency spent much time and effort engaging highly qualified and respected experts in hydrology and hydrological transport, landscape evolution (erosion), human health and environmental risk analysis, and other technical fields, and stands behind the analyses performed for this EIS.

Please see the Issue Summaries for "Concerns about Potential Contamination of Water" and "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of these issues.

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1 decisionmaking. The groundwater contaminate
2 transport analysis and modeling used in the
3 DEIS cannot be relied on to predict public
4 radiation doses and long-term cleanup
5 decisions. Erosion and waste transport burial
6 performance has not been substantiated and may
7 be overly optimistic. Especially for these
8 reasons, we cannot accept a study process
9 which leaves open the potential for the DOE to
10 walk away from the site after 30 years, or to
11 choose the Sitewide Close-In Place Alternative
12 or any variable thereof.

Anything less than ultimate cleanup
of the site is unreasonable and unethical.

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2 energy really be if we included the cost of
3 appropriately dealing with the associated
4 nuclear waste? If the push toward new nuclear
5 is, as I suspect, about ultimate corporate
6 control of our energy resources, then I am
7 reminded of where unbridled control of our
8 nation's resources by the few has gotten us
9 today.

23 MS. ROBINSON: Thank you. Our
24 next speaker is Maria Maybee followed by
25 Adrian Stevens.

EDITH E. FORBES (585) 343-8612

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2 Page 41

3 MS. MAYBEE: My name is Maria
4 Maybee. And I am a member of the Seneca
5 Nation of Indians and I'm born into the Heron
6 Clan and I'd like to offer you a gift from the
7 Cattaraugus Creek. It's really good. I had
8 some last night.

9 I was born in 1961. And was sitting
10 around this afternoon having dinner with other
11 people coming to the hearing. I understand
12 that's when the trenches were being built '61
13 to '63. And I grew up on this reservation
14 near the creek. I come from a family that
15 fishes alot. My cousin, Todd, holds the
16 trophy for one of the best spearers here half
17 the time. As a kid, you know, summer times
18 and after school when it was nice out, we were
19 allowed to walk from our home down to the end
20 of the reservation woods near Gowanda to the
21 creek. And we ate a lot of the things along
22 the way. You know, we knew where the rhubarb
23 was. We knew where the wild onions were. Dig
24 'em up and bring 'em home. We'd eat the
25 berries. We knew how to fish. And we even
 knew how to cook them by the creek, you know.

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1 I was buried in the sand along the side of the
2 creek many times by my older brothers and
3 sisters while they snuck off to have a
4 cigarette. We used to sleep in the rocks in
5 the middle of the creek. And my parents I
6 don't think would have ever let me do that if
7 they realized what I was really playing in.

8
9 Shortly after that, I can't remember
10 the year, and I haven't heard anybody mention
11 it here is that it was an Act of Congress to
12 clean that up for the citizens of this region
13 and further said, please clean this up and
14 Congress said, yeah. And I don't know to what
15 level. I don't know if Congress -- I haven't
16 read anything in quite a while, but is that
17 being followed or is this just another way of
18 putting it off for another 30 years. I am not
19 happy with that.

20 I suffered different illnesses that
21 I understand can be contributed to the West
22 Valley site as well as the Peter Cooper site.
23 So the combination is not very good at all.
24 Where I live now as an adult is at the mouth
25 of the Cattaraugus Creek. 25 feet from my

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611-1 611-1

As discussed in Chapter 1, Section 1.1, of this EIS, the West Valley Demonstration Project Act was passed by Congress in 1980. The Act called for DOE to perform the following five actions: (1) Solidify, in a form suitable for transportation and disposal, the high-level radioactive waste at WNYNSC; (2) develop containers suitable for the permanent disposal of the high-level radioactive waste solidified at WNYNSC; (3) transport as soon as feasible, in accordance with applicable provisions of law, the waste solidified at WNYNSC to an appropriate Federal repository for permanent disposal; (4) dispose of low-level radioactive waste and transuranic waste produced under the project by the solidification of the high-level radioactive waste in accordance with applicable licensing requirements; and (5) decontaminate and decommission the tanks, facilities, material, and hardware used in the solidification of the high-level radioactive waste and in connection with WVDP in accordance with such requirements as NRC may prescribe.

At this time, DOE has completed the first two actions. As stated in the Purpose and Need for Agency Action (Chapter 1, Section 1.3, of this EIS), the Act requires DOE to decontaminate and decommission the waste storage tanks and facilities used in the solidification of high-level radioactive waste, as well as any material and hardware used in connection with WVDP, in accordance with such requirements as NRC may prescribe. This EIS evaluates alternatives by which DOE would complete its responsibilities under the West Valley Demonstration Project Act.

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1 porch is the river. My nieces and nephews put
2 a big rope from the tree so they could swing
3 out into there. When they swing out into
4 there, they go into muck, you know, many
5 inches deep. It's fun for them, but I wonder
6 should I tell them not to.

7 You know, there's so many different
8 levels I've heard people speak of here. You
9 know, from the drinking water, my territory
10 gets their water from Erie County. And Erie
11 County gets their water from Lake Erie and
12 Cattaraugus Creek flows right into Lake Erie
13 not far from where the intakes are. When I
14 read the water report, I'm not clear that it's
15 even tested for any of the waste that comes
16 from the site that you're responsible for. So
17 are you responsible for the waste as well as
18 the site or just the site?

19 You know, on a health factor, I
20 understand that, you know, some of the
21 diseases that, you know, are a big trigger are
22 lung disease and bone cancer. I don't know if
23 you've ever helped somebody die from that, but
24 I have. You know, I rubbed my cousin's back

611-2 611-2

Chapter 3, Section 3.6.1, of this EIS provides detailed information on surface water flow from WNYNSC to Cattaraugus Creek and Lake Erie, as well as the New York State water classification and state pollutant discharge elimination permit for WNYNSC. Figures 3-20 and 3-22 present the onsite and offsite surface water and soil/sediment sampling station locations, which are part of the WNYNSC environmental monitoring program. These locations are periodically monitored for radionuclide content. The monitoring results can be found in the annual site environmental monitoring reports.

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1 and broken ribs and she still enjoyed the back
2 rub, you know, shortly before she died.

3
4 I have nieces and nephews that have
5 to go to special classes, you know, because
6 they are mentally -- or disabled. You know,
7 they have developmental problems. Is that
8 from us eating that fish, my sister's eating
9 that fish? I think there could be some
10 correlation.

11 This is really personal to me. You
12 know, I have probably close to a hundred
13 nieces and nephews at this point. And they
14 are going to be responsible to stand up and do
15 this in 30 years. And if it's the preferred
16 decision that's taken, they are going to drive
17 by there and they are not going to think it's
18 a problem because it's going to look really
19 pretty. You won't get to see those black
20 tarps from the road. You won't be able to see
21 any of the buildings or any of the equipment.
22 It will be gone. So it will appear as though
23 it's fine and appearances we all know make a
24 difference on what people do and don't do.

25 I hope that I'm not wasting my time

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611-3

611-3 Implementation of the Preferred Alternative (Phased Decisionmaking) would make an important advance in the decommissioning of the WNYNSC within the initial 8 years. If the Phased Decisionmaking Alternative is selected, the cleanup that would take place during Phase 1 of the Preferred Alternative, as explained in Chapter 2, Section 2.4.3, of this EIS, would reduce or eliminate potential health or environmental impacts by removing major facilities (such as the Main Plant Process Building and lagoons). In addition, the source area for the North Plateau Groundwater Plume would be removed, thereby reducing the source of radionuclides that are potential contributors to human health or environmental impacts. The nonsource area would be contained by the permeable treatment wall. Other buildings and the geomembrane covers would remain until a Phase 2 decision is made and implemented.

Regarding the 30 years cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected. Please see the Issue Summary "Modified Phased Decisionmaking Alternative" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

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1 as well as all these other people making these
2 public comments that we don't want this
3 because that's been the majority of comments
4 that I've heard. We don't want this decision,
5 that we want it all cleaned up because the
6 preferred decision leaves waste and it leaves
7 it too long. I'm not comfortable with who
8 makes that decision. So I asked that question
9 earlier.

10 So we've walked for the water from
11 the mouth of the creek all the way to West
12 Valley and were heckled when we got to the
13 door for they asked us why we were there. And
14 we told them we were here for the water. We
15 were on a spiritual journey to, you know, let
16 the water know that we care. You know, the
17 guards were like, oh, that's all cleaned up.
18 It's no problem. I'm not a scientist, but I
19 know a lot scientists and they tell me it's
20 not a good thing. She keeps flashing her red
21 thing at me.

22 I will provide more written comment
23 and come for the rest of the days. I implore
24 upon you to look at this from a human point.

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611-4 611-4

DOE and NYSERDA acknowledge the commentator's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

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2 You guys have children, too. Do you want them
3 to be healthy? And I really believe that this
4 site will set a precedence across the nation
5 of taking better care of our waste, so that
6 when it does have a leak, we can take care of
7 it and not have to worry about plumes getting
8 out into the creek and et cetera. So thank
9 you.

10 MS. ROBINSON: Thank you. Next
11 speaker is Adrian Stevens, followed by our
12 final speaker, who signed up at least,
13 Lawrence Behan.

14 MR. STEVENS: I had originally
15 signed up not knowing that Todd was going to
16 be here to read the resolution that Tribal
17 Council had submitted. So I defer.

18 MS. ROBINSON: I thought that
19 might happen. Okay.

20 MR. STEVENS: Thank you.
21 MS. ROBINSON: Thank you. Next
22 we have Lawrence Barber.

23 MR. BEHAN: My name is Larry
24 Behan. And I wanted to speak to uncertainty.
25 I'm here representing the Sierra Club and the

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Comments from the Seneca Nation of Indians, Irving, New York, Public Hearing (March 31, 2009)

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2 Adirondack Mountain Club. In Western New York
3 these two clubs have about 3,000 members and
4 both organizations have been following this
5 West Valley issue for a long time. And we are
6 of the opinion that all of that nuclear waste
7 has to come out of West Valley and go some
8 place else.

And the one thing that is obvious
about them, the one thing that is certain, the
least uncertainty is that they are gradually
eroding. I mean anybody that spends any time
there will tell you of the roaring brooks in
the spring time of the mud slides of the muddy
water that's running down Cattaraugus Creek.
It's a well known -- it's a geological fact

612-1

612-2

- 612-1** DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

612-2 DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

Please see the Issue Summaries for "Concerns about Potential Contamination of Water" and "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

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1 that that area once was a plain, the bottom of
2 a lake. And it is now riddled with beautiful
3 streams, gorges and that plateau, that area
4 that West Valley Nuclear Center is on is
5 gradually eroding. The whole darn thing is
6 eventually going to go down Cattaraugus Creek
7 and out into Lake Erie and down the Saint
8 Lawrence and along with it, that nuclear waste
9 is going to ride along until we get it out of
10 there. That nuclear waste is going to last
11 hundreds of thousands of years.

13 Lynn and I took a drive down to West
14 Valley just recently as the snow pack was
15 melting. Cattaraugus Creek was roaring.
16 Buttermilk Creek was roaring. We took a drive
17 down Coby Hill Road into Cattaraugus Creek
18 where the 219 has just been started in. And
19 where everybody has known for a long time the
20 soil is unstable. You drive down in there.
21 219 has slid part way into Zoar Valley and
22 part way into Cattaraugus Creek. You look up
23 the hill, there's a house that's off of its
24 foundation. The trees are turning sideways.
25 The whole area is subject to erosion. There

612-2
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2 Page 49

3 is no uncertainty about that at all. We need
4 to get that nuclear waste out of there before
5 it comes down and is dissolved into Lake Erie.

6 Thank you.

7 MS. ROBINSON: Thank you, sir.
8 Okay. According to my list, that's everybody
9 who signed up. Did I miss anybody who did
10 sign up? Okay. Then we now have time if
11 there is somebody who didn't sign up and would
12 like to speak now, you may do that. Ma'am,
13 when do you come up, please identify yourself
14 since we don't have your name written down so
15 that the court reporter can get it.

16 MS. HAMEISTER: My name is Joanne
17 Hameister, H-A-M-E-I-S-T-E-R. I am chairman
18 of the West Valley Coalition, but tonight, I'd
19 like to speak for myself. I've been involved
20 with this issue for a long time. I'll be
21 offering the coalition's comments tomorrow
22 night.

23 A lot has bubbled up and it happens
24 an awful lot in my mind. I've been involved
25 with first the legal women voters. I've been
 involved with the coalition since 1977.

||| 612-1
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12 Dealing with leaky and bathtubbing
13 burial grounds, monitoring wells to follow the
14 progress of the plume and trying to intercept
15 it, \$2.5 million to exhume eight tanks and the
16 NDA leaking kerosene laden with plutonium, and
17 we still don't know where the plutonium went.

18 This escalation of time, of money,
19 talent, research, more questions than answers,
20 more studies than solutions, convinces me that
21 we have to promote more responsibility in the
22 nuclear industry and other industries as well,
23 that we have to have a solution for these
24 legacy wastes and future wastes of so-called
25 progress before we start producing them.

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The West Valley site has its very own Act of Congress, the West Valley Demonstrate Project Act, which charges you with demonstrating that the wastes at West Valley can be cleaned up, decommissioned and decontaminated. I charge you to do it. Let's get on with it.

I continue to worry also about seriousness with which all these comments are considered in your decision process, which by the way is afforded to us under NEPA and SEORA.

In point of fact, you are required only to receive these comments but not necessarily to listen to us. In preparing for them today, I did return to a prior EIS comments made by the Coalition and relived my disappointment and depression. There continues to be a cavalier attitude in many cases and mainly, we get the ever present trust me type of bureaucratic answer.

Please listen to us. Whether or not we are lawyers, mathematicians or scientists, our concerns are real and we are entitled by

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613-1

613-1

DOE and NYSERDA seriously considered the concerns expressed in all comments received on the Revised Draft EIS. DOE and NYSERDA view public involvement as an essential component in the decisionmaking process. Each comment received was reviewed by a team that included policy experts, subject matter experts, and NEPA specialists. Comments were reviewed throughout the course of the response process as new information became available or as aspects of this EIS changed. Responses to all of the comments are provided in Section 3 of this CRD.

DOE and NYSERDA point out that NEPA and SEQR are processes for providing agency decisionmakers with an assessment of reasonably foreseeable environmental consequences of alternative actions along with public comments on the EIS and agency responses to those comments. Agencies make their decisions based on a consideration of many factors beyond the environmental analysis presented in an EIS and the number and nature of public comments on an EIS. A Federal agency decision and its supporting rationale is documented in a Record of Decision published in the *Federal Register*. New York State agency decisions and supporting rationale are documented in a Findings Statement published in an New York State *Environmental Notice Bulletin*.

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5:
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2 virtue of birth and life and a very simple act
3 of being to have an effect on and validation
4 of your decision process. Thank you.

5 MS. ROBINSON: Thank you, ma'am.
6 Is there anyone else who didn't sign up who
7 would like to? Ma'am, would you also please
8 identify yourself?

Another concern is even if it

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614-1

614-1 DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term) and Section 4.1.10 (long-term). Chapter 4, Section 4.1.6, of this EIS also presents the results of an ecological risk assessment showing the projected long-term ecological impacts of the alternatives. The results of the human health and ecological impacts analysis imply that any impacts on wildlife would be negligible.

Please see the Issue Summaries for “Concerns about Potential Contamination of Water” and “Questions about Long-term Erosion Modeling” in Section 2 of this CRD for further discussion of these issues and DOE’s and NYSERDA’s responses.

As acknowledged in this EIS, long-term monitoring and maintenance would be required for alternatives that would leave waste on site. This EIS provides a summary description of current and potential future environmental monitoring programs. Long-term monitoring and maintenance are described in Chapter 2, Sections 2.4.2.6 and 2.4.3.8. Long-term monitoring and institutional controls are also discussed in Chapter 6. Additional information about current and proposed monitoring and institutional controls is provided in Appendices C, H, and I. Chapter 2, Table 2-4, includes estimates of the environmental consequences if (1) monitoring and maintenance are successful (institutional controls remain in place) and (2) monitoring and maintenance programs fail (institutional controls are lost).

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1 doesn't rain, if there's a lot of wave action
 2 from high winds, a lot of wave action that
 3 also stirs up the sediment. I was looking at
 4 the photo in the booklet and you can see where
 5 the line of the sediment is going down. So
 6 that even though it's away from the actual
 7 lakeshore, it's coming in.

8
 9 So my concerns are obviously for
 10 myself and for my children and I walk the
 11 beach. It's a beautiful beach area. I enjoy
 12 birding. I see the shore birds there as was
 13 mentioned before. You know, that's my concern
 14 for nature.

15 I feel fortunate that at Woodlawn
 16 Beach at least they test the water every day
 17 so we know. You know, it's made public, but
 18 up in Hamburg Beach, which is only a couple
 19 miles up the road, they don't test as often so
 20 people are swimming over there and they are
 21 swimming unaware of what kind of contamination
 22 is in there. So I just wanted to express
 23 those concerns.

24 I feel that there should be no other
 25 choice except to have full removal. And the

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**614-1
cont'd**

614-2

614-2 DOE acknowledges the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

In the Final EIS, the duration of implementation of the Sitewide Removal Alternative was estimated to be 60 years. The 30 years referred to in the comment relates to the Phased Decisionmaking Alternative (see below).

The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Phase 2 would complete decommissioning and would have a duration of several years to several decades. DOE will remain on site until it completes its responsibilities as assigned under the West Valley Demonstration Project Act. DOE would not leave the site after completion of the Phase 1 actions because it would not have completed the actions required under the Act.

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1 other concern was, you know, the 30 years?
2 What happens if it's a 64 year project? What
3 happens to the other 34 years? Who's going to
4 monitor that? Thank you.

5 MS. ROBINSON: Thank you, ma'am.
6 Anyone else who did not sign up to speak who
7 would like to? Okay. Is there anybody who
8 already spoke who would like to? Ma'am?

9 MS. D'ARRIGO: I forgot to
10 repeat, Diane D'Arrigo. We want more time to
11 comment. Yes, we had a longer public comment
12 period on this than most EIS's, Environmental
13 Impact Statements, but we need more time to
14 make sure that the rest of the residents in
15 this area know what's being decided and can
16 give some input. So we are asking -- I mean
17 basically, it's just a reiteration of a
18 request that numerous of our organizations
19 have made to the Department of Energy and
20 NYSERDA for an extension of the comment period
21 until October 30th and that request has been
22 denied, but we are re-requesting it and saying
23 that there are quite a few people here, there
24 were a few people in Albany last night, but

614-2
cont'd

606-4 606-4

In response to requests from the public, DOE and NYSERDA extended the original 6-month comment period (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE) for an additional 90 days, through September 8, 2009.

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12 MS. ROBINSON: Thank you, ma'am.
13 Anybody else like to speak? Yes. Remind her
14 who you are, please?

15 MS. RABE: I'm Anne Rabe with the
16 Center for Health Environment and Justice.
17 I'd like to echo what Diane D'Arrigo said. We
18 both represent national organizations. We
19 both worked on West Valley for over 25 years.
20 We both watched lots of DEIS processes, lots
21 of superfund clean up site processes over the
22 country. And I have to say this is a huge
23 complex site that, you know, we have been
24 waiting a decade and a half for this Draft
25 Environmental Impact Statement and yet we are

606-4
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604-4
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1 seeing an agency that unlike any other time
 2 I've seen in New York State with any other
 3 agency where you have a six month comment
 4 period and you collapse into that a public
 5 availability session open house with a public
 6 hearing and you deny people without any good
 7 reason, having an extension of the public
 8 comment period on a highly technical Draft
 9 Environmental Impact Statement and the
 10 NYSERDA's report, which raises a lot of serious
 11 issues with the Draft Environmental Impact
 12 Statement and the NRC's, Nuclear Regulatory
 13 Commission's decommissioning plan, so there is
 14 three documents to delve into. And we were
 15 just given quickly a no from both NYSERDA and
 16 DOE when we asked for an extension in the
 17 comment period. We need extra time. We don't
 18 have any technical assistance grant, like the
 19 super fund sites to hire economists to look at
 20 the cost evaluations, to hire scientists. We
 21 have to go find volunteers like the wonderful
 22 Professor Mike Wilson from SUNY Fredonia, who
 23 really knows what this is about, the erosion
 24 problems, who says in previous EIS's and I

**604-1
cont'd**

604-5

DOE and NYSERDA acknowledge the commentator's opposition to the Sitewide Close-In-Place Alternative. DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. As stated in the Issue Summary on "Conclusions of the *Synapse Report*," the erosion analysis in this Final EIS is considered to be consistent with state-of-the-art analytical capabilities. The uncertainties in the erosion analysis are acknowledged in the discussions on erosion in Section 2.4 of this CRD and Appendix F of this EIS.

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1 would suspect this one as well, we'll have to
2 wait for his opinion on that, but you know,
3 basically, the DOE is yet, again, denying the
4 serious erosion problems at West Valley
5 inevitable. We can't even look at a Close-In
6 Place Alternative. We shouldn't be looking at
7 a Close-In Place decision. We really need an
8 extension of the public comment period. We're
9 going to go to Governor Paterson. We have a
10 letter at the table back there that people who
11 would like to sign, we are going to be
12 delivering to Governor Paterson next week.
13 And basically, urges the Governor to reverse
14 NYSERDA's support of the phased decisionmaking
15 approach, and also, to request an extension of
16 the comment period because it's untenable.
17 It's anti-Great Lakes protection approach to
18 have a phase decisionmaking and to punt this
19 issue of when and how we are going to cleanup
20 West Valley for another three decades. We
21 don't have to do that. We have all the
22 evidence now. We need to dig up the waste.
23 And we need our state agency and our Governor
24 to support digging up the waste and we need to
25

604-5
cont'd

604-6

604-6 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be provided in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Regarding the 30 years cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected. Please see the Issue Summary "Modified Phased Decisionmaking Alternative" in Section 2 of this CRD.

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Comments from the Seneca Nation of Indians, Irving, New York, Public Hearing (March 31, 2009)

1 put lots of pressure on the Federal Department
2 of Energy through our Congress members,
3 through our Senators, to get them to reverse
4 this misguided approach to walk away from this
5 site and study, study, study for another 30
6 years. It's unacceptable. Thank you.
7

8 MS. ROBINSON: Thank you, ma'am.
9 Sir, you have to remind her, again, who you
10 are, please?

11 MR. KETTLE: What's that?
12 MS. ROBINSON: Remind her again
13 who you are again, please, the court reporter?
14 MR. KETTLE: (Spoke in Native
15 Tongue.) Alan Kettle. I just wanted to say
16 that when I speak for the Creator that we have
17 a great relationship to everything that he
18 made, the earth, the water, the wind,
19 everything. And you know, when you people
20 first came here, you called us savages, dirty
21 filthy savages. And it seems the only thing
22 America has done in this world is to destroy
23 or try to destroy everything that the Creator
24 has made. And you're very irresponsible for
25 what you guys do.

604-6
cont'd

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Comments from the Seneca Nation of Indians, Irving, New York, Public Hearing (March 31, 2009)

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603-2 | 603-2

DOE and NYSERDA acknowledge the commentator's position regarding impacts to the earth and water. This EIS analyzes the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. These projected impacts are presented in Chapter 4, Section 4.1.10, and Appendix H of this EIS. Chapter 4, Section 4.1.6, of this EIS also presents the results of an ecological risk assessment showing the projected long-term ecological impacts of the alternatives. Please also see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Comments from the Seneca Nation of Indians, Irving, New York, Public Hearing (March 31, 2009)

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1 water, the spirit of the water, and then it
2 leaks into the spirit of our people, our
3 fish, our animals. Everything has a spirit.
4 And you're destroying that spirit. You're
5 making us weak. You're making everything
6 weak.

7
8 So it's time to -- I've already
9 turned my back on America. I look at the
10 Creator. He's the only one that I pledge
11 allegiance to and ever will. That flag means
12 nothing to me, that red, white and blue flag
13 up there. They have a flag up there. You see
14 a symbol on the board up there. That's wampum
15 bill, represents the people that I just talked
16 about, our nations.

17 So I'm just telling you right now
18 that all these people that spoke up here today
19 against this, this West Valley, there's
20 thousands and thousands of West Valleys in
21 this country. Why all the reservations are
22 all the sovereign nations of this land, you're
23 just destroying Americas, destroying
24 everything. I think that's their job. That
25 is their job. That's why they are sent here

603-2
cont'd

Response side of this page intentionally left blank.

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Comments from the Seneca Nation of Indians, Irving, New York, Public Hearing (March 31, 2009)

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1 to do. Go into all the world and destroy
2 everything that the Creator made. So we can
3 do it again. Do it as soon as possible.
4
5 Thank you.

6 MS. ROBINSON: Thank you, sir.
7 Ma'am, would you please repeat who you are for
8 the court reporter?

9 MS. WARREN: Barbara Warren, the
10 Citizen Environmental Coalition. I just
11 wanted to mention also another reason for the
12 extension for the need for the extension is
13 that we found significant differences in the
14 Environmental Impact Statement and the
15 Decommissioning Plan. And that, of course,
16 being that they are both such big documents,
17 it requires an extraordinary amount of review.
18 And one of those things that we found that is
19 different and causes us a lot of concern is
20 the apparent intention of DOE, Department of
21 Energy, to leave the site at the beginning of
22 Phase 2. We don't really understand why that
23 is in the document, why that's the direction
24 DOE is going in, and causes us a lot of
25 concern about whether that means that New York

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607-4 607-4

DOE will remain on site until it completes its responsibilities as assigned under the West Valley Demonstration Project Act. DOE would not leave the site after completion of the Phase 1 actions because it would not have completed the actions required under the Act. The description of the Phased Decisionmaking Alternative in Chapter 2 of the EIS has been revised to clarify this, and the wording in the *Phase 1 Decommissioning Plan for the West Valley Demonstration Project* has been revised to avoid any implication that DOE would leave the site at the end of Phase 1.

Comments from the Seneca Nation of Indians, Irving, New York, Public Hearing (March 31, 2009)

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1 State is going to be left with the
2 responsibility for this entire site, the
3 cleanup, you know, financially and the
4 responsibility for it. So we'd like to
5 understand why that is in the decommissioning
6 plan in that way. Thank you. We would like
7 the extension.

8 MS. ROBINSON: Thank you, ma'am.
9 Is there anyone else who would like to make a
10 comment? Ma'am, please identify yourself for
11 the court reporter.

12 MS. KETTLE: Hi, my name is Lisa
13 Kettle. And I'm going to speak to you as a
14 Seneca woman. I'm a mother and a wife. And
15 I've lived here all my life. And I'm not a
16 scientist or, you know, a nuclear expert on
17 anything. But you know, like what was
18 mentioned earlier about the erosion, my
19 grandfather has a place up on Seneca Road.
20 It's up towards the Lotens area. And I see --
21 I seen what that erosion has done over the
22 past 30 years. And it does move fast. I've
23 seen it take out his orchard and half his
24 grape fields he had up there. So I know how

25
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607-3
cont'd

615-1 615-1

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

Comments from the Seneca Nation of Indians, Irving, New York, Public Hearing (March 31, 2009)

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1 fast it moves.

2
3 One of the things that I have a
4 question about is this entire cleanup is going
5 to take 64 years. I know a number of people
6 looking around here that aren't going to see
7 64 years and, you know, there's four kids --
8 four little kids running around here. They
9 will probably be here. Hopefully, they will
10 still be here.

11 My question is, you know, I'll be
12 honest when I see people like yourself sitting
13 there, there is an element of distrust. You
14 say that this would take 64 years for an
15 entire cleanup. What's to say after you're
16 long gone and someone's sitting in your spot
17 filling those same shoes that that plan is
18 going to change.

19 My daughters and the other two kids
20 that were here, they are Seneca. I have three
21 daughters and that tells me that the Seneca
22 people are going to live on. They are going
23 to inherit this. I'm probably just repeating
24 what's already been said.

25 Something really needs to happen. I

615-2

615-2

The estimated duration of the Sitewide Removal Alternative of approximately 60 years is based on assumed funding levels and task sequencing that could change in the future.

The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. This decision will be an agency decision and will not be dependent on specific individuals employed by the agencies. DOE will remain on site until it completes its responsibilities as assigned under the West Valley Demonstration Project Act. This Act requires DOE to decontaminate and decommission the waste storage tanks and facilities used in the solidification of high-level waste, and any material and hardware used in connection with WVDP, in accordance with such requirements as NRC may prescribe.

615-2
cont'd

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Comments from the Seneca Nation of Indians, Irving, New York, Public Hearing (March 31, 2009)

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1 really have -- was unaware, I mean I knew West
2 Valley was there. I knew that there was stuff
3 going on. But my cousin, Maria, asked me and
4 my husband to come here tonight. We weren't
5 going to stick around because we didn't know
6 if the girls were going to sit still. They
7 are doing a pretty good job. One is asleep
8 back there. I'm glad I stayed. I learned a
9 lot. And one thing I learned is that you guys
10 really need to mean what you say.

12 My husband -- we are really firm on
13 our beliefs. You know, there is a word that
14 gets thrown around, genicide. You know, he's
15 right. You know, a lot of people in this room
16 if they want, they can relocate, Arizona,
17 Wyoming, Montana. I can't. This is where I
18 live. I've had chances to relocate and I
19 won't. For one thing the Longhouse is here
20 and this is where I'm going to stay.

21 I know that my friend, Leslie, was
22 here with her two kids. You know, there is a
23 good chance they are going to be around in 64
24 years. I don't know, 40 years down the road,
25 is it, oh, we did the study back in 2006 and

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1 we were in this very room telling you, ramming
2 down your throats that we were going to do
3 this, hoping you would believe us. But guess
4 what, we did another study, and it's going to
5 take another 64 years to cleanup that 99
6 percent we didn't even touch.

7 Honestly, as me, my own opinion, I
8 think you guys got a lot of nerve. The Seneca
9 Nation welcomed you here. So you need to
10 think about what you're saying. And I hate to
11 see a grown man cry. When I heard Todd Gates
12 breakdown, that got to me. It's not just his
13 family. That Cattaraugus Creek goes right
14 through the territory. I know this woman over
15 here she lives right on the creek. I know
16 Mark. He grew up on Bush Road. That's right
17 up the road from her. Those are just two
18 examples. There's a lot of people in this
19 community that depend on that creek.

20 There's a spiritual side to that
21 creek. There's a spiritual side to that water
22 spirit. We use -- without going into detail,
23 we use it in ceremony and if this doesn't go
24 through, you're really affecting us. It would

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1 be like me marching into your house on
2 December 25th and telling you to get out, get
3 out of your house, get out, get away from the
4 table, from your Christmas dinner. That's
5 what you would be doing to me and my family.

6
7 I wasn't going to say anything, but
8 sometimes I don't know how keep my mouth shut,
9 but I'm speaking on behalf of my kids. You
10 guys really need to think about it and act.

11 MS. ROBINSON: Thank you, ma'am.
12 Is there anyone else who would like to make a
13 comment? Okay.

14 All right. Given that, I'd like to
15 thank all of you for your respectful
16 participation tonight. It was a broadening
17 experience for everyone and I'd like to thank
18 you all for your hospitality and refreshments,
19 too. And now, Ms. Kathy Bohan would like to
20 make a closing remark.

21 MS. BOHAN: I want to thank
22 everyone for coming this evening and voicing
23 your comments and taking the time to talk with
24 us about the document. We are planning to, as
25 I mentioned before, review all the comments

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Comments from the Seneca Nation of Indians, Irving, New York, Public Hearing (March 31, 2009)

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1 that have been received either in writing or
2 orally at these hearings and consider them in
3 development of the Final Environmental Impact
4 Statement and if you would like to get more
5 information about the document, I know some of
6 you are just learning about these issues and
7 the decisions that need to be made, you can
8 sign up on to be on our mailing list. You can
9 receive a copy of the document out at the
10 registration table in the hallway and we would
11 be happy to get you any information in that
12 regard.

13 The comments can be submitted
14 through via any of the methods that are shown
15 here, toll free fax, U.S. mail, electronically
16 through the web site or at the two remaining
17 public hearings. Thank you.

18 (Proceedings concluded.)

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C E R T I F I C A T E

6 I, DOREEN M. SHARICK, do hereby certify that I
7 have reported in stenotype shorthand the proceedings
8 in the public hearing of the Revised Draft
9 Environmental Impact Statement for Decommissioning
10 and/or Long-Term Stewardship at the West Valley
11 Demonstration Project and Western New York Nuclear
12 Service Center, at the Seneca Nations of Indians,
13 12837 Route 438, Irving, New York 14081, on Tuesday,
14 March 31, 2009.

15 That the transcript herewith is a true,
16 accurate and complete record of my stenotype notes.

DOREEN M. SHARICK
Notary Public.

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Comments from the West Valley, New York, Public Hearing (April 1, 2009)

1

1 PUBLIC HEARING
2 STATE OF NEW YORK

3 _____/
4 REVISED DRAFT
5 ENVIRONMENTAL IMPACT STATEMENT for
6 DECOMMISSIONING and/or
7 LONG-TERM STEWARDSHIP at the
8 WEST VALLEY DEMONSTRATION PROJECT and
9 WESTERN NEW YORK NUCLEAR SERVICE CENTER
10 _____/

11
12
13 Public Comment portion of the Public
14 Hearing in the above-captioned proceeding held
15 at Ashford Office Complex, 9030 Route 219,
16 West Valley, New York, on April 1, 2009, at a
17 time of 7:30 p.m.

18
19
20
21
22
23 REPORTED BY: SUSAN M. RYCKMAN, CP,
24 Court Reporter,
25 EDITH FORBES COURT REPORTING SERVICE
 21 Woodcrest Drive,
 Batavia, NY 14020,
 (585) 343-8612

EDITH E. FORBES (585)343-8612

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Comments from the West Valley, New York, Public Hearing (April 1, 2009)

2

1 APPEARANCES:

2 PAUL BEMBIA,
3 NYSERDA;
4 CATHERINE BOHAN,
5 U.S. Department of Energy;
6 BRYAN BOWER,
7 U.S. Department of Energy;
8 LINDA ROBINSON,
9 Moderator.

10

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Comments from the West Valley, New York, Public Hearing (April 1, 2009)

3

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11 JOANNE HAMEISTER 16

12 Coalition on West Valley Nuclear Waste

13 ANNE RABE 19

14 Center for Health, Environment & Justice

15 DIANE D'ARRIGO 23

16 Nuclear Information Resource Service

17 BARBARA WARREN 27

18 Citizens Environmental Coalition

19 * * *

20

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22

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Comments from the West Valley, New York, Public Hearing (April 1, 2009)

4

1 MS. ROBINSON: Keep in mind that
2 comments given during this segment will not be
3 responded to tonight, but will be addressed,
4 taken into account, in the Final Environmental
5 Impact Statement in its comment response
6 document.

7 Cathy Bohan, the DOE's
8 representative, and Paul Bembia of NYSERDA,
9 are here to listen to and accept your
10 comments. So I would appreciate you
11 addressing them to them, except of course, you
12 need to keep one eye over here so you can see
13 your timeline.

14 The court reporter today is
15 Sue Ryckman, and her objective is to produce a
16 complete and accurate transcript of the oral
17 comments. She will take them verbatim
18 tonight, and they will be included in the
19 comment response document of the Final
20 Environmental Impact Statement.

21 I will now call commenters in the
22 order in which they will register. I will
23 name two people at a time, so you will have a
24 little warning as to when you will be called
25 on. When it's your turn, please come to the

Response side of this page intentionally left blank.

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Comments from the West Valley, New York, Public Hearing (April 1, 2009)

5

1 microphone to speak. You may give your full
2 name and the organization you represent, if
3 there is one, so that the court reporter can
4 get it down.

5 If you speak as long as four
6 minutes, I will signal with this red card, and
7 I will also say, one minute, if you have not
8 noticed the red card. And I will ask you to
9 wrap yourself -- your talk up in the next
10 minute, so you reach the five minutes.

11 And when we finish with everybody
12 who has signed up, I will give opportunities
13 for those who did not sign up to speak at that
14 time. So, the first speaker tonight and your
15 second speaker tonight will be Warren Schmidt
16 coming first, followed by Seth Wochensky. And
17 I will have a timer, of course.

18 **WARREN SCHMIDT:** Good evening, and
19 thank you for this opportunity to comment on
20 the Revised Draft Environmental Impact
21 Statement. I am Warren Schmidt, and I comment
22 on behalf of the West Valley Citizen Task
23 Force.

24 The Citizen Task Force was formed in
25 1997 to assist in the development of the

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Comments from the West Valley, New York, Public Hearing (April 1, 2009)

6

1 preferred alternative for the completion of
2 the West Valley Demonstration Project and
3 clean-up, closure and/or long-term management
4 of the facilities at the site. The group has
5 18 members, with representatives from the
6 affected communities. After its formation,
7 the CTF met for 18 months and studied the
8 issues before releasing a report in July of
9 1998. That report details the CTF's
10 expectations with respect to policies and
11 priorities and guidelines for a preferred
12 alternative. Our report and considerable
13 information about our work and the site may be
14 found at www.westvalleyctf.org.

15 For more than a decade since the
16 report was issued, the CTF has been meeting
17 regularly with DOE and NYSERDA. We have also
18 received numerous presentations from
19 regulatory agencies, and advocated with
20 elected officials on behalf of clean-up at the
21 site. We believe that our ongoing active
22 involvement has been essential to a number of
23 the clean-up activities underway or planned at
24 the West Valley Demonstration Project.

25 The CTF appreciates the progress to

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Comments from the West Valley, New York, Public Hearing (April 1, 2009)

7

1 date, and the work of the Core Team agencies
2 in arriving at a preferred alternative,
3 something that was missing from the 1996
4 Draft EIS. The Core Team agencies are to be
5 commended for overcoming significant
6 differences and for working together to arrive
7 at a preferred alternative.

8 The CTF also appreciates that DOE
9 and NYSERDA are planning to accomplish
10 clean-up work at the site that the CTF deems
11 essential, including the removal of the source
12 area of the North Plateau Groundwater Plume
13 and a significant number of the contaminated
14 facilities.

15 We are actively working on written
16 comments to be submitted later this spring.
17 Based on our review to date of the Draft EIS,
18 we would like DOE, NYSERDA, and the public to
19 understand in broad terms what we anticipate
20 will be the essential views expressed in those
comments.

22 First, the proposed Preferred
23 Alternative Phase 1 work meets the Policies
24 and Priorities articulated in the CTF 1998
25 Final Report. The CTF strongly encourages

701-1

701-1 DOE and NYSERDA note the comment. If the Phased Decisionmaking Alternative were selected, during Phase 1, DOE would conduct additional studies and evaluations to clarify and possibly reduce technical uncertainties related to the decision on final decommissioning and long-term management of the site. During Phase 1 and prior to implementation of Phase 2, DOE and NYSERDA would seek information about improved technologies for in-place containment and for exhumation of the tanks and burial areas that may become available. DOE and NYSERDA would continue to assess the results of any site-specific studies along with any emerging technologies to support Phase 2 decisions. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement.

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Comments from the West Valley, New York, Public Hearing (April 1, 2009)

8

1 that this work be completed without further
 2 delay, and in a manner that enhances future
 3 decisions regarding clean-up of the site. The
 4 CTF desires that performance measures for this
 5 work be clearly articulated and adhered to.

6 Second, the CTF stands by the
 7 Policies and Priorities articulated in its
 8 Final Report, including, among others:

9 The protection of human health and
 10 safety and of the environment is paramount.

11 Our 1998 reports states that the CTF
 12 does not believe that the geologic,
 13 hydrologic, and climate conditions of the site
 14 are suitable for long-term, permanent storage
 15 or disposal of long-lived radionuclides.
 16 After 11 years of continued education on the
 17 characteristics of the site since then, we are
 18 more convinced of this, and that the level of
 19 risk from exposure is such that reliance on
 20 institutional controls over a prolonged
 21 period, hundreds or thousands of years, is not
 22 feasible.

23 Third, decisions and studies should
 24 be performed during Phase 1 that assess and
 25 support the eventual goal of a full clean-up

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**701-1
cont'd**

701-2

701-3

701-2 DOE and NYSERDA acknowledge the commentor's opinion on the unsuitability of the WNYNSC site for long-term storage or disposal of wastes. This EIS analyzes the impacts of the alternatives on the environment, including human health and safety during the decommissioning and post-decommissioning timeframes if waste and contamination were to remain on site.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling are discussed in Appendix F. This EIS addresses potential impacts of climate change through sensitivity analyses, but does not attempt to address extreme global-scale climate change. The analysis of doses due to unmitigated erosion uses a gully advance rate associated with a climate that is wetter than current site conditions. Please see the Issue Summary, "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for additional discussion of this issue and DOE's and NYSERDA's response.

This information will be considered by the agencies when they make their decision, which will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

701-3 Studies will be performed during Phase 1 of the Phased Decisionmaking Alternative for the purpose of better informing the agencies in preparation for the Phase 2 decision. Please see the response to Comment no. 701-1.

Comments from the West Valley, New York, Public Hearing (April 1, 2009)

9

1 of the site and reassess the technologies and
2 volume of waste disposal associated with
3 exhumation, which may alter estimates of
4 safety risks and costs.

5 Finally, if the Preferred
6 Alternative and its phased decision-making
7 approach is selected, we feel that the views
8 of the public should be considered on an
9 ongoing basis. The public should be allowed
10 full opportunity for review and comment on
11 later subsequent proposals that might lead to
12 anything less than unrestricted release of the
13 site. If an ongoing assessment period occurs,
14 there will be many interim decisions and site
15 work which will have far reaching impacts on
16 human health and the environment. These
17 decisions and the planning for the work should
18 also be subject to regular, ongoing public
19 consultation to ensure that viable options are
20 not precluded.

21 Regulatory reviews, permitting, and
22 licensing should contain commitments from the
23 appropriate agencies, beyond the minimum legal
24 requirements, to seek and incorporate the
25 views of the community in making decisions

701-3
cont'd

701-4

701-4 Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until a final decision is made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate the Phase 2 decision for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input. Regulatory bodies involved in permitting and licensing activities at WNYNSC would be responsible for defining the review and public involvement process for their activities.

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Comments from the West Valley, New York, Public Hearing (April 1, 2009)

10

1 regarding the future of the site.

2 Over the coming months, the CTF will
3 be developing more detailed written comments
4 on the Draft EIS. We encourage everyone to
5 take the time to carefully read and comment on
6 this DEIS and submit written comments. Thanks
7 again for the opportunity to comment at this
8 time.

9 MS. ROBINSON: Thank you, sir. Now
10 we will have Seth Wochensky, followed by
11 Barry Miller.

12 **SETH WOCHENSKY:** Good evening. My
13 name is Seth Wochensky, and I'm a member of
14 the Coalition on West Valley. I am just
15 giving my own personal comments. The
16 Coalition has its own official statement
17 coming later, I guess. And I'm a resident of
18 the Village of Springville, I guess I should
19 say.

20 Forty-five years ago men in suits
21 came from out of town to this community
22 promising a brighter future, jobs, an airport
23 in Springville, all that kind of stuff. But
24 they didn't know quite what to do with "the
25 stuff." We'll figure that out later, they

|| 701-4
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Comments from the West Valley, New York, Public Hearing (April 1, 2009)

11

1 said. They took a myopic view, and in the end
2 we were all left holding the bag. That was
3 before I was born.

4 The suggested path today is similar
5 in its myopic view and its attitude towards
6 the waste. Let's work on this stuff over
7 here, but that much bigger mess, we'll figure
8 that out later. On your proposal and given
9 your track record over the past decades, I
10 will most likely be dead before the work gets
11 done.

12 I believe the Preferred Alternative
13 is a joke. The DOE has made a decision to
14 avoid making a decision. Avoiding decisions
15 is the biggest management crime one can make.
16 Unfortunately, for the people who actually
17 care about this area, this management blunder
18 could have serious and deadly impacts.

19 The phased alternative makes a
20 mockery of the EIS process. The Department of
21 Energy took charge of this site roughly 30
22 years ago. It took nine years to get the
23 first DEIS, the legitimate DEIS, in my view.
24 That projected a 24-year timeline for
25 clean-up. It was evident that it was going to

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702-1

702-2

702-1 DOE and NYSERDA acknowledge the commentor's opinion of the Preferred Alternative. This EIS presents the Preferred Alternative, Phased Decisionmaking, along with two other action alternatives. The decision on the selected course of action and supporting rationale will be announced in DOE's Record of Decision and NYSERDA's Findings Statement after consideration of the environmental analysis in the EIS, public comments on the Revised Draft EIS, and other programmatic considerations.

If DOE and NYSERDA select the Preferred Alternative (Phased Decisionmaking Alternative), cleanup during Phase I would reduce or eliminate potential health or environmental impacts by removing major facilities (such as the Main Plant Process Building and lagoons). In addition, the source area for the North Plateau Groundwater Plume would be removed, thereby reducing a source of radionuclides that are potential contributors to human health or environmental impacts. During Phase 1, DOE would conduct additional studies and evaluations to clarify and possibly reduce technical uncertainties related to the decision on final decommissioning and long-term management of the site. A variety of studies would be implemented to further characterize the site and to research technology developments. The information gathering conducted during Phase 1 is expected to provide data to aid consensus decisionmaking for Phase 2 activities. Phase 2 activities could include sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements.

702-2 Chapter 1 of this EIS summarizes the history of WNYNSC. Section 1.1 provides an accurate history of the development of the site and how DOE and NYSERDA became responsible for their respective roles. Section 1.2 discusses the history of the development of this EIS.

Comments from the West Valley, New York, Public Hearing (April 1, 2009)

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1 be costly and difficult. Comments were
2 received, just as they are being received
3 today. Then the process was, essentially
4 abandoned, and here we are today 13 years
5 later.

6 We have the longest running EIS
7 process in history. And just to ensure that
8 the DOE holds onto that title, the DOE has the
9 nerve to suggest a plan which calls for
10 putting off planning to the future.

11 I think I understand the longevity
12 of radioactivity, but I am struggling hard to
13 understand the longevity of this process. I
14 am wondering what the half life of a DOE
15 clean-up is.

16 Several years ago at a CTF meeting,
17 a question was asked about radioactive mouse
18 prints coming from the process building,
19 across the parking lot, or outside of the
20 building. A site official reluctantly
21 confirmed the rodent problem. Nature marches
22 on whether a decision is made or not. If the
23 Department of Energy had an old house, they
24 would suggest painting the trim work while the
25 roof was failing and the termites were chewing

702-2
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1 away at the studs. We'll figure that out
2 later.

3 There have been independent studies,
4 and DOE's own studies, which show the problems
5 with the site. Combine these with a good dose
6 of morality, and I believe they all point
7 towards a fairly clear path, a lot of details
8 to be worked out. I will put the path the
9 simplest way I know possible: Dig it up.

10 When JFK gave his man on the moon
11 speech in 1961, he stated that we'd put a man
12 on the moon by the end of the decade -- or we
13 would have a man on the moon and have him back
14 safely by the end of the decade. That was the
15 goal. They had no idea how to do it.

16 I believe you set a goal and you
17 work towards it. Vitrification was done.
18 There was a goal set, and through the hard
19 work of the people at this site, it was
20 successful.

21 I don't expect DOE to have the
22 answers on how to get this done, but with that
23 goal -- I'm sorry, without that goal to work
24 towards, there is no drive to ever find the
25 answers. The DOE will continue to argue with

702-3

702-3

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

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Comments from the West Valley, New York, Public Hearing (April 1, 2009)

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1 NYSERDA. I know it seems rosy today, but the
 2 DOE will continue to argue with NYSERDA, and
 3 vice versa. The CTF will argue. My son will
 4 argue with your sons, and we'll pass the
 5 potato back and forth through the eons, never
 6 doing what we all know is right. Dig it up.
 7 Thank you.

8 MS. ROBINSON: Thank you, sir. The
 9 next commenter will be Barry Miller, followed
 10 by Joanne Hameister.

11 BARRY MILLER: I'm Barry Miller, and
 12 I represent the Concerned Citizens of
 13 Cattaraugus County. Points on how to handle
 14 the waste at West Valley.

15 One, sitewide removal. A recent
 16 state-funded cost accounting reveals that
 17 leaving the waste buried is both high risk and
 18 highest cost. Excavation is less cost and
 19 least risk to a large population.

20 Two, leaving buried waste is not
 21 acceptable. Erosion, and we are talking about
 22 1,000 years of control and monitoring,
 23 unacceptable.

24 Three, no phased decision making.
 25 There is no evidence that the strontium plume

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703-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative and objection to the Phased Decisionmaking Alternative (see Comment no. 703-3). The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

The report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., has been addressed in this CRD consistent with the Council on Environmental Quality's NEPA regulations. Please see the Issue Summaries for "Support for the Sitewide Removal of All Radioactive and Hazardous Wastes" and "Conclusions of the Synapse Report" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

703-2 DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

703-1 As acknowledged in this EIS, long-term monitoring and maintenance would be required for alternatives that would leave waste on site. This EIS provides a summary description of current and potential future environmental monitoring programs. The descriptions of the alternatives were revised to further describe the use of engineered barriers and long-term monitoring and maintenance. Long-term monitoring and maintenance are described in Chapter 2, Sections 2.4.2.6 and 2.4.3.8, of this EIS. Long-term monitoring and institutional controls are also discussed in Chapter 6. Additional information about current and proposed monitoring and institutional controls is provided in Appendices C, H, and I. Chapter 2, Table 2-4, includes estimates of the environmental consequences if (1) monitoring and maintenance are successful (institutional controls remain in place) and (2) monitoring and maintenance programs fail (institutional controls are lost). Chapter 4, Section 4.2, of this EIS includes monitoring and maintenance costs for the alternatives that would leave waste on the site.

703-2 Detailed information regarding long-term monitoring and maintenance programs and institutional controls under alternatives that would leave radioactive waste

Comments from the West Valley, New York, Public Hearing (April 1, 2009)

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1 is from leaking tanks. Besides, this is a
 2 very small portion of the radioactive waste.
 3 There is no explanation concerning public
 4 participation in Phase 2. A two-phased
 5 approach over 30 years is not responsible.

6 Four, revisions are needed on the
 7 flawed DEIS. It includes clean-up options
 8 where long-lasting radioactive waste is left
 9 buried on site, yet there is a serious lack of
 10 information on the monitoring and maintenance
 11 of engineering and institutional controls to
 12 insure radioactive material is safely
 13 contained.

14 Funds and procedures should also be
 15 described that will be in place to respond
 16 immediately to any toxic releases. The
 17 decommissioning plan appears to describe a
 18 situation where the DOE could leave the site
 19 and any responsibility at the end of Phase 1
 20 in around 30 years, which would leave New York
 21 State the responsibility of cleaning up
 22 99 percent of the radioactivity. It is
 23 imperative that the DOE confirm that they will
 24 continue their responsibility and commitment
 25 to fully remediate the site.

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703-3
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703-4

stored on site has not been specifically defined at this time. Such definition would occur after an alternative is selected for implementation and would include consultation with appropriate regulatory authorities. An element of the long-term programs would be the development of plans and procedures for responding to emergencies. These plans and procedures would include coordination and agreements with local police and fire departments and medical facilities.

703-3 DOE and NYSERDA concur that there is no evidence that the strontium plume is from the underground tanks in the Waste Tank Farm. The extensive WNYNSC environmental monitoring program, which is designed to detect possible movement of contamination on the site, as well as specialized studies, have concluded that the source of the North Plateau Groundwater Plume is the Main Plant Process Building.

Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until a final decision is made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate the Phase 2 decision for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

Regarding the 30-year timeframe cited by the commentator, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and

Comments from the West Valley, New York, Public Hearing (April 1, 2009)

NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

- 703-4** Regarding long-term monitoring and maintenance requirements, please see the response to Comment no. 703-2.

It is not within the scope of the EIS to address funding of the alternatives. The U.S. Congress and the President are responsible for establishing funding levels for various Federal Government programs, while the New York State Legislature and the Governor are responsible for establishing funding levels for state government programs. Implementation of the decision made in DOE's Record of Decision and NYSERDA's Findings Statement is contingent on the level of funding allocated.

DOE and NYSERDA acknowledge the commentor's concern about continued DOE participation in the cleanup of the WNYNSC site. DOE will remain on site until it completes its responsibilities as assigned under the West Valley Demonstration Project Act. DOE would not leave the site after completion of the Phase 1 actions because it would not have completed the actions required under the Act. The description of the Phased Decisionmaking Alternative in Chapter 2 of the EIS has been revised to clarify this, and the wording in the *Phase 1 Decommissioning Plan for the West Valley Demonstration Project* has been revised to avoid the implication that DOE would leave the site at the end of Phase 1.

Comments from the West Valley, New York, Public Hearing (April 1, 2009)

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1 And five, use 0 in the discount
 2 rate. There must not be an economic discount
 3 rate in an analysis of the cost of clean-up in
 4 1,000 years, the time the waste will be
 5 radioactive. Any substantial discount rate
 6 implies that the health and well-being of
 7 future generations have no present value or no
 8 worth to us today. Dig it up.

9 MS. ROBINSON: Thank you, sir. The
 10 next speaker will be Barry Miller -- I mean
 11 that was Barry Miller -- Joanne Hameister,
 12 followed by Anne Rabe.

13 JOANNE HAMEISTER: One thing I might
 14 suggest ahead of time, is that for the
 15 quarterly meeting, which is coming up in May,
 16 you might want to add the people who are
 17 speaking at these public hearings to the
 18 mailing list, might be a good idea. We'll
 19 have time.

20 The Coalition on West Valley Nuclear
 21 Waste has had a long-standing position of a
 22 full clean-up of the West Valley, which
 23 includes the exhumation of the Cesium Prong,
 24 the strontium plume, both the Federal licensed
 25 and the State licensed burial areas and the

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703-5 703-5

DOE and NYSERDA acknowledge the commentor's objection to cost discounting in the cost-benefit analysis included in the Revised Draft EIS. Please see the Issue Summary for "Questions about Cost-Benefit Analysis" in Section 2 of this CRD for further discussion of this issue and DOE and NYSERDA's response.

The cost-benefit analysis presented in Chapter 4, Section 4.2, of the Revised Draft EIS was performed to support NRC's request for cost-benefit information consistent with its as low as is reasonably achievable (ALARA) analysis guidelines. This cost-benefit analysis follows the principles in the NRC ALARA guidance presented in NUREG-1757, "NRC Consolidated Decommissioning Guidance." The analysis in Section 4.2 has been revised for this Final EIS and uses several relatively low discount rates (1, 3, and 5 percent) to investigate the sensitivity of the results to lower discount rates. The use of a single discount rate of zero for the ALARA analysis is not considered to be consistent with the NRC guidance.

704-1 704-1

DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Comments from the West Valley, New York, Public Hearing (April 1, 2009)

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1 tanks.

2 The Coalition believes that the
 3 legally required process, including this DEIS,
 4 has been manipulated and does not reflect the
 5 full scope of issues that an appropriate
 6 review should entail. This includes
 7 requirements of the West Valley Demonstration
 8 Project Act, the National Environmental Policy
 9 Act, and the State Environmental Quality
 10 Review Act.

11 Our position always has been as
 12 advocates for monitored and retrievable
 13 storage. The Federal government has to
 14 develop an environmentally sound isolation and
 15 modeling technologies for West Valley's
 16 reprocessing waste and other radioactive waste
 17 from mine tailings to fuel rods. We do not
 18 support irreversible technologies.

19 The West Valley site has its very
 20 own act of Congress, which charges you with
 21 demonstrating that wastes at West Valley can
 22 be cleaned up, decommissioned, and
 23 decontaminated. I further charge you to just
 24 do it. Let's get on with it.

25 I continue to worry about the

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704-2

704-2 DOE and NYSERDA believe that this EIS meets the requirements of NEPA and SEQR. The principal purpose and need for this EIS is to evaluate the environmental impacts of decommissioning and/or long-term stewardship of WNYNSC, and thus meet the requirements of the West Valley Demonstration Project Act.

Offsite authorized disposal capacity is available for most of the waste that could be generated from any of the EIS alternatives. The shift to a national policy of storage rather than disposal of this waste is outside the scope of this EIS. Consistent with existing practice, any waste generated from any of the EIS alternatives that does not currently have offsite disposal capacity (referred to as orphan waste) would be safely and retrievably stored on site until such disposal capacity is available.

704-3

DOE and NYSERDA seriously considered all of the comments received on the Revised Draft EIS. The formal comment period was originally scheduled for 6 months (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE), but was expanded to 9 months, beginning on December 8, 2008, and ending on September 8, 2009. During this comment period, public hearings were held in Albany, Irving, Ashford, and Buffalo, New York. In addition, Federal agencies, state and local governmental agencies; Native American Tribal Governments, and the general public were encouraged to submit comments via the U.S. mail, e-mail, a toll-free fax line, and a DOE Internet website (<http://www.westvalleyeis.com>). DOE and NYSERDA considered all comments, including those received after the comment period ended, in evaluating the accuracy and adequacy of the Revised Draft EIS to determine whether its text needed to be corrected, clarified, or otherwise revised. Responses to each of the comments received are provided in Section 3 of this CRD.

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1 seriousness with which all comments are
2 considered in this decision process afforded
3 to us by NEPA and by SEQR. Please listen to
4 every one. Whether or not we're lawyers,
5 scientists, or mathematicians, our concerns
6 are very real. We are entitled, by virtue of
7 our birth and life, and the simple act of
8 being, to have an affect on and a validation
9 of your decision making.

10 And the statement I've made at town
11 board meetings also: Our tax money is paying
12 your salaries. We therefore are, essentially,
13 your boss. We are also consumers, in this
14 case specifically of water, and the customer
15 is always right.

16 I want to show you my nightmare
17 propagator, is this picture. This is how the
18 waste is buried at West Valley. Unlined,
19 unengineered trenches. It was simple then.
20 In my mind, it's illegal now. We know better.
21 And we also know it's morally objectionable
22 and reprehensible to leave it there in that
23 state, in an unimagined, unknown condition.
24 And that borders on being criminal. Thank
25 you.

704-3
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Comments from the West Valley, New York, Public Hearing (April 1, 2009)

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1 MS. ROBINSON: Thank you, ma'am.
2 Next speaker will be Anne Rabe, followed by
3 Diane D'Arrigo. You will have to help me with
4 that, Anne.

5 ANNE RABE: I'm Anne Rabe with the
6 national group called the Center for Health,
7 Environment, and Justice, CHEJ, and I'm here
8 tonight representing hundreds of our members
9 in the Great Lakes region. We've worked on
10 toxic dump clean-ups ever since our director,
11 Lois Gibbs, worked on the Love Canal Niagara
12 Falls toxic waste dump in 1980. And CHEJ and
13 a large coalition of groups are in what we
call the West Valley Action Network.

15 And we are here tonight, and at all
16 the hearings, to strongly urge the Department
17 of Energy and NYSERDA to revise this DEIS to,
18 number one, decide this year on a sitewide
19 removal clean-up, and number two, to reverse
20 the phased decision-making option and any
21 buried waste approach being considered.

22 Why sitewide removal? Well, Senator
23 Catherine Young provided us with funds to be
24 able to hire scientists, economists, and
25 nuclear physicists to look into the long-term,

705-1

705-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The purpose this EIS is to evaluate the environmental impacts of decommissioning and/or long-term stewardship of WNYNSC. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

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1 over a thousand years, impact of the West
 2 Valley site in terms of a buried waste
 3 approach and in terms of waste excavation, of
 4 sitewide removal.

5 Sitewide removal, they found,
 6 provides a permanent safe solution that
 7 removes waste from the site with serious
 8 erosion problems, earthquake hazards, and
 9 sole-source aquifer. It also prevents any
 10 catastrophic releases which could pollute the
 11 community's drinking water supplies, Lakes
 12 Erie and Ontario, and it significantly lowers
 13 health risks to the nearby communities with
 14 all wastes removed after an estimated 60 plus
 15 years. It also is the most cost effective
 16 approach over the long-term. It also protects
 17 the precious Great Lakes region and
 18 Cattaraugus County forevermore, as opposed to
 19 the high-risk approach with buried waste.

20 Why are we opposing phased
 21 decision-making? Well, number 1, I call it
 22 the 1 percent punt. And basically it's --
 23 we're not number 1, it's number 1 and delay.
 24 It deals with 1 percent of the radioactivity
 25 on the site, for approximately \$1 billion, and

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705-3

705-2 The report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., has been addressed in this CRD consistent with the Council on Environmental Quality's NEPA regulations. Please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for further discussion of the report's issues and DOE's and NYSERDA's response.

705-3 The environmental impacts of implementing Phase 1 of the Phased Decisionmaking Alternative are described for each resource area in Chapter 4 of this EIS. If this alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. For each resource area, Chapter 4 discusses the impacts that would occur if either removal or close-in-place is selected for Phase 2. The chapter also discusses which alternative(s) bound the impacts in the event that continued active management is selected for the SDA. The short-term impacts of a Phase 2 decision that involves continued active management of the SDA are bounded by either the removal or close-in-place impacts. The post-decommissioning impacts of a continued active management decision for the SDA, which include staffing, occupational exposure, and waste generation related to SDA monitoring and maintenance, as well as long-term impacts on public health and safety, would be similar to the no action impacts for the SDA.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

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1 then punts the whole question of the final
2 clean-up plan for up to 30 years.

3 The DEIS did not look at the
4 potential environmental health impacts of
5 leaving 99 percent of the radioactivity on
6 site for another 30 years. And given the past
7 record of decades of delays, the previous
8 speakers have noted, this two-phased approach
9 with a lengthy 30-year timetable, is not
10 responsive, it's not responsible, and it's
11 actually incredibly insulting, and does not
12 address dangerous contamination of the site in
13 large part.

14 What's really disturbing and
15 perplexing about this Draft Environmental
16 Impact Statement, is that it really isn't one.
17 And I've been working for over 30 years on
18 Superfund site contamination problems and
19 radioactive site contamination problems.
20 Under Superfund, and under other Department of
21 Energy sites, such as Albany's uranium site,
22 here's what is done to properly address a site
23 from the environmental, public health,
24 engineering, and public participation
viewpoint.

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705-3
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705-4

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

Please also see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

In accordance with the requirements of NEPA and SEQR, this EIS analyzes the totality of the environmental impacts of a spectrum of reasonable alternatives that meet the respective purposes and needs of DOE and NYSERDA (Sitewide Removal, Sitewide Close-In-Place, and Phased Decisionmaking), as well as the impacts of a No Action Alternative. In addition, this EIS presents a discussion of the costs associated with each alternative.

The requirements for an interim remedial action apply to sites under CERCLA. WNYNSC is not a Federal CERCLA site.

In accordance with the West Valley Demonstration Act, DOE is to decontaminate and decommission the waste storage tanks and facilities used in the solidification of high-level radioactive waste, as well as any material and hardware used in connection with WVDP, in accordance with such requirements as NRC may prescribe. NRC issued its "Decommissioning Criteria for WVDP at the West Valley Site; Final Policy Statement" (67 FR 5003). In this notice, NRC announced its decision to apply its License Termination Rule (10 CFR 20, Subpart E) as the decommissioning goal for the entire NRC-licensed site. This EIS evaluates alternatives for meeting those decommissioning criteria for the NRC-licensed property, as well as decommissioning and management options for the SDA.

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1 First, you test a site. On and off
2 site, you fully characterize the site's
3 pollution. The remedial investigation. Then
4 you have the public comment on it. Did you
5 test everywhere that you should, did you test
6 for the right chemicals? You get public input
7 on it.

8 Then you move into the feasibility
9 study. You evaluate the different clean-up
10 options. Then the public comments on it. Are
11 you looking seriously at all the clean-up
12 options that will best protect our community?
13 And you move forward.

14 Then the agency does a proposed
15 remedial action plan with recommended clean-up
16 option. And the public weighs in on that as
17 well.

18 Then you finalize a clean-up plan.
19 Then you do the engineering design to develop
20 the technical plan on how you're going to
21 implement that clean-up option. Typically a
22 clean-up Draft Environmental Impact Statement
23 includes the pollution summary, the
24 feasibility study on the clean-up options, and
25 the proposed clean-up goal.

705-4
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Comments from the West Valley, New York, Public Hearing (April 1, 2009)

23

1 This is not a DEIS. This is
2 basically a tiny, tiny clean-up plan for
3 1 percent of the site's radioactivity. I
4 mean, personally, I think this is an illegal
5 DEIS.

6 We would ask that you go back to the
7 drawing board, respect the public's input and
8 concern that has been expressed for decades,
9 and redo this DEIS to provide us a full
10 clean-up plan recommendation this year for
11 sitewide removal, and protect the Great Lakes
12 now. Thank you.

13 MS. ROBINSON: Thank you. All
14 right. The next speaker will be
15 Diane D'Arrigo. Would you please say it when
16 you come up for me, and Barbara Warren will
17 follow her.

18 DIANE D'ARRIGO: It's Diane
19 D'Arrigo; I am with the Nuclear Information
20 Resource Service, which is part of the West
21 Valley Action Network. And I'm also -- my
22 family is in this area, so I am concerned as a
23 somewhat local person.

24 Reading the Buffalo News editorial
25 that came out in the paper today, April 1st,

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EDITH E. FORBES (585)343-8612

Comments from the West Valley, New York, Public Hearing (April 1, 2009)

24

1 2009, into the record.

2 Remove nuclear waste. Complete
3 clean-up of West Valley site is the only real
4 solution for Western New York. A thousand
5 years from now there may not be a State of New
6 York, a United States of America, or anyone
7 who could even read all the paperwork dealing
8 with the Western New York Nuclear Services
9 Center in West Valley. What probably will be
10 here is Lake Erie, a number of rivers that
11 feed into it, people who depend on water from
12 that lake and those rivers, and unless Federal
13 officials decide to do the right thing now, a
14 large collection of highly toxic nuclear waste
15 buried in or leaking from a 1,030-year-old
16 dump site south of Buffalo.

17 Federal and State officials say they
18 are leaning toward keeping the bulk of the
19 nuclear waste buried where it is, promising to
20 keep a careful eye on it, of course. But
21 that's an option that ignores the
22 mind-boggling long time that some of the West
23 Valley waste will remain toxic. A better
24 idea, and in the really long-term, arguably a
25 cheaper one, would be to dig up all of the

EDITH E. FORBES (585)343-8612

706-1

706-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Chapter 1 of this EIS summarizes the history of WNYNSC. Section 1.1 provides an accurate history of the development of the site and how DOE and NYSERDA became responsible for their respective roles.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

Please see the Issue Summaries for "Concerns about Potential Contamination in Water," "Questions about Long-term Erosion Modeling," and "Conclusions of the Synapse Report" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

Comments from the West Valley, New York, Public Hearing (April 1, 2009)

25

1 nuclear waste now, find a proper place to keep
2 it for the really long time, and remove a
3 giant toxic land mine that could cause
4 catastrophic damage to future generations and
5 the entire Great Lakes ecosystem.

6 Of course, in the geologic time
7 frames used to view such things, cleaning up
8 the waste, quote, now, unquote, could mean a
9 deliberate remediation process that could take
10 70 years and cost almost \$10 billion. But
11 according to some independent analyses brought
12 to bear on the subject, keeping the waste in
13 place could cost \$27 billion over the long
14 haul. Keeping the waste in place could cost
15 \$27 billion over the long haul. And the cost
16 in money and in lives would be much greater if
17 there are repeated catastrophic leaks of toxic
18 material that would poison the water supplies
19 relied on by millions of people in the Great
20 Lakes watershed.

21 The West Valley site has not been --
22 the West Valley site has been a hot waste, hot
23 potato for State and Federal officials for a
24 long time. From 1966 to 1972, the site was
25 the home of a nuclear reprocessing operation

706-1
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Comments from the West Valley, New York, Public Hearing (April 1, 2009)

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1 that ingested some 640 tons of irradiated
2 materials from other atomic operations. The
3 operations stopped when upgrades in Federal
4 standards proved too expensive for plant
5 operators to meet, which left the Federal
6 government holding the bag for the waste that
7 was later solidified by stirring it into
8 melted glass.

9 A 1996 draft report on cleaning up
10 the site didn't come to a conclusion on the
11 best way to do it, and the problem was left to
12 fester for another decade.

13 Now, the US Department of Energy and
14 New York State Energy Research and Development
15 Authority are holding hearings and taking
16 public comment on the matter.

17 According to the Notice in the
18 Federal Register, the preferred approach of
19 the Federal and State agencies is to remove
20 some of the existing facilities and waste,
21 while leaving more of the leavings under
22 active management, while they continue to
23 figure out what to do with all the poisons
24 they have been left with.

25 But environmental activists

**706-I
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Comments from the West Valley, New York, Public Hearing (April 1, 2009)

27

1 reasonably argue the threat the waste poses to
2 the surrounding areas, particularly its water
3 supplies, already has begun and won't go away
4 until the waste does. They point to the
5 geologically unstable surroundings of the site
6 as frighteningly demonstrated by the recent
7 landslides that have been -- that have
8 complicated the reconstruction of Route 219 in
9 the area.

10 The more than 600 metric tons of
11 solidified nuclear waste, plus toxic leaks
12 that have already been detected in the
13 surrounding water supplies, is no gift for us
14 to leave future generations. It will be
15 expensive, and it will take time, but the best
16 approach to the West Valley waste site is to
17 remove it completely once and for all.

18 MS. ROBINSON: Thank you, ma'am. A
19 Barbara Warren is the last speaker, and after
20 that we will move to people who didn't sign
21 up.

22 **BARBARA WARREN:** Good evening. My
23 name's Barbara Warren; I am with Citizens
24 Environmental Coalition, a statewide
25 organization.

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cont'd

Comments from the West Valley, New York, Public Hearing (April 1, 2009)

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1 The recent debacle of the financial
2 industry has resulted in lots of talk about
3 toxic assets and what to do about them.
4 Several trillion dollars have been allocated
5 to restoring the soundness of financial
6 institutions because of these so-called toxic
7 assets.

8 We have the real deal at West
9 Valley. We have real toxic assets that will
10 be dangerous for thousands of years, and the
11 government must find the money to dig them up
12 and safely contain them. Whatever the cost,
13 it is the government's responsibility to do
14 so. Leaving the buried waste in the ground to
15 leach into the sole-source aquifer or to be
16 released catastrophically by forces of erosion
17 and contaminating the Great Lakes is
18 unacceptable.

19 Fully cleaning up the radioactive
20 waste at West Valley sounds like a bargain at
21 under \$10 billion, when compared to over \$100
22 billion for individual banks.

23 We want to remind you that
24 prevention is usually a fraction of the costs
25 of response remediation and clean-up.

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707-1

707-1 DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Regarding funding of cleanup at WNYNSC, this EIS was prepared to evaluate the environmental impacts of the alternatives for decommissioning and/or long-term stewardship of WNYNSC, a legally required step to support a decision on a course of action. The U.S. Congress and the President are responsible for establishing funding levels for various Federal Government programs, while the New York State Legislature and the Governor are responsible for establishing funding levels for state government programs. Implementation of decisions made in DOE's Record of Decision and NYSERDA's Findings Statement is contingent on the level of funding allocated.

The preliminary cost-benefit analysis presented in Chapter 4, Section 4.2, of this EIS was prepared at NRC's request and in a manner consistent with NRC's as low as is reasonably achievable (ALARA) guidance. Section 4.2 has been revised to present the results of sensitivity analyses using different discount rates. If cost-benefit considerations are part of the basis for agency decisionmaking, this will be acknowledged and discussed in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the "Questions about Cost-Benefit Analysis" Issue Summary in Section 2 of this CRD for further discussion of this issue.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. Please also see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Comments from the West Valley, New York, Public Hearing (April 1, 2009)

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1 Protecting New Orleans, for example, from
 2 storms and flooding would have prevented
 3 hundreds of billions of dollars in damages
 4 from Hurricane Katrina. And the choice of
 5 cost benefit analysis, often, usually,
 6 undervalues all prevention activities which
 7 prevent future harm.

8 Our organization is opposed to
 9 leaving any buried waste on site because of
 10 the problem of containing the waste and
 11 preventing the public from being exposed to
 12 this toxic material.

13 We're also very concerned about the
 14 phased alternative because it, essentially,
 15 leaves the public out of the process, and
 16 leaves too much undecided. Phase 2's
 17 undecided. Phase 1, we're not provided with
 18 the information for a large part of Phase 1.
 19 Like the studies, the data collection that
 20 will be done. So that's inadequate.

21 And the fact that Phase 1 handles
 22 just 1 percent of the problem. 1 percent of
 23 the problem, leaving another 99 percent. That
 24 99 percent is the major facilities most of us
 25 are concerned about; the NRC disposal site,

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707-2

707-2 Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until final decisions are made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate Phase 2 decisions for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

Chapter 2, Section 2.4.3, of this EIS describes decommissioning activities under the Phased Decisionmaking Alternative and provides a discussion of the data collection, studies, and monitoring to be performed during implementation of Phase 1 and the purpose of each of these activities. The overall intent of these Phase 1 activities is to further characterize the site and to research technology developments and engineering to aid consensus decisionmaking for Phase 2. Section 2.4.3.3 explains how the additional data and studies would be used in making the Phase 2 decision regarding potential future activities. The intent of this EIS is to provide a description of the environmental impacts of each of the alternatives to inform the Agency decisionmakers.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and

Comments from the West Valley, New York, Public Hearing (April 1, 2009)

30

1 the State disposal site, and the high level
2 waste tanks. Those are things that people
3 want to know have been taken care of.

4 I just have a brief statement about
5 the sitewide removal alternative. We support
6 full clean-up. We support the sitewide
7 removal alternative, because there's only one
8 alternative that is a complete, comprehensive
9 plan for the entire site. There's only one
10 alternative which will excavate, package, and
11 prepare all radioactive material on site for
12 disposal, which will track off-site
13 contamination for clean-up. The only one that
14 tracks off-site contamination for clean-up and
15 remediation. That provides a permanent and
16 final solution to the comprehensive
17 contamination on site. That does not require
18 continued monitoring of leaks and spreading
19 contamination. That eliminates the need to
20 perfectly maintain all engineered structures
21 and replace them at regular intervals for
22 thousands of years. That eliminates the
23 threat of a catastrophic release of
24 radioactive material and the resultant
25 monetary and public health costs. That is not

**707-2
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NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

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Comments from the West Valley, New York, Public Hearing (April 1, 2009)

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1 jeopardized by the powerful forces of erosion,
2 weather, water, earthquakes, or human
3 intruders. There is only one alternative that
4 eliminates the worry for nearby residents and
5 public officials. That does not require
6 maintenance of emergency radiological services
7 in nearby towns, and that does not require a
8 financial set aside to guarantee care at the
9 site for thousands of years. Which has also
10 been adequately disclosed to the public so
11 they can have some confidence in the outcome,
12 and for which there is detailed information
13 and a reasonable public participation process.

14 This alternative, not surprisingly,
15 is the sitewide removal alternative, where
16 complete excavation and clean-up of all
17 facilities on the project premises, the State
18 disposal area, both the source area and
19 non-source area of the strontium plume, the
20 cesium contamination, including any off-site
21 contamination, are all taken care of.

22 As the recently completed
23 independent full cost accounting study
24 revealed, complete exhumation and clean-up
25 poses the fewest risks to the environment and

**707-1
cont'd**

707-3 707-3

DOE and NYSERDA acknowledge the commentor's support for the conclusions of *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* and opposition to an EIS alternative that would leave buried waste on site. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Conclusions of the Synapse Report" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

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1 public health over the long-term, and also
 2 costs the least. In other words, a complete
 3 clean-up is in the interests of the public
 4 health and the environment, and also the most
 5 effective option.

6 MS. ROBINSON: One minute.

7 MR. BOWER: Just let Barbara finish,
 8 since she's the last speaker.

9 MS. ROBINSON: Sure.

10 BARBARA WARREN: This is what
 11 happens, things spread around like toxic
 12 radioactive waste. I am forgetting what I was
 13 going to say as an end.

14 In essence, we support the full
 15 clean-up. There are so many unanswered -- so
 16 many problems with the Environmental Impact
 17 Statement. Construction impacts aren't
 18 adequately evaluated. The high level waste
 19 tanks are right adjacent to where the major
 20 excavation is going to be occurring, and it's
 21 really not explored, the possible damage to
 22 those waste tanks, for example.

23 Climate change is not considered a
 24 real thing happening in this area. That's
 25 ignored.

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707-4

707-5

707-4 Appendix C, Section C.3 and C.4, of this EIS describes the construction and demolition activities to be conducted under each of the action alternatives to the extent known and provides a basis for determining the impacts under each alternative. At the starting point of the time period analyzed in this EIS, the contents of the waste storage tanks would be in a dry form and would not readily migrate to groundwater should the tanks be breached. Appendix I, Section I.5, contains an evaluation of an accident scenario whereby the roof of the vault and the tank collapse, exposing the tank contents to the atmosphere. Because the contents are dry, the exposure route that is considered in the accident analysis is through the air. It should be noted that the tanks have never leaked and have not contributed to the source of groundwater contamination on the North Plateau. It should also be noted that, should an accident occur resulting in breaching of the tanks, mitigative measures would be immediately implemented to minimize environmental and worker impacts.

707-5 The analysis in this EIS recognizes the potential for climate change to influence the long-term consequences of waste management. Climate changes, whether natural or influenced by human actions, could change the nature and amount of precipitation. Appendix H, Section H.3.1, of both the Revised Draft EIS and the Final EIS discusses the sensitivity of groundwater flow to changes in annual precipitation. The revised erosion prediction used for the unmitigated erosion dose analysis is based on the assumption that storms could occur more frequently than indicated by current records. This prediction includes the effects of storms of greater severity than the one that occurred in the region in August 2009. The use of this higher erosion rate associated with an elevated precipitation rate is discussed in Appendix H, Section H.2.2.1. Chapter 4, Section 4.3.5, has been revised to include a discussion of how the uncertainties about future climate change are addressed in this EIS.

Comments from the West Valley, New York, Public Hearing (April 1, 2009)

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1 So there are a lot of deficiencies,
2 and we hope people will make an effort to
3 comment by June 8th, because it's incredibly
4 important that we do this right. It's very
5 important that we do it right. Thank you very
6 much.

7 MS. ROBINSON: Thank you, ma'am.
8 Okay. Are there any other people in the room
9 who would like to make a comment who did not
10 sign up?

11 (No response from the audience.)

12 MS. ROBINSON: Okay. Are there any
13 other people who would like to comment, who
14 did sign up, and would like to do it again?

15 (No response from the audience.)

16 MS. ROBINSON: Okay. Well, I remind
17 you, that you may make your comments later.
18 According to the list, everybody has done it,
19 and everybody who has been given an option has
20 done it.

21 So I thank you for your
22 participation tonight, and I'd like to give --
23 end my portion of this and turn this back over
24 to Cathy Bohan of the Department of Energy for
25 closing remarks.

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Comments from the West Valley, New York, Public Hearing (April 1, 2009)

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1 (The public speaker portion then
2 concluded at a time of 8:31 p.m.)

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Comments from the West Valley, New York, Public Hearing (April 1, 2009)

35

1 STATE OF NEW YORK)

2 ss:

3 COUNTY OF GENESEE)

4

5

6 I DO HEREBY CERTIFY as a Notary Public
7 in and for the State of New York, that I did
8 attend and report the foregoing proceeding,
9 which was taken down by me in a verbatim
10 manner by means of machine shorthand.

11 Further, that the proceeding was then
12 reduced to writing in my presence and under my
13 direction. That the proceeding was taken to
14 be used in the foregoing entitled action.

15

16

17

18

19

20 SUSAN M. RYCKMAN, C.P.,
Notary Public.

21

22

23

24

25

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Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

1

1 PUBLIC HEARING
2 STATE OF NEW YORK
3 _____/
4 REVISED DRAFT
5 ENVIRONMENTAL IMPACT STATEMENT for
6 DECOMMISSIONING and/or
7 LONG-TERM STEWARDSHIP at the
8 WEST VALLEY DEMONSTRATION PROJECT and
9 WESTERN NEW YORK NUCLEAR SERVICE CENTER
10 _____/
11

12 Public Comment portion of the Public
13 Hearing in the above-captioned proceeding held
14 at Erie Community College, City Campus,
15 121 Ellicott Street, Buffalo, New York, on
16 April 2, 2009, at a time of 7:30 p.m.

17
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20
21
22 REPORTED BY: SUSAN M. RYCKMAN, CP,
23 Court Reporter,
EDITH FORBES COURT REPORTING SERVICE
24 21 Woodcrest Drive,
Batavia, NY 14020,
25 (585) 343-8612

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Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

2

1 APPEARANCES:

2 PAUL BEMBIA,
3 NYSERDA;
4 CATHERINE BOHAN,
5 U.S. Department of Energy;
6 BRYAN BOWER,
7 U.S. Department of Energy;
8 LINDA ROBINSON,
9 Moderator.

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Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

5

1 MS. ROBINSON: Keep in mind, during
2 this segment the comments will be taken
3 verbatim by the court reporter, and they will
4 not be responded to tonight. They will be
5 taken into account in a comment response
6 document of the Final EIS statement.

7 Cathy Bohan and Paul Bembia will be
8 the people to whom you should direct your
9 comments. Though I need you to keep an eye
10 over here, because I will, at the end of your
11 time period or before the end of your time
12 period, give you a notice of the end of your
13 time period.

14 The court reporter is Sue Ryckman,
15 and her objective is to produce a complete and
16 accurate transcript of the oral comments
17 tonight. And they will be included, as I
18 said, in the EIS.

19 I will now call the commenters in
20 the order that they register. I will tell you
21 then at the four-minute period, I am going to
22 tell you with this red card. And if you're
23 not noticing my red card, I am going to say
24 one minute, meaning you have one more minute
25 to wrap up. So you have five minutes to talk.

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Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

6

1 And that is out of fairness to everybody so
2 those who sign up get a chance.

3 I am going to call two people at a
4 time so that you have some time to get to the
5 microphone and you will have some time to get
6 yourself together to speak. I ask that you
7 re-give your full name and organization, if
8 you have one to represent, so that the court
9 reporter can get that down.

10 All right. We have -- if you have
11 written comments that you would like to turn
12 in that is the same as what you are saying, we
13 welcome you turn that in also. And again, I
14 will give you this notice, and I have a
15 stopwatch with which I will measure time.

16 Okay. Here we go. This is the
17 commentors. The first one will be Bill Nowak
18 on behalf of State Senator Thompson. The
19 second will be Lee Lambert. Again -- sir,
20 there is a question?

21 A SPEAKER: Clarify, will there be
22 an opportunity to talk further at the end?

23 MS. ROBINSON: Yes. I said that
24 before. We have so many commenters that we
25 will say yes, and we still have the hall that

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Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

7

1 long. Definitely, we will do that. If there
2 is any opportunity we will. Sir.

3 **BILL NOWAK:** Thank you. I am
4 Bill Nowak, Deputy Chief of Staff for Antoine
5 Thompson. The Senator had committed to being
6 here tonight, but as of an hour ago, he was
7 still in Albany working on the budget. He
8 asked me to give his statement for him.

9 The Senator is the Environmental
10 Conservation Committee Chair in the New York
11 State Senate, and his comments run as follows:

12 I appreciate the opportunity to
13 speak tonight, and commend all who have taken
14 the time to attend the hearing.

15 As Chair of the New York State
16 Environmental Conservation Committee, I would
17 like to state in no uncertain terms, that I
18 support the sitewide removal option among the
19 four options looked at in the Draft
20 Environmental Impact Statement for the West
21 Valley nuclear site.

22 It is clear to me that sitewide
23 removal is, ultimately, the most logical and
24 certain way to protect public health and
25 natural resources far into the future. I

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801-1

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

8

1 believe we should choose that path now.

2 It's my understanding that the
3 Department of Energy's Preferred Alternative
4 is different from mine. And first let me note
5 some good news relative to both these
6 alternatives. Under either the sitewide
7 removal or the phased-decision option,
8 positive steps will be taken over the next
9 several years to protect public health.

10 Either of these clean-up alternatives include
11 the near term removal of very significant site
12 facilities in areas of contamination.

13 Stopping the flow of the plume of contaminated
14 groundwater is certainly one of the most
15 important immediate keys to protecting the
16 health represented by the dangers on this
17 site.

18 More good news came yesterday in the
19 form of \$74 million in Federal stimulus money
20 that will allow this work to go forward, while
21 creating 200 jobs.

22 Although it has been an incredibly
23 busy time for the State Senate, I have taken
24 some time to investigate this process. I
25 understand that NYSERDA is taking a strategic

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EDITH E. FORBES (585)343-8612

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

9

1 position. They are wary of some of the DEIS
2 analyses that can be taken to support leaving
3 these dangerous wastes on site indefinitely.
4 They support the phased-approach option
5 because it would give time for more scientific
6 study to further explore the balance between
7 the consequences of available options.
8 According to their official position on the
9 Preferred Alternative, the consequences they
10 are balancing include, quote, the very large
11 costs associated with removing these
12 facilities, and the potential for significant
13 long-term risks from leaving them in place.

14 After having just gone through a
15 grueling budget process, including intense
16 criticism of State spending, no one
17 appreciates the value of the taxpayers' dollar
18 more than I do. As an elected official,
19 though, I believe it is my responsibility to
20 take the long view in protecting the public
21 interest. I believe in the long run it will
22 be far more expensive to keep these wastes in
23 place while dealing with erosion and
24 constantly monitoring for new contamination
25 plumes.

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801-1
cont'd

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10

1 Regarding health and safety, there
2 may be a risk of an accident in the process of
3 sitewide removal, but I believe that risk is
4 minimal compared with leaving dangerous waste
5 buried on the sole-source aquifer with serious
6 erosion problems and the potential for
7 earthquakes.

8 In the end, it is my opinion that
9 the best long-term financial health and
10 environmental interests of the citizens of New
11 York State are served by complete sitewide
12 removal of these nuclear wastes on an
13 expedited but carefully executed time frame.
14 Let's start that process now so there will be
15 a time when our grandchildren look back and
16 thank us for making their world a cleaner and
17 safer place. Thank you.

18 MS. ROBINSON: Thank you. Next will
19 be Lee Lambert for the organization, and then
20 Lee Lambert for individual comments, followed
21 by Vincent Agnello.

22 **LEONORA LAMBERT:** I'm speaking for
23 the Coalition on West Valley Nuclear Waste, a
24 citizens group that was formed almost 40 years
25 ago, exclusively watching over the waste at

801-1
cont'd

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EDITH E. FORBES (585)343-8612

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

11

1 West Valley. My name is Leonora Lambert.
2 The Coalition on West Valley Nuclear
3 Waste has had a long-standing position of a
4 full clean-up of the West Valley nuclear site,
5 which includes the exhumation of the cesium
6 prong, the strontium plume, both the Federally
7 licensed burial areas and the State disposal
8 area, and the tanks.

9 The Coalition believes that the
10 legally required process, including this DEIS,
11 has been manipulated and does not reflect the
12 full scope of issues that an appropriate
13 review should entail. This includes
14 requirements of the West Valley Demonstration
15 Project Act, the National Environmental
16 Protection Act, and the State Environmental
17 Quality Review Act.

18 Our position always has been as
19 advocates for monitored and retrievable
20 storage. The Federal government has to
21 develop an environmentally sound isolation and
22 monitoring technologies for West Valley's
23 reprocessing waste and other radioactive
24 wastes from mine tailings to fuel rods. We do
25 not support irreversible technology.

802-1 802-1 DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

802-2 802-2 DOE and NYSERDA believe that this EIS meets the requirements of NEPA and SEQR. The principal purpose and need for this EIS is to evaluate the environmental impacts of decommissioning and/or long-term stewardship of WNYNSC, and thus meet the requirements of the West Valley Demonstration Project Act.

802-2 Offsite authorized disposal capacity is available for most of the waste that could be generated from any of the EIS alternatives. The shift to a national policy of storage rather than disposal of this waste is outside the scope of this EIS. Consistent with existing practice, any waste generated from any of the EIS alternatives that does not currently have offsite disposal capacity (referred to as orphan waste) would be safely and retrievably stored on site until such disposal capacity is available.

EDITH E. FORBES (585)343-8612

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

12

1 The West Valley site has its very
2 own act of Congress, which charges you with
3 demonstrating that the wastes at West Valley
4 can be cleaned up, decommissioned, and
5 decontaminated.

6 I further charge you to just do it.
7 Get on with it.

8 I continue to worry about the
9 seriousness with which all these comments are
10 considered in this decision process afforded
11 to us under NEPA and SEQR. Please listen to
12 all of us, whether or not we are lawyers,
13 scientists, or mathematicians. Our concerns
14 are very real, and we are entitled, by virtue
15 of birth and life, and the simple act of
16 being, to have an affect on and validation of
17 your decision making.

18 Our tax money is paying your
19 salaries. We are, in essence, your boss. We
20 also are consumers, in this case, specifically
21 of water, and the consumer/customer, is always
22 right.

23 And now my personal statement. I
24 thank you for this opportunity. My name is
25 Leonora Lambert. For many years, as a member

802-3 802-3

DOE and NYSERDA seriously considered all of the comments received on the Revised Draft EIS. The formal comment period was originally scheduled for 6 months (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE), but was expanded to 9 months, beginning on December 8, 2008, and ending on September 8, 2009. During this comment period, public hearings were held in Albany, Irving, Ashford, and Buffalo, New York. In addition, Federal agencies, state and local governmental agencies; Native American Tribal Governments, and the general public were encouraged to submit comments via the U.S. mail, e-mail, a toll-free fax line, and a DOE Internet website (<http://www.westvalleyeis.com>). DOE and NYSERDA considered all comments, including those received after the comment period ended, in evaluating the accuracy and adequacy of the Revised Draft EIS to determine whether its text needed to be corrected, clarified, or otherwise revised. Responses to each of the comments received are provided in Section 3 of this CRD.

EDITH E. FORBES (585)343-8612

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

13

1 of the League of Women Voters of Buffalo
2 Niagara, I have followed the issue of
3 preservation of our natural resources,
4 particularly problems related to disposal of
5 radioactive waste. But I am not here to speak
6 for the League.

7 More recently I've become a member
8 of the Citizen Task Force for West Valley and
9 of the Coalition on West Valley Nuclear Waste.
10 Nor do I speak for either of these fine
11 groups.

12 The League of Women Voters' primary
13 focus is to encourage informative and active
14 participation in government. We work to
15 increase understanding of major public policy,
16 and to influence public policy through
17 education and advocacy.

18 Many of the laws that apply to
19 meetings such as this, laws that guarantee the
20 safety of the people and protection of the
21 environment, were supported and promoted by
22 the League of Women Voters.

23 In 1998, the League's Educational
24 Foundation, in partnership with the Department
25 of Energy, held two workshops to explore the

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EDITH E. FORBES (585)343-8612

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1 issue of what to do with radioactive waste
2 being stored at numerous locations around the
3 country. I, and a few members of the Citizen
4 Task Force of West Valley, attended a workshop
5 in San Diego. We learned a lot about the
6 magnitude of the problems, both from DOE and
7 from other participants, especially
8 representatives of several tribes of Native
9 Americans whose land was threatened by the
10 proximity of nuclear waste.

11 We also discovered that numerous
12 environmental groups, made up almost entirely
13 of volunteers, had boycotted the workshop
14 because their experience in the past with the
15 Department of Energy was so negative, they
16 were sure it would be a waste of time.

17 In the end, at the conclusion of the
18 workshop, all agreed on one thing; we need a
19 dialogue in America to discuss the issue of
20 radioactive waste and determine what is best
21 for the country.

22 It didn't happen. Peoples' eyes
23 glazed over about the third sentence when the
24 subject comes up, usually after a press
25 release headline boasts of clean-up. Most

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1 lawmakers who could make such a dialogue
2 happen know little about it themselves.

3 There is also the possibility that
4 no one wants to admit that we have a big
5 problem that cries out for a real solution.

6 Coming home from that event, almost
7 11 years ago, and attending meetings of the
8 task force, I concluded we need another
9 Demonstration Project to demonstrate that we
10 really clean-up a nuclear waste site.

11 Meanwhile, the big process was
12 developed, and a great deal of the highly
13 radioactive nuclear waste is out of the tanks,
14 no longer a huge leaking threat. Still,
15 highly radioactive sludge remains a threat, as
16 long as the tanks remain in the ground.

17 About two years ago, representatives
18 from the Environmental Protection Agency
19 suggested a pilot demonstration project to
20 take the tanks out of the ground. There are
21 hundreds of tanks buried at DOE sites around
22 the country, some of them leaking. As far as
23 we know, there has been no attempt to unearth
24 them. The technology that would need to be
25 developed to do that could be helpful here and

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EDITH E. FORBES (585)343-8612

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

16

1 at those other sites.

2 Why couldn't this EIS have included
3 an option to exhume a tank? One might object
4 that we don't know how to do that. But we
5 didn't know how to do it then, and the experts
6 experimented until they got it done.

7 More importantly, why can't the
8 Department of Energy commit right now to a
9 full clean-up? Instead of phased decision
10 making, why not phased clean-up? Then Phase 2
11 could hold some promise as opposed to the
12 indecision that hovers over the present plan.
13 Essentially, a plan not to decide.

14 We don't want a partial clean-up.
15 We want the NDA and SDA burial removed, the
16 strontium plume removed, not merely the source
17 under the process removed, and the tanks out
18 of the ground. We don't want a cosmetic
19 effort that would take down buildings and
20 plant grass, hiding what lurks beneath the
21 beautiful rolling countryside. To coin a
22 phrase heard a lot last fall, if you put
23 lipstick on a pig, it's still a pig.

24 MS. ROBINSON: Thank you. Our next
25 speaker is Vincent Agnello, and followed by

802-4 802-4

This EIS was prepared to evaluate the environmental impacts of alternatives for the decommissioning and/or long-term stewardship of the WNYNSC site. Under the Sitewide Removal Alternative, DOE would remove the waste storage tanks from the site.

802-5

In accordance with NEPA and SEQR requirements, this EIS evaluates a reasonable range of alternatives for decommissioning and/or long-term stewardship of WNYNSC. Please see the response to Comment no. 802-1.

EDITH E. FORBES (585)343-8612

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

17

1 Judy Einach.

2 **VINCENT AGNELLO:** My name is Vincent
3 Agnello, resident of Youngstown, New York.

4 I am the past president of Residents
5 for Responsible Government, Inc., a
6 community-based group fighting to clean the
7 environment in Lewiston and Youngstown from
8 further disposal of toxic wastes, and from the
9 radioactive assault on the community from the
10 government's LOOW site.

11 In a sense, our struggle and that of
12 the residents impacted by West Valley are
13 similar. The government's response, both
14 Federal and State, are even more strikingly
15 identical. No action to protect the health
16 and welfare of the impacted citizens. And
17 neither level of government has taken any
18 action in our communities to protect our
19 nation's greatest resource, the fresh waters
20 of the Great Lakes.

21 I'm a professor at Niagara
22 University, and I recently showed my class a
23 video on the struggles of the residents of
24 Love Canal. The video was entitled, "In Our
25 Own Backyard: The First Love Canal," by

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Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

18

1 Bull Dog Films. I would recommend that you
2 view the film before making any decisions on
3 West Valley. My students were shocked by the
4 government's inaction. History does repeat
5 itself. When asked what the role of
6 government is, their response was uniform:
7 Government's job is to protect the health and
8 welfare of its citizens.

9 Your plan of action and the
10 Environmental Impact Statement is faulty, in
11 that it fails to address honestly, accurately,
12 and fully the two major issues regarding
13 West Valley.

14 First, your plan must protect the
15 residents of the area from actual and
16 potential harm. Secondly, and as important,
17 your plan must remove any threat of
18 contamination to the fresh drinking water of
19 the Great Lakes. Complete removal is the only
20 viable solution that addresses both issues.

21 We could spend months going over
22 each line of your plan and impact statement,
23 but that would not resolve the issue at hand.
24 I implore you to go back to the planning stage
25 and come up with a plan that will permanently

803-1

803-1

DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative. Please see Chapter 1, Section 1.2, for a discussion of the history of the development of this EIS. This EIS was prepared to evaluate the environmental impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

EDITH E. FORBES (585)343-8612

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

19

1 remove the radioactive waste from West Valley,
2 and to do so immediately.

3 What will our legacy be? What shall
4 we say to our children, grandchildren, and
5 generations to come as to why we have no
6 drinking water? What shall we say to our
7 children as to why our government continues to
8 fail us? Thank you.

9 MS. ROBINSON: Thank you, sir. Judy
10 Einach is next, and Nick Orlando will follow.

11 JUDY EINACH: My name is
12 Judy Einach, and I am a member of the Steering
13 Committee of the Coalition on West Valley
14 Nuclear Wastes, and I also have a seat on the
15 Citizen Task Force, which is what I speak for
16 tonight. So I thank you for the opportunity
17 to comment.

18 The Citizen Task Force was formed in
19 1997 to assist in the development of a
20 Preferred Alternative for the completion of
21 the West Valley Demonstration Project and
22 clean-up, closure, and/or long-term management
23 of the facilities at the site. The group has
24 18 members, with representatives from the
25 affected communities.

EDITH E. FORBES (585)343-8612

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Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

20

1 After its formation, the CTF met for
2 18 months and studied the issues before
3 releasing a report in July 1998. That report
4 details the CTF's expectations with respect to
5 Policies and Priorities and guidelines for a
6 Preferred Alternative. Our report and
7 considerable information about our work and
8 the site may be found at
9 www.westvalleyctf.org.

10 For more than a decade since the
11 report was issued, the CTF has been meeting
12 regularly with DOE and NYSERDA. We have also
13 received numerous presentations from
14 regulatory agencies, and advocated with
15 elected officials on behalf of clean-up at the
16 site. We believe that our ongoing active
17 involvement has been essential to a number of
18 the clean-up activities underway or planned at
19 the West Valley Demonstration Project.

20 The CTF appreciates the progress to
21 date and the work of the Core Team agencies in
22 arriving at a Preferred Alternative, something
23 that was missing from the 1996 Draft EIS. The
24 Core Team agencies are to be commended for
25 overcoming significant differences and for

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EDITH E. FORBES (585)343-8612

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

21

1 working together to arrive at a Preferred
2 Alternative.

3 The CTF also appreciates that DOE
4 and NYSERDA are planning to accomplish
5 clean-up work at the site that the CTF deems
6 essential, including the removal of the source
7 area of the North Plateau groundwater plume
8 and a significant number of the contaminated
9 facilities.

10 We are actively working on written
11 comments to be submitted later this spring.
12 Based on our review to date of the Draft EIS,
13 we would like DOE, NYSERDA, and the public to
14 understand in broad terms what we anticipate
15 will be the essential views expressed in those
16 comments.

17 First, the proposed Preferred
18 Alternative Phase 1 work meets the Policies
19 and Priorities articulated in the CTF 1998
20 final report. The CTF strongly encourages
21 that this work be completed without further
22 delay, and in a manner that enhances future
23 decisions regarding clean-up of the site. The
24 CTF desires that performance measurements for
25 this work be clearly articulated and adhered

804-1

804-1 DOE and NYSERDA note the comment. If the Phased Decisionmaking Alternative were selected, during Phase 1, DOE would conduct additional studies and evaluations to clarify and possibly reduce technical uncertainties related to the decision on final decommissioning and long-term management of the site. During Phase 1 and prior to implementation of Phase 2, DOE and NYSERDA would seek information about improved technologies for in-place containment and for exhumation of the tanks and burial areas that may become available. DOE and NYSERDA would continue to assess the results of any site-specific studies along with any emerging technologies to support the Phase 2 decision. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement.

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Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

22

1 to.

2 Second, the CTF stands by the
3 Policies and Priorities articulated in the
4 1998 final report, including, among others:

5 The protection of human health and
6 safety and of the environment is paramount.

7 Our 1998 report states that the CTF
8 does not believe that the geologic,
9 hydrologic, and climate conditions of the site
10 are suitable for long-term permanent storage
11 or disposal of long-lived radionuclides.
12 After 11 years of continued education on the
13 characteristics of the site, we are more
14 convinced of this, and we feel that the level
15 of risk from exposure is such that reliance on
16 institutional controls over a prolonged
17 period, hundreds of thousands of years, is not
18 feasible.

19 Third, decisions and studies should
20 be performed during Phase 1 that assess and
21 support the eventual goal of full clean-up of
22 the site, and reassess the technologies and
23 volume of waste disposal associated with
24 exhumation, which may alter estimates of
25 safety risks and costs.

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804-2

804-2 DOE and NYSERDA acknowledge the commentor's opinion on the unsuitability of the WNYNSC site for long-term storage or disposal of wastes. This EIS analyzes the impacts of the alternatives on the environment, including human health and safety during the decommissioning and post-decommissioning timeframes if waste and contamination were to remain on site.

804-3

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies and long-term erosion modeling are discussed in Appendix F. This EIS addresses potential impacts of climate change through sensitivity analyses, but does not attempt to address extreme global-scale climate change. The analysis of doses due to unmitigated erosion uses a gully advance rate associated with a climate that is wetter than current site conditions. Please see the Issue Summary, "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for additional discussion of this issue and DOE's and NYSERDA's response.

This information will be considered by the agencies when they make their decision, which will be reported in DOE's Record of Decision and NYSERDA's Findings Statement.

804-3

Studies will be performed during Phase 1 of the Phased Decisionmaking Alternative for the purpose of further characterizing the site and evaluating technology developments and engineering to aid consensus decisionmaking for Phase 2 if the Phased Decisionmaking Alternative is selected. Please see the response to Comment no. 804-1.

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

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1 Finally, if the Preferred
 2 Alternative and its phased decision making
 3 approach is selected, we feel the views of the
 4 public should be considered on an ongoing
 5 basis. The public should be allowed full
 6 opportunity for review and comment on later
 7 subsequent proposals that might lead to
 8 anything less than unrestricted release at the
 9 site. If an ongoing assessment period occurs,
 10 there will be many interim decisions and site
 11 work which will have far reaching impacts on
 12 human health and the environment.

13 MS. ROBINSON: One minute.

14 JUDY EINACH: These decisions and
 15 the planning for the work should also be
 16 subject to regular ongoing public consultation
 17 to ensure that viable options are not
 18 precluded. Regulatory reviews, permitting,
 19 and licensing should contain commitments from
 20 the appropriate agencies, beyond the minimum
 21 legal requirements, to seek and incorporate
 22 the views of the community in making decisions
 23 regarding the future of the site.

24 Over the coming months, the CTF will
 25 be developing more detailed written comments

804-4 **804-4** Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until a final decision is made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

804-4
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NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate the Phase 2 decision for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

Regulatory bodies involved in permitting and licensing activities at WNYNSC would be responsible for defining the review and public involvement process for their activities.

EDITH E. FORBES (585)343-8612

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

24

1 on the Draft EIS. We encourage everyone to
2 take the time to carefully read and comment on
3 the DEIS and submit written comments. Thank
4 you for the opportunity to comment at this
5 time.

6 MS. ROBINSON: Thank you, ma'am.
7 Next will be Nick Orlando, followed by
8 Diane D'Arrigo.

9 NICK ORLANDO: Good evening. My
10 name is Nicholas Orlando, and I have direct
11 concerns with what is happening here as I own
12 a farm and an organic farm down plume from
13 this project.

14 I've, basically, like to know two
15 things: How safe are my interests, since I
16 use deep artesian wells to water my crops and
17 drinking water for my animals, and water for
18 my family and for friends of mine who also use
19 my water.

20 Secondly -- I am going to be very
21 short with this. Can we expect a more
22 aggressive cleanup with our current
23 administration's commitment to the
24 environment? That's the end of my statement.

25 MS. ROBINSON: Thank you.

805-1 805-1

DOE maintains an onsite and offsite groundwater environmental monitoring program at WNYNSC. Well samples are periodically analyzed for the presence of any radionuclide contamination to ensure that water used by members of the public for consumption, agriculture, and animal husbandry is safe. This system and the results of monitoring are presented in Chapter 3, Section 3.6.2, of this EIS. DOE acknowledges the commentator's support for a more aggressive cleanup. The decision on the selected course of action and supporting rationale will be provided in DOE's Record of Decision and NYSERDA's Findings Statement.

EDITH E. FORBES (585)343-8612

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

25

1 NICK ORLANDO: Can we expect an
2 answer soon?

3 MS. ROBINSON: For the comments that
4 are given here during the comment period, they
5 would be addressed in the EIS itself, the
6 Final EIS. What you may want to do is stay
7 afterwards and talk some more.

8 NICK ORLANDO: Okay. Thank you very
9 much.

10 MS. ROBINSON: Yes. We have
11 Diane D'Arrigo followed by Victoria Ross.

12 DIANE D'ARRIGO: I'm Diane D'Arrigo
13 with Nuclear Information and Resource Service.
14 It's a national group, although I am a --
15 grown up in Western New York, and family's
16 still here, I am part of a national group
17 that's part of a growing local, state, and
18 international coalition of groups that are
19 pushing for the full clean-up -- the full
20 clean-up decision to be made now on the West
21 Valley site. It's the West Valley Action
22 Network, and many other people who are here
23 are a part of it. And there are others.

24 I think it's important to say, and I
25 think probably everyone here knows, but I want

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1 to be clear, that what's in every part of this
2 site is some long, long-lasting radioactive
3 materials. We heard mentioned earlier that,
4 maybe, some parts of the site have shorter
5 lasting materials. One of the so-called low
6 level radioactive waste trenches are at least
7 14 pounds of plutonium, with a 24,000 year
8 half-life, so hazardous for 240- to 480,000
9 years. I would also like to point out that
10 strontium 90 and cesium 137, the so-called
11 short-lasting elements, are hazardous for 300
12 to 600 years, if you use the 10 to 20
13 half-life equation. So short lasting is still
14 long enough to leak into our water supply and
15 destroy it.

16 The independent study that was done
17 with New York State funding, that was got
18 through Senator Young, concludes that it's
19 very likely -- or it's very possible that
20 there could be a serious erosion event -- that
21 there will be many erosion events and
22 gullying, and that the -- that there could be
23 a release, a significant release of
24 radioactivity in 150 to, maybe it wouldn't be
25 to 1500 years, but that it could be soon.

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806-1

806-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Conclusions of the Synapse Report" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

DOE and NYSERDA recognize that erosion must be considered in analyzing the impacts of each of the alternatives. The EIS analyzes the consequences of unmitigated erosion at the site on existing Lake Erie and Niagara River water users as well as postulated water users that are closer to the site. The erosion analysis that is presented in Appendix F of the EIS is considered to be scientifically defensible and, consistent with NEPA requirements, uses a theoretical approach that is accepted in the scientific community that evaluates long-term erosion. Please see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD, which presents a discussion of the erosion model and addresses the uncertainties in the erosion predictions.

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1 And I find it frustrating that our
2 relatively -- that this relatively inexpensive
3 study was able to show that there's strong
4 need to remove this waste from land that will
5 eventually erode into Cattaraugus Creek and
6 the Great Lakes, yet the State and Federal
7 agencies, in 13 years of preparing this
8 updated Revised Draft Environmental Impact
9 Statement, don't seem to have enough
10 information to justify digging it up.

11 I don't know what it's really going
12 to take. You know, do it. Figure it out and
13 revise the EIS, and do it before the end of
14 this round of EIS. We are not willing to wait
15 30 more years, or up to 30 more years, to
16 decide.

17 I'd like to know what you think.
18 Let's just think for a minute about the
19 radioactive wastes that were buried in the
20 ground in 1963. And they were, at that time,
21 they could be in cardboard boxes. In 1982 the
22 rules got stricter, so you can't do cardboard
23 boxes anymore. But let's just think about
24 radioactive sludges and other radioactive
25 materials both high and low level that are in

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1 the ground, either in containers or in boxes.
2 What do you think the condition of the boxes
3 are? Has this material -- yes, it's gotten
4 wet. The reason the burial ground closed in
5 '74 is water filled the trenches, burst
6 through the trench caps, gushed into Lake Erie
7 through Cattaraugus Creek. So it's probably
8 not still in those neat little boxes and
9 barrels.

10 And in 30 more years, how much more
11 water is going to get in? Yes, there are
12 garbage bags on the top, you've got special
13 liners on the top of the trenches to keep the
14 waste from getting in, and sometimes they rip,
15 and they can get fixed, like they just did
16 this week. But radioactive material is going
17 to be there for a long time, even in the
18 so-called low-level part, not to mention the
19 damaged fuel that's in the NRC licensed
20 disposal area.

21 And so I want to know, I want people
22 to envision the logic. I know you've got a
23 lot of different legal steps that you have to
24 go through being NYSERDA and being DOE and
25 having your -- your various requirements to

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1 make contracts, et cetera. But the point is,
2 we've got waste that is oozing under the
3 ground right now.

4 I have a couple of more questions.
5 One is, when is the last time and what was the
6 level of radioactivity in Buttermilk Creek,
7 which runs next to the site? How much
8 radioactivity was there? Who's watching it?
9 And how is that being reported to us?

10 And I'd like to know how many other
11 plumes there are. We've seen talk about the
12 plume they're going to partially remove in
13 Phase 1. Yippee. We don't even know if there
14 are other plumes on the site. I'd like to
15 know what other evidence we have that that
16 site isn't oozing all over the place right
17 now.

18 And I will conclude with just
19 repeating that we're calling for a full
20 clean-up, and we still are calling for an
21 extension on the comment period. Because you
22 need to hear from more people that are
23 potentially affected. And we need more time
24 than June 8th to alert our elected officials,
25 alert our water districts, that you've even

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806-2

DOE maintains a monitoring program at WNYNSC that measures radiological and nonradiological samples both on and off the site. Sampling locations include upstream background locations and downstream locations on both Buttermilk Creek and Cattaraugus Creek. A description of the monitoring program, sampling locations, and results is provided in the annual site environmental reports, which are available through the WVDP website (<http://www.wv.doe.gov>). The description of the site in Chapter 3 of this Final EIS is based on the results from the most recent site environmental report.

806-3

As described in this Final EIS (see Chapter 3, Section 3.6, and Appendix E), a comprehensive understanding of the geological and hydrological properties of WNYNSC has been developed through decades of study, as has an understanding of the nature and extent of soil, groundwater, and surface water contamination. The most significant area of groundwater contamination at WNYNSC is recognized to be the North Plateau Groundwater Plume (see Section 3.6.2.1).

806-3

DOE and NYSERDA note the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in the DOE's Record of Decision and NYSERDA's Findings Statement.

In response to requests from the public, DOE and NYSERDA extended the original 6-month comment period (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE) for an additional 90 days, through September 8, 2009.

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1 got these documents out. Thanks.

2 MS. ROBINSON: Thank you. Our next
3 speaker is Victoria Ross, followed by
4 Eric Hahn.

5 VICTORIA ROSS: I'm Victoria Ross
6 with the Western New York Peace Center. And
7 if I start talking about depleted uranium and
8 cluster bombs and everything, you can get the
9 hook or something. I'll try to restrain
10 myself, but those are big problems, too. And
11 you have, and we all have a big problem here.
12 So I want to really sympathize with your
13 difficult chairs that you're sitting in right
14 over there, because there are -- this is a
15 difficult issue, and I can sympathize with
16 trying to take nuclear waste, hazardous
17 nuclear waste on the roadways or moving it at
18 all, or where do you put it when you find it.

19 But one thing, so let's keep it
20 simple. Simple, but not easy. Simple is
21 keeping it in the ground, keeping it where it
22 is, keeping it where it's leaching into the
23 drinking water in a public area is not an
24 option. It's not. It's irresponsible.

25 But even more so, it is the height

807-1

807-1 DOE and NYSERDA acknowledge the commentor's opposition to an EIS alternative that would leave buried waste on site. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

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1 of irresponsibility for us to be using nuclear
2 power. We have no business using nuclear
3 power in this country, or any other country,
4 because it's an easy out. But it's no easy
5 out because then we're faced with a problem
6 like we have right now, because we have no
7 solution. We don't have a good solution.
8 That's why we're all here now. That's why
9 you're in such difficult seats right there,
10 because it's not a responsible -- it is the
11 height of irresponsibility to be using nuclear
12 power in this country or any country.

13 We need other solutions, and there
14 are other solutions, sustainable solutions.
15 It's research and development that -- and
16 energy that we're talking about. We need to
17 put our efforts into those sustainable
18 solutions so we're not faced with this
19 insanity. Thank you.

20 MS. ROBINSON: Thank you. Next
21 speaker will be Eric Hahn, followed by
22 Maria Maybee. Eric Hahn is actually a pair.

23 **ERIC HAHN:** And now we pause for a
24 station identification. This body was killed
25 by low level radioactive waste from the West

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1 Valley reprocessing plant. This body was
2 killed by waste from another leaking plant.
3 We're here on the street to ask a typical
4 representative of NYSERDA, which body he
5 thinks is whiter and brighter? Why, here
6 comes one now. Excuse me, sir, could I ask
7 you a question?

8 **CHARLES HAHN:** Why, certainly.

9 **ERIC HAHN:** Which body do you think
10 is whiter and brighter?

11 **CHARLES HAHN:** Oh, my goodness, that
12 one is much worse.

13 **ERIC HAHN:** There you have it,
14 folks, proof positive that radioactive waste
15 from West Valley, with the miracle ingredient
16 uranium 235, will get your bodies whiter and
17 brighter. Now we return to our regularly
18 scheduled program.

19 **CHARLES HAHN:** Hello, everyone, and
20 welcome to the local folk interview segment of
21 our show. I am your reporter, Bob Raymond,
22 interviewing a representative from the DOE,
23 Lyon Sackowitz, who would like to set the
24 record straight on the issue of nuclear waste
25 at the West Valley site here in Western New

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1 York. Welcome to our show, Mr. Sackowitz.

2 ERIC HAHN: Lyon, Lyon, please.

3 CHARLES HAHN: All right, Lyon-Lyon.

4 ERIC HAHN: No, no, just Lyon.

5 CHARLES HAHN: All right, just Lyon.

6 I am sure you want to reassure people about
7 the situation out at the site?

8 ERIC HAHN: That's right, Bob.

9 We've decided to keep an eye on things, and
10 we'll also revisit it after 30 years.

11 Frankly, Bob, I don't see what people are so
12 fussed about.

13 CHARLES HAHN: They're concerned
14 about the high level of radioactive waste
15 buried in West Valley.

16 ERIC HAHN: What do they want me to
17 do about it?

18 CHARLES HAHN: According to my
19 notes, they would like you to dig it up.

20 ERIC HAHN: Why?

21 CHARLES HAHN: Because of erosion.
22 Look, it says here the site is on a
23 geologically young landscape, which is
24 undergoing a rapid rate of erosion.

25 ERIC HAHN: Exactly. So if they

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808-2

808-2

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

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1 just leave it for 30 years like I suggested,
2 erosion will uncover it for them. Problem
3 solved. For free.

4 CHARLES HAHN: I wonder if you could
5 speak to the issue of the waste being
6 radioactive for tens of thousands of years?

7 ERIC HAHN: Well, I'm afraid that's
8 just an old wives' tale, Bob. Besides, we
9 have plenty of backup systems.

10 CHARLES HAHN: Backup systems?

11 ERIC HAHN: That's right. Anything
12 goes wrong, we say back up, back up, back up.
13 Everybody back up.

14 CHARLES HAHN: What do you say to
15 people who complain that the Draft
16 Environmental Impact Statement has taken 30
17 years to complete?

18 ERIC HAHN: Everybody's a critic.
19 Preparation of good documents takes time. But
20 if anybody thinks you can write a better one,
21 I would be more than happy to personally read
22 it, and just to be fair, I will give them 30
23 years, too. Don't worry. Don't worry. We
24 won't do anything until we hear from you in 30
25 years. I don't see how I can be much more

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1 fair than that.

2 CHARLES HAHN: And lastly, I wanted
3 to get your views on the radioactive material
4 that is leaking off site.

5 ERIC HAHN: Some people are never
6 satisfied, Bob. When I had radioactive
7 material at the site, people complained about
8 that. Now it's going away, and they're
9 complaining again. Some people.

10 CHARLES HAHN: Well, there you have
11 it, straight from the horse's mouth. Thanks
12 for just Lyon, coming -- er, thanks for
13 coming, Just Lyon.

14 ERIC HAHN: My pleasure, Bob. Thank
15 you. Thank you.

16 MS. ROBINSON: Thank you, sirs. The
17 next will be Maria Maybee, and followed -- and
18 the one after Maria would be Gladys Gifford.
19 Maria Maybee? Maria Maybee? Okay. Is Gladys
20 Gifford willing to do it now, and we will come
21 back to Maria Maybee if she shows up.

22 GLADYS GIFFORD: Good evening. My
23 name is Gladys Gifford; I live in
24 Eggertsville, and I have been monitoring the
25 West Valley site for over ten years.

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1 During those ten years, I have been
2 sharing my understanding of the West Valley
3 site with Presbyterians in Western New York.
4 I have traveled many times to the meetings
5 held at the Ashford Office Complex, despite
6 the 90-mile round trip, because I am convinced
7 that the clean-up of West Valley is not just a
8 problem for the residents of Cattaraugus
9 County, but rather a grave problem for all of
10 Western New York.

11 I am thankful that the meeting
12 tonight is in Buffalo, available to the larger
13 population whose health and future well-being
14 is impacted by the decisions the DOE is
15 considering in this Draft Environmental Impact
16 Statement.

17 Western New York is suffering the
18 strain of several nuclear waste sites,
19 especially the West Valley Demonstration
20 Project. This site is leaking terrible
21 nuclear poisons into the groundwater already.

22 This plume of radioactivity is bound
23 for Buttermilk Creek, thence to Cattaraugus
24 Creek, thence to Lake Erie, and on and on.
25 Lake Erie is one of the Great Lakes, the

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809-1

809-1 Chapter 3, Section 3.6.2.1, of this EIS addresses groundwater at WNYNSC that was contaminated due to past activities (for example, the North Plateau Groundwater Plume). This EIS was prepared to evaluate the environmental impacts of alternatives for decommissioning and/or long-term stewardship of WNYNSC. Under all of the action alternatives, DOE would either remove contamination sources, mitigate their impacts to groundwater, or both. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the North Plateau Groundwater Plume. Potential groundwater impacts associated with the EIS alternatives are discussed in Chapter 4, Sections 4.1.4 and 4.1.10, and Appendix H of this Final EIS.

This EIS also analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. The environmental contamination from current operations is minimal (below established standards), as demonstrated by the results from the ongoing environmental monitoring program. Please see the Issue Summary for "Concerns about Potential Contamination in Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Chapter 1 of this EIS summarizes the history of WNYNSC. Section 1.1 provides an accurate history of the development of the site and how DOE and NYSERDA became responsible for their respective roles.

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1 repository of 20 percent of the sweet
2 freshwater for the whole planet.

3 West Valley Demonstration Project
4 has already put in place one barrier to try
5 and stop that plume -- then they added another
6 barrier. This is such foolishness. We know
7 that water will have its way. How could we
8 stop groundwater from moving?

9 I understand that the West Valley
10 site is the creature of the Federal Department
11 of Energy. The Department of Energy continues
12 to minimize the dangers and expense of
13 cleaning up nuclear waste in order to promote
14 and subsidize nuclear power.

15 Has anyone searched out the people
16 who have been accidentally exposed to the
17 wastes while working at the West Valley site?
18 Does anyone care that there is a child living
19 in the area who has no hands?

20 Why do we tolerate this? How much
21 longer shall we endure this nuclear poison for
22 the sake of the nuclear power industry?

23 Along with the 64 Presbyterian
24 congregations in Western New York, I support
25 the sitewide removal alternative.

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**809-1
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809-2

809-2 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

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1 Let us face up to the reality that
2 the land in West Valley cannot hold these
3 nuclear wastes much longer.

4 Let us do the right thing for
5 ourselves and our descendants.

6 In the name of your constituents in
7 Western New York who are already suffering the
8 ill-effects of nuclear waste, make the right
9 decision -- the sitewide removal alternative.

10 Dig up all the nuclear waste, put it
11 in impermeable containers ready for shipment
12 to a dry and safe place, and forever remove
13 this nuclear waste threat from the beautiful
14 land and waters of West Valley in Cattaraugus
15 County, New York, and the watershed of the
16 Great Lakes. Thank you.

17 MS. ROBINSON: Thank you, ma'am. Is
18 Marie Maybee in the room? If not, let's move
19 on to Dennis Scott, to be followed by
20 Agnes William.

21 **DENNIS SCOTT:** Well, folks, you
22 already heard my first part about
23 alternatives. You've already heard my first
24 part about the alternatives. I will tell you
25 what, I've served in the military for 23

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1 years. And what you laid out here is
2 everything I've learned in the Army -- hurry
3 up and wait. Now if I had to tell that to my
4 children, and we filled this place up with
5 kids, you're not going to be here in 30 years,
6 she may not be here in 30 years, and I don't
7 know about you Paul, but you probably could
8 retire somewhere soon. Okay. So every
9 decision you make here is not really affecting
10 just us, it is affecting our children and
11 their children.

12 There is alternatives. You brought
13 up some great ideas, good points, and so did
14 you, your points about transportation. The
15 alternatives out there are, again, sitting
16 right in front of us.

17 China -- not China. Japan, even the
18 United States and Europe are talkin' 'bout
19 plasma technology because it can handle the
20 type of waste you're talking about. To be
21 honest with you, ma'am, to store this stuff
22 above ground, serving for my country, I
23 understand how many bad people really are out
24 there. It's not just a thing about what all
25 the environmental would do to you there. You

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1 have enough crack pots out there who would
2 take a chance at something like that. It's a
3 sad scenario, but believe me, if something,
4 after we learned in 9/11, that how safe are we
5 really, and what can they get their hands on,
6 and do you want to take the chance of all
7 these people here, the risk at that time. Let
8 alone if you do, move your house next to
9 there. I want to see you live by there, I
10 want to see you monitor there. If you can't
11 do that, then you know, what -- make a quick
12 decision, clean-up these grounds. Do the
13 responsible thing.

14 As a business owner here, I am going
15 towards green energy. As another part of a
16 business owner I am part of a group called the
17 Core, and one of our good leaders is Al Gore.
18 He's challenged us as business owners to take
19 the responsibility for what we do today,
20 because there is no more tomorrow to keep
21 playing around with. I challenge you with the
22 same thing.

23 Thirty years from now and your
24 \$1 billion, or whatever it will be, is
25 probably today's cost. Knowing how politics

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810-1

The human health impacts of postulated intentional destructive acts are analyzed in Appendix N, which also addresses DOE's strategy for emergency planning, response, security, and recovery.

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1 and government works, it will be inflated to
2 something that we will never be able to
3 afford, let alone who knows what that paid
4 for.

5 But take the proper
6 responsibilities, and if any of that can be
7 used back towards energy or that for us,
8 that's another concern. We've already found
9 what happens with dependencies that we sit on
10 today. Didn't get us too far, did we? We
11 heard the same story back in the '70s. We'll
12 get away from dependencies, we'll do all the
13 right things, and we'll never have to worry
14 that we'll ever be at risk. Well, guess what?
15 2000 came around, 9/11 came around, then it
16 happened.

17 So stop stalling and doing
18 bureaucratic stuff. You're telling us you
19 took six months to do -- you will take six
20 months to make a decision.

21 A gentleman over here asked the
22 attorney a very simple question, will you
23 consider another draft. That was really the
24 simple part of the summary. You didn't have
25 to go around in circles. A military guy can

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1 understand that. It was simple. Can you make
2 a decision that there may be an alternative,
3 sir? I'm asking you for that man and everyone
4 else here. Really think about that, because
5 we don't need the long legal jargon. Just a
6 simple decision. Is there the opportunity for
7 another alternative to do something better?

8 Don't rush the decision that you
9 will make that will affect us. And 30 years
10 is way too long. Love Canal, most of us at
11 least in this room probably do remember that.
12 Thank you.

13 MS. ROBINSON: Thank you, sir. Are
14 you Maria Maybee? No.

15 MS. BOHAN: If he still has time
16 remaining --

17 MS. ROBINSON: He does.

18 MS. BOHAN: Mr. Scott, you
19 referenced at the beginning of your statement
20 that we already heard what you said on
21 alternatives, but that was not recorded. So
22 if you would like it to be part of the
23 transcription, I would encourage you to repeat
24 it.

25 DENNIS SCOTT: The alternative to

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810-2

DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

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1 the board and to these folks, is there is a
2 thing called arc plasma technology and gas
3 fixation. Japan has been using this for years
4 to handle their waste. Not just nuclear and
5 bio waste, to handle their every day waste.
6 They turn it into fuel. They turn it into
7 electricity, and they turn it into natural
8 gas. They did this because it was a better,
9 cleaner alternative than putting it into the
10 ground.

11 National Grid's got a plant in
12 Boston, Massachusetts, that's being converted.
13 They tried to sell us coal again, but they are
14 going to plasma.

15 There is a plant in Pennsylvania
16 being done. There is a plant in Chicago being
17 done to handle tires, and Florida now has put
18 one in in Jacksonville.

19 There is a reason why they put it in
20 there. It's clean, it's new electricity, it's
21 produced by every bit of waste that we
22 produce, which we have a lot of it, believe
23 me. I've been around the world, I see that
24 our country just doesn't care about how much
25 waste we produce. We're pretty good at it.

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DOE is aware of and has worked with arc-plasma technology. This particular technology is more suitable for waste with high organic content or nonvolatile inorganic constituents. It is not well suited to the waste at WNYNSC.

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1 But it gives you an alternative,
2 because if it is good enough for the military
3 to say, we'll take a few of our nukes, put it
4 in there, because we know when we're done with
5 this, it's gonna break the atoms up to be
6 exactly what they used to be, prior to one of
7 our great scientists creating something that
8 can kill people. Why can't you guys look at
9 something as an alternative?

10 It will save you the decision of
11 what this poor man just brought up, was
12 transportation of that product and what would
13 happen if there was a spill. It will save you
14 on a decision possibly of what do we do when
15 we take this out of the ground? Do we store
16 it up above. Why store it? Destroy it. And
17 then move it wherever you want to.

18 MS. ROBINSON: Thank you, sir. Now
19 Maria Maybee. Okay. I will leave her name to
20 the very end instead of calling her again and
21 again. You are Agnes Williams. You will be
22 followed by Andrew Goldstein.

23 AGNES WILLIAMS: I know we all look
24 alike, but I am a different person from
25 Maria Maybee.

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810-3
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1 My name is Agnes Williams; I'm a
2 Seneca, and I was born and raised on the
3 Cattaraugus Indian Reservation, Versailles,
4 New York, on the Cattaraugus side of the
5 Creek.

6 And I know I've heard a lot about
7 Cattaraugus County, but this creek is also in
8 -- where the waste comes through there is also
9 in Erie County. So Erie County is really
10 affected, too.

11 I'm speaking tonight for a group
12 called the Indigenous Women's Initiative, and
13 we have a peace institute. And one of our
14 mantras since the '60s has been the fact that
15 women are the first environment. Everybody
16 starts in the womb, and as women we are like
17 our mother the earth, and our health is
18 reflected by the health of our mother the
19 earth.

20 And as we continue to contaminate
21 and affect our mother the earth, and these
22 contaminations that human beings continue to
23 put into the earth, we continue to see the
24 affects on women's health. And you don't
25 really have to -- I'm sure each one of us is

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1 touched by ovarian cancer or breast cancer or
2 anything like that.

3 Beyond that, my mother is the last
4 sole survivor of the Snow family, which is at
5 the mouth of the Cattaraugus Creek. They've
6 had, for over 60 years, docks and cottages
7 there. And probably in our fourth generation
8 of non-Indian people that come to our
9 reservation, spend ten months of the year
10 there. And out of those four generations,
11 many, many of those people -- because the
12 Cattaraugus Creek floods every year down
13 there, at least a couple times. And the
14 people go down there in the summer and they
15 stay there, and many, many of those peoples
16 have died of cancer, you know, a lot of
17 cancer. We see that.

18 We started to do, in the Seneca
19 Nation, some epidemiology studies, only to be
20 told because we didn't have a significant
21 population in numbers, that anything that was
22 found in terms of rates of cancer and that was
23 not -- didn't matter because there wasn't
24 enough of us.

25 Our population was actually removed

||| 811-1

811-1

Comment noted. In 2009, *The Journal of Rural Health* published the results of a study that evaluated the incidence of cancer among the Seneca Nation of Indians as compared to the rest of New York State (except New York City) for two 15-year periods (1955 through 1969 and 1990 through 2004). The study concluded that “[d]espite marked changes over time, deficits [lower rates compared to those in the rest of the State] in overall cancer incidence have persisted between the time intervals studied” (Mahoney et al. 2009).

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1 to the Cattaraugus Indian Reservation because
2 we were originally in the Buffalo Creek area
3 here. And when the City -- industrial society
4 built the City here, we were forcibly removed
5 and put onto the reservation, thinking that
6 the reservation where we were, we were out of
7 -- out of the way of you all, and put on the
8 Cattaraugus Reservation, thinking that it
9 wasn't -- it really wasn't a valuable place
10 because nobody else wanted that land at that
11 time.

12 And this scenario's repeated all the
13 way across the country. Native American
14 people are on the beginning and the end of the
15 nuclear chain. It is a nuclear chain, it is
16 not a cycle. With uranium mining that was in
17 the southwest, many of us worked very hard in
18 the '60s and the '70s to close down those
19 uranium mines in the southwest.

20 The Indigenous Women's Network,
21 which I'm a founding mother of as well,
22 supports a project called Honor the Earth with
23 Wyanonna LaDuke, who worked very, very hard and
24 got a lot of those uranium plants to be
25 shutdown in the southwest.

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1 Yet the Navahos, they have a Special
2 Olympics every year because of all the birth
3 defects. They have so many kids that have
4 birth defects now. And children would play in
5 these uranium tail minings.

6 And what this has really amounted to
7 is environmental racism. Because the affects
8 of the nuclear chain is always kind of
9 stumbled on indigenous peoples all over the
10 world. You know, primarily out west,
11 including Yucca Mountain. When people look
12 for a site to put this waste, Yucca Mountain
13 is a sacred site to the Native people in the
14 west.

15 In the '70s, we had 19 -- well,
16 actually in the '60s, the governors would get
17 together and do governors' meetings to declare
18 national sacrifice areas. And they always
19 pick Native lands to do that. And they had
20 picked the Bad Lands in South Dakota.

21 Then in 1973 when the Indian Nation
22 declared the independent Oglala Nation, the
23 United States Government came in and shot and
24 killed people and wounded, and that was a
25 71-day occupation. For two years it was a

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1 civil war. And in 1975 there was a shoot-out.
2 Two FBI agents came in and shot up a camp of
3 Indian people, and they were killed as a
4 result. And Leonard Pelletier is serving two
5 life prison sentences for that today.

6 In the '80s we found out that the
7 same day the FBI agents came into this
8 encampment of Indian people, that the
9 president of the Pine Woods Reservation was
10 signing away one-eighth of the Bad Land in
11 Washington, DC. So we are the old Indians,
12 and you are all the new Indians.

13 MS. ROBINSON: Thank you, ma'am.
14 All right. Our next speaker will be
15 Andrew Goldstein, followed by Anne Rabe.

16 **ANDREW GOLDSTEIN:** Good evening.
17 Good evening, everyone. My name is
18 Andy Goldstein, and 25 years ago after
19 returning to Buffalo from out west, an old ex-
20 girlfriend of mine, who I was still slightly
21 attracted to, asked me to attend a meeting of
22 a neat group, and the group was the Sierra
23 Club Radioactive Waste Campaign. And I
24 attended, and there I met Dee, and I met Lisa
25 Finaldi and many others, and I haven't been

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1 the same since.

2 You know, I heard today that NYSERDA
3 is committed to making decisions now and in
4 the future. Yet I heard today from -- from
5 you and from your presentation and from the
6 written material, that it -- that comments
7 like, it depends on this, it depends on public
8 participation, it depends on this study, it
9 depends on that. We don't know this or that.
10 Comments like, in your written statement, if
11 Phase 2 calls for this, we'll do that. If
12 Phase 2 calls for that, we'll do this. I've
13 heard lawyers without answers and scientists
14 without other answers. Let me say, this is no
15 way to write an Environmental Impact Study.

16 You know, I was at the gates of
17 West Valley 28 years ago calling for decisions
18 to be made. Ten years later I, with several
19 others in attendance, camped out on the shores
20 of Buttermilk Creek and Cattaraugus Creek,
21 again calling for brave decisions to be made.

22 And today all of us, I and all of us
23 here today, are making the same call.

24 Your reply of please wait again,
25 make it perfectly clear to me that you are the

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812-1 This EIS evaluates the environmental impacts of a range of alternatives for the decommissioning and/or long-term stewardship of WNYNSC. It is assumed that the comment refers to the Preferred Alternative, the Phased Decisionmaking Alternative. If this alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. For each resource area, Chapter 4 discusses the impacts that would occur if either removal or close-in-place is selected for Phase 2. The chapter also discusses which alternative(s) bound the impacts in the event that continued active management is selected for the SDA. The short-term impacts of a Phase 2 decision that involves continued active management of the SDA are bounded by either the removal or close-in-place impacts. The post-decommissioning impacts of a continued active management decision for the SDA, which include staffing, occupational exposure, and waste generation related to SDA monitoring and maintenance, as well as long-term impacts on public health and safety, would be similar to the no action impacts for the SDA.

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1 same please just wait cowards that we had
 2 faced before.

3 And in the words that I learned 28
 4 years ago today -- 28 years ago, you can run,
 5 but you can't hide. Thank you.

6 MS. ROBINSON: Thank you, sir. Next
 7 commenter is Anne Rabe, followed by
 8 Arthur Klein.

9 ANNE RABE: Thank you. Good
 10 evening. I'm with the Center For Health
 11 Environment and Justice, CHEJ, and our group
 12 has been working on toxic site cleanup since
 13 the infamous Love Canal toxic site in Niagara
 14 Falls, led by our executive director,
 15 Lois Gibbs.

16 I've testified earlier this week,
 17 and I wanted to focus tonight on a couple key
 18 problems of the DEIS.

19 There are many, many problems with
 20 this Draft Environmental Impact Statement, but
 21 one of the ones I wanted to highlight, thanks
 22 to Barbara Warren of CEC who delved through
 23 this entire document, we were able to uncover,
 24 it is pretty disturbing.

25 And that is that the DEIS, in terms

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The analysis in this EIS recognizes the potential for climate change to influence the long-term consequences of waste management. Climate changes, whether natural or influenced by human actions, could change the nature and amount of precipitation. Appendix H, Section H.3.1, of both the Revised Draft EIS and the Final EIS discusses the sensitivity of groundwater flow to changes in annual precipitation. The revised erosion prediction used for the unmitigated erosion dose analysis is based on the assumption that storms could occur more frequently than indicated by current records. This prediction includes the effects of storms of greater severity than the one that occurred in the region on August 2009. The use of this higher erosion rate associated with an elevated precipitation rate is discussed in Appendix H, Section H.2.2.1. Chapter 4, Section 4.3.5, has been revised to include a discussion of how the uncertainties about future climate change are addressed in this EIS.

The 2008 draft of the SDA Quantitative Risk Analysis (QRA) did not formally address the issue of climate change.

The QRA supporting meteorological data are derived from more than 80 years of historical records from three regional weather stations and 17 years of records from the West Valley meteorological tower. The QRA exceedance frequencies for severe storms explicitly quantify uncertainties that account for variability in localized storms throughout the region and variations in weather patterns over nearly a century of historical data.

The QRA models explicitly account for releases that are caused directly by severe storm damage at the site (e.g., from episodic high winds, tornadoes, extreme rainfall, etc.). The analyses also account for storm-related damage that may leave the site vulnerable to the effects from additional subsequent storms (e.g., during the time required to repair wind damage to the geomembranes).

The 2009 updated QRA contains a sensitivity study that examines the potential risk impacts from postulated dramatic climate changes during the 30-year SDA operating period. The sensitivity analyses account for increased frequencies of severe high winds, tornadoes, and precipitation. In particular, the analyses evaluate the effects from postulated conditions that would apply at the site if all meteorological parameters were assumed to persist at the 95th percentiles of their current uncertainty ranges throughout the next 30 years. In other words, based on the historical data, we are 95 percent confident that the actual meteorological conditions at the site will be less severe than those used in the sensitivity analyses.

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1 of looking at the environmental impact in the
2 future, assumes that there is no climate
3 change.

4 And it just so happens that our
5 organization just last month did a national
6 report on the impact of climate change on
7 Superfund sites around the country, called
8 Superfund, In the Eye of the Storm.

9 And in our investigation, we've, you
10 know, looked at the scientific research, and
11 we found that International Panel on Climate
12 Change, a scientific research group comprised
13 of the world's leading scientists, issued
14 reports on the increase of climate change
15 related weather events, and concluded that,
16 quote, warming of the climate is unequivocal,
17 as is now evident from observations of
18 increases in global average air and ocean
19 temperatures, widespread melting of snow and
20 ice, and rising global average sea levels.
21 Their reports join many others in
22 demonstrating there is scientific consensus
23 that the earth is warming, which will lead to
24 serious potentially catastrophic impacts,
25 including increased flooding, drought, and

813-I
cont'd

The QRA team does not believe that the extreme meteorological conditions that are evaluated by these analyses will evolve over the next 30 years. However, even if these conditions were to apply throughout the 30-year study period beginning in 2010, the mean total SDA risk may increase by a factor of only approximately 2.3, compared to the baseline risk assessment. Approximately 75 percent of the risk increase is attributed to trench overflow (Scenario 3-4), which is particularly sensitive to moderate- to high-precipitation conditions. Groundwater release Scenario 1-2 accounts for essentially all of the remaining difference, due primarily to the increased probability that trench water levels are at the weathered Lavery till/unweathered Lavery till interface. Even if these extreme conditions were to develop very rapidly during the next few years, the sensitivity study confirms that a release resulting in a dose of 100 millirem in 1 year, or more, to an offsite receptor remains very unlikely during the next 30 years of SDA operation.

See Section 15.3 of the updated QRA report (summarized in Appendix P) for details of the sensitivity analyses and results.

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1 hurricane intensity, end quote.

2 So our report found that over the
3 last five years, there have been extreme
4 weather conditions that have greatly impacted
5 Superfund sites, including Hurricanes Ike in
6 2008, Katrina and Rita in 2005, tornados in
7 Oklahoma and Iowa in 2008, flooding in Iowa,
8 Kansas, and Missouri 2008. And from 2004 to
9 2008 alone, 56 Federal Superfund sites were
10 impacted by hurricanes in the Gulf Coast
11 Region alone.

12 Our science director, Steven Lester,
13 found that the strong winds of hurricanes and
14 tornados can cause significant damage, such as
15 disrupting contaminated soils, moving waste
16 barrels long distances, and flooding can
17 dislodge buried waste and spread contamination
18 of soil. Basically, spreading toxic waste
19 from Superfund sites. Clearly the same would
20 hold for nuclear waste sites.

21 And yet on page 5-14 of the Draft
22 Environmental Impact Statement, it states
23 that, it assumes no climate change over the
24 next 10,000 years. So my question to DOE and
25 NYSERDA is: What were you thinking?

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1 But we have a much bigger problem
2 with this. You can't do an Environmental
3 Impact Statement on a Phase 2, haven't yet
4 decided on the clean-up goal plan. You can't
5 have that. It's not an Environmental Impact
6 Statement.

7 You can have an interim remedial
8 action, which is done at Superfund sites, on
9 the Phase 1 waste removal action dealing with
10 that 1 percent of the site's radioactivity.
11 So you can do what we call an IRM, Interim
12 Removal Action, and get out there and do it.

13 Or you could make a case for a tiny
14 EIS on the Phase 1 action. But you can't have
15 an Environmental Impact Statement on a
16 remedial action yet to be determined. How can
17 you adequately evaluate the environmental
18 impacts of a clean-up decision you haven't
19 made?

20 It's an illegal EIS. That's what it
21 is. That's the bottom line. And if the DEC
22 came to a public meeting and gave us a Draft
23 Environmental Impact Statement on a
24 no-decision plan, they'd be laughed out of the
25 room. They'd be laughed out of the room.

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813-2

In accordance with NEPA and SEQR requirements, this EIS adequately analyzes the totality of environmental impacts, including costs, of a broad spectrum of reasonable alternatives that meet the respective purposes and needs of DOE and NYSERDA (Sitewide Close-In-Place, Phased Decisionmaking, and Sitewide Removal), as well as the No Action Alternative. The uncertainty about the nature of the Phase 2 decision is addressed by analyzing two cases. The first case assumes Phase 2 is removal of the remaining facilities, while the second case assumes Phase 2 is in-place closure of the remaining facilities.

The requirements for an interim remedial action apply to sites under CERCLA. WNYNSC is not a Federal CERCLA site. In accordance with the West Valley Demonstration Act, DOE is to decontaminate and decommission the waste storage tanks and facilities used in the solidification of high-level radioactive waste, as well as any material and hardware used in connection with WVDP, in accordance with such requirements as NRC may prescribe. NRC issued its "Decommissioning Criteria for the WVDP at the West Valley Site; Final Policy Statement" (67 *Federal Register* 5003). In this notice, NRC announced its decision to apply its License Termination Rule (10 CFR 20, Subpart E) as the decommissioning goal for the entire NRC-licensed site. This EIS evaluates alternatives for meeting those decommissioning criteria for the NRC-licensed property, as well as decommissioning and management options for the SDA.

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1 So we appreciate Phase 1. We
2 appreciate that. Do it as an interim remedial
3 action. Do it as, quick, let's get going
4 corrective action. You've got some stimulus
5 money, move forward, yes. But don't wrap it
6 in an illegal Draft Environmental Impact
7 Statement.

8 So I would request that the
9 Department of Energy and NYSERDA extend the
10 comment period to October 30th. We've been
11 waiting over 14 years for this plan. It's not
12 a plan. It's a piecemeal Phase 1, and it's
13 not a plan Phase 2.

14 Do the Interim Remedial Action on
15 Phase 1, move on that contract action. Take
16 the money and go with it. Revise this Draft
17 Environmental Impact Statement with a full,
18 sitewide removal action decision, and do a
19 proper EIS that protects our Great Lakes and
20 acknowledges clear impacts like climate
21 change. Thank you.

22 MS. ROBINSON: The next speaker is
23 Arthur Klein, followed by Amy Wittryol.

24 **ARTHUR KLEIN:** I'm Art Klein; I am
25 vice chairman of the Niagara Sierra Group, but

813-3

813-2
cont'd

813-3

In response to requests from the public, DOE and NYSERDA extended the original 6-month comment period (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE) for an additional 90 days, through September 8, 2009.

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1 I am not here representing the Niagara Group
2 tonight. I'm here representing myself. These
3 are my words.

4 I worked for 40 years for the Corps
5 of Engineers on marine construction in the
6 Great Lakes, and the last 17 years of which I
7 worked with the regulatory affairs. I'm very
8 familiar with the public interest review
9 process.

10 I thought this public interest
11 review, I see it's supposedly three months old
12 now, and I just became aware of it about a
13 month ago. And I think most of the public
14 that would be affected by a cataclysmic
15 occurrence at West Valley, for example the
16 people live along the shores of Lake Ontario,
17 including Toronto, Canada, would be very
18 interested in the possibility of failure at
19 the West Valley site and how it could affect
20 the water that reaches their shoreline.

21 Now, from my own background, I
22 worked in shoreline erosion for a good part of
23 that 17 years. I was an investigator, and I
24 investigated and inspected hundreds and
25 hundreds of shoreline erosion control devices.

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1 And I'll tell you, erosion control devices are
2 an oxymoron. They don't occur. You might
3 slow it down a little bit. You might affect
4 it a little bit. You're not gonna -- slurry
5 walls and things like that, if it's not the
6 dynamic surface water will overcome your best
7 efforts, it will be the subsurface water.
8 It's going to be changes in climate that will
9 affect it.

10 You could have -- in Buffalo,
11 New York, we have an example of two 100-year
12 storms within 2 years of each other, 1977 and
13 1979. These sort of things could occur down
14 here. And over any one of your possible
15 models for erosion control, are pretty invalid
16 because you don't account for the possibility
17 of cataclysmic weather, the possibility of
18 different substrata beneath the surface
19 strata, the difference of the subsurface water
20 affecting the site at the same time surface
water could be affecting the site.

22 I have one person who addressed the
23 issue, the possibility of you could possibly
24 put culverts in the creeks, Buttermilk Creek
25 and the Erdman Creek that are on the site.

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814-1

814-1 The erosion analysis presented in this EIS is considered to be a "state-of-the-art" analysis. The uncertainty of the erosion predictions are discussed in Appendix F of this EIS. Appendix H includes an analysis that recognizes the uncertainty in the long-term unmitigated erosion predictions. The analysis in this EIS addresses the issue of changes in weather patterns. The groundwater dose analysis investigates the sensitivity of wetter or drier climates on the estimates of human health impacts because there are no reliable predictions of future climate changes in the WNYNSC region. The methodology and results are presented in Appendix H, Section H.3.1. In addition, the analysis of doses due to unmitigated erosion uses a gully advance rate associated with a climate that is wetter than current site conditions.

The analysis in this EIS evaluates the potential impacts of erosion control structures that would be built to implement the alternatives. Chapter 4, Sections 4.1.1, 4.1.4, and 4.1.6, of this EIS presents the impacts on land use, water resources, and ecological resources, respectively. As previously noted, the impacts of erosion and wetter or drier conditions have been accounted for in the evaluation of human health impacts.

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1 That would be fine, except you would, of
2 course, be killing the creeks. And who says
3 what's going to happen to the surface water in
4 those circumstances.

5 So I think in all, the models we
6 have so far are probably not very valid. I --
7 I don't think that you're going to come up
8 with some good conclusions.

9 I don't think anyone in his right
10 mind would have selected, in today's world,
11 would have selected West Valley as a site for
12 that type of plant. I mean, it's glacial
13 till, it's on a highly erodible plateau and
14 there's another highly erodible plateau right
15 next to it there. The whole site is really
16 not a very good place to build a facility like
17 that.

18 So I would urge two things: I would
19 hope that you will expand the comment period
20 back to October. We have many, many people in
21 our areas that would like to have more
22 information about this. They don't even know
23 about the comment period. They don't know
24 anything about the DEIS yet. We just started
25 to educate them. Now, I dare say by June, we

**814-1
cont'd**

814-2

In response to requests from the public, DOE and NYSERDA extended the original 6-month comment period (required by the 1987 Stipulation of Compromise Settlement between the Coalition on West Valley Nuclear Wastes and Radioactive Waste Campaign and DOE) for an additional 90 days, through September 8, 2009.

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1 will not have all those people fully informed.
2 And that's what the citizens of this nation
3 really deserve, to have a government that
4 makes sure that they're fully informed about
5 the entire problem, rather than little bits
6 and pieces here and there. That's our job in
7 the Sierra Club. We go forth and educate the
8 people and try to stress the idea that they
9 use that education to derive a public benefit.

10 And we hope that you will put that back.

11 And we really, I -- I really think
12 there's no way that much should remain on that
13 site. I mean, the 64-year scenario, there is
14 really -- you have the site right now. I
15 think everybody should makeup their mind that
16 stuff doesn't deserve to -- to remain there.
17 I think it should be, in the absence of
18 another repository, it's silly. We can build
19 one. We can find a place to build one, put it
20 in there. Make it a temple to our folly.

21 We've had -- the last eight years
22 we've had examples of unintended consequences.
23 I think we're getting a little tired of
24 unintended consequences. West Valley is the
25 product of unintended consequences. Let's get

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|| 814-3

814-3

DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

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1 that stuff out of there. Let's get it to
 2 someplace where it will be free from -- from
 3 plaguing humanity, and clean-up that site.
 4 Thank you.

5 MS. ROBINSON: Thank you, sir.

6 Amy Witryol, followed by Roger Cook.

7 **AMY WITRYOL:** If any of you that
 8 have been seated all night would like to stand
 9 up and stretch while I speak, I really won't
 10 be offended.

11 My name is Amy Witryol, and I live
 12 in the Town of Lewiston in Niagara County.
 13 Two weeks ago the Niagara County Legislature
 14 unanimously passed a resolution calling for
 15 the sitewide removal option. And we will see
 16 a copy of that resolution.

17 Also, please know that yesterday's
 18 Buffalo News editorial reflects the view of
 19 many Western New Yorkers, like me, whose
 20 drinking water supply is affected by what
 21 happens at West Valley.

22 I agree with NYSERDA that the Draft
 23 EIS erosion, groundwater transport,
 24 contaminant barriers, and uncertainty is
 25 technically indefensible.

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**814-3
cont'd**

815-1

815-2

815-1 DOE and NYSERDA acknowledge the commentor's concern about affects on drinking water supplies. Please see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

815-2 DOE disagrees with many of the points raised in NYSERDA's View, which is included as the Foreword to this EIS. At the core, differences between DOE and NYSERDA center on different views about the nature of analysis required for an EIS and the attendant level of acceptable risk associated with any uncertainties in that analysis as it relates to decisionmaking. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, this EIS (1) acknowledges the information limitation and its relevance to environmental consequence, (2) summarizes existing credible scientific evidence, and (3) presents an analysis using a theoretical approach that is generally accepted by the scientific community involved in such analyses. This Final EIS contains text boxes in the relevant subject matter areas that acknowledge the differences of opinion between DOE and NYSERDA. In general, DOE's position is that the Agency spent much time and effort engaging highly qualified and respected experts in hydrology and hydrological transport, landscape evolution (erosion), human health and environmental risk analysis, and other technical fields, and stands behind the analyses performed for this EIS.

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1 I also endorse the testimony
2 submitted by CHEJ, CEC, and the Nuclear
3 Information and Resource Service.

4 The phased approach attempts to
5 triage the condition of the very ill West
6 Valley patient you seek to stabilize.
7 However, in most cases when we see a phased
8 plan, there is a final phase. That's not the
9 case here.

10 I would respectfully request that a
11 sitewide plan for full clean-up be adopted
12 with measurements and milestones to ensure
13 that at the very least, there would be a
14 change of plan as opposed to no plan for how
15 to completely remediate the area, which has an
16 unstable geology we cannot change.

17 Adopting an approach which delays a
18 full decision by 30 years, provides government
19 little incentive to act. However, a
20 commitment to act will appropriately place the
21 burden on government to revise the plan, if
22 warranted, in the future, instead of placing
23 the burden on the public to insist on one.

24 The financial costs are higher no
25 matter which road you choose. Now is cheaper

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- 815-3 This EIS presents the impacts of Phase 1 and Phase 2 of the Phased Decisionmaking Alternative. The environmental impacts of implementing Phase 1 of the Phased Decisionmaking Alternative are described for each resource area in Chapter 4 of this EIS. If this alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. For each resource area, Chapter 4 discusses the impacts that would occur if either removal or close-in-place is selected for Phase 2. The chapter also discusses which alternative(s) bound the impacts in the event that continued active management is selected for the SDA. The short-term impacts of a Phase 2 decision that involves continued active management of the SDA are bounded by either the removal or close-in-place impacts. The post-decommissioning impacts of a continued active management decision for the SDA, which include staffing, occupational exposure, and waste generation related to SDA monitoring and maintenance, as well as long-term impacts on public health and safety, would be similar to the no action impacts for the SDA. See the response to Comment no. 815-5 regarding the timing of the Phase 2 decision.
- 815-4 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.
- 815-5 Regarding the 30 years cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the

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1 than later, as the independent full cost
 2 accounting shows. We understand the funding
 3 triage government faces for problems across
 4 the State and across the country. But the
 5 time for planning is now. It seems only fair
 6 that government make a commitment to remove
 7 the entire problem, not just some of it.

8 As everyone has noted, over the next
 9 30 years a portion of contamination may
 10 diminish with the half-life of some
 11 contaminants. However, there are substantial
 12 volumes of radioisotopes which will remain
 13 acutely dangerous for thousands of years. The
 14 resulting risk is unacceptable to this region
 15 and the Great Lakes, especially when we
 16 consider other problems contributing to the
 17 risk profile to our drinking water supply.

18 Leaving high activity waste here
 19 forever is not an option given the current
 20 limitations of science to truly secure it.

21 As a resident of Niagara County, I
 22 know there is no such thing as a secure
 23 landfill or secure storage of hazardous
 24 materials. Government has the responsibility
 25 to find the safest storage possible, not the

|| **815-6**
cont'd

|| **815-1**
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Phased Decisionmaking Alternative is selected. Please see the Issue Summary for "Modified Phased Decisionmaking Alternative" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

815-6

DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for a discussion of the report's issues and DOE's and NYSERDA's response.

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1 most convenient.

2 So while you work on eliminating the
3 suspected sources of contaminant plumes, we
4 want you to work on removal of all waste. The
5 periodic assessments should be to update the
6 removal strategy, not to see how long we can
7 wait until the problem increases.

8 I urge you to adopt the sitewide
9 removal option. Thank you.

10 MS. ROBINSON: Thank you, ma'am.
11 Next is Roger Cook, followed by Jim Rauch.

12 **ROGER COOK:** I am Roger Cook; I am a
13 resident of Grand Island, and live on the
14 Niagara River. So personally I'm impacted by
15 whatever radioactive waste comes down that
16 river. My drinking water, my recreational
17 waters, and so forth.

18 But I am testifying tonight on
19 behalf of the organization where I serve as
20 executive director, the Western New York
21 Council on Occupational Safety and Health.
22 The Board of Directors, Shirley Hamilton, one
23 of my board members, is here tonight. And our
24 affiliated 80 union locals. I will be
25 submitting written testimony, and I will ask

815-1
cont'd

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1 for the signatures of all the delegates from
 2 those different unions, and send that in.
 3 They represent roughly 100,000 members here in
 4 Western New York.

5 Our organization supports sitewide
 6 removal of radioactive waste at this site.
 7 It's not the -- it's certainly the perfect
 8 solution, but of all the options, it's the
 9 best solution.

10 I had the opportunity to hear a
 11 presentation of the options and the advantages
 12 and disadvantages of each by the independent
 13 consultants whose study was funded by New York
 14 State Senator Catherine Young. Their report
 15 convinces me, and my organization, that
 16 removal is the best solution, because, one,
 17 it's the safest way of protecting our
 18 ecosystems and human health in the long run;

19 Two, is ultimately the most
 20 cost-effective approach;

21 Three, it is consistent with what we
 22 know about the fragile geology of the area;

23 And fourth, it's consistent with
 24 what we know about the ability of our
 25 scientists and engineers to deal with very

816-1

816-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

816-2

816-2 The report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., has been addressed in this CRD consistent with the Council on Environmental Quality's NEPA regulations. Please see the Issue Summary for "Conclusions of the Synapse Report" in Section 2 of this CRD for further discussion of this report's issues and DOE's and NYSERDA's response.

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1 complex variables where we have very little
2 information and knowledge. And you've heard
3 of that tonight. Anne Rabe mentioned a
4 variable I didn't even think of, climate
5 change. But you've got the geology, you've
6 got the little we know really about behavior
7 of highly radioactive materials.

8 And so that's -- when highway
9 engineers working on Route 219, with a very
10 simple set of variables, but sound and proven
11 technology, can't predict that the land is
12 going to slide as they're putting the highway
13 in, how in the heck can you, within 30 years
14 dealing with this complexity of variables,
15 give us much information to really, sincerely
16 deal with that solution in a very
17 technologically sound way. I don't believe it
18 can happen.

19 And Andy Goldstein, my friend said,
20 28 years ago he was out there at the site. I
21 think I was there in 1971 with a group of
22 people. We were picketing, and we were
23 considered cuckoos. And we were told we
24 didn't know what we were talking about because
25 we weren't technologically sophisticated.

|| 816-2
cont'd

|| 816-3 816-3

The erosion analysis presented in the EIS is considered to be a "state-of-the-art" analysis. The uncertainty in the erosion predictions are discussed in Appendix F of this EIS.

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1 And here we are 40 some years later,
2 and we've, you know, all your technology,
3 getting promised that they were going to be
4 able to build a viable recycling plant. Then
5 it was, well, okay, it wasn't really safe. So
6 then, well, we know how to clean it up, and so
7 here we are.

8 I think we're really just playing
9 games to say that in another 30 years you're
10 going to come up with a real sound solution to
11 this. It just -- it makes no sense to me.

12 And finally, in listening to the
13 independent study report, it's clear that our
14 human institutions, our political and economic
15 institutions, are going to have to be dealing
16 with this situation for thousands of years.
17 It is unrealistic to think that even in the
18 next 30 years, you're going to have the
19 political and economic will to be able to deal
20 with this.

21 I've been dealing with some of the
22 victims of the legacy of the cold war
23 radioactive exposures at Bethlehem Steel. In
24 2000 they were promised by the US Congress
25 they would get compensated. And NIOSH,

816-4

816-4 Regarding the 30 years cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected. Please see the Issue Summary for "Modified Phased Decisionmaking Alternative" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

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1 National Institution of Occupational Safety
2 and Health, said that it would use its best
3 scientific methods to make judgments. Quite
4 honestly, NIOSH was making political judgments
5 because we were living under the Bush
6 administration. They did not want to spend
7 the money.

8 And so that's exactly what's going
9 to happen to you guys. You're going to get --
10 right now is the time to act. We have the
11 political -- I suspect, the political will in
12 Washington to fund this kind of stuff. You've
13 got the stimulus package. Let's take
14 advantage of it, because down the road you're
15 going to get a conservative administration in
16 there, and we will not have the opportunity to
17 do what we need to do now.

18 Get the damn stuff out of there.
19 Thank you. I also had an opportunity to camp
20 on Buttermilk Creek with my good friend Andy.

21 MS. ROBINSON: Now we have
22 Jim Rauch, followed by Brian Smith.

23 **JAMES RAUCH:** Hi, everybody. My
24 name is James Rauch; I'm secretary and
25 technical advisor to FACTS, For a Clean

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1 Tonawanda Site. This is the group union --
 2 union people at Linde Air Products now
 3 Praxair, that organized around the -- I hate
 4 to call it a clean-up because it's so
 5 deficient -- the Manhattan Project facility
 6 there, the Linde Air Products plant that
 7 refined uranium for the Hiroshima Bomb. A lot
 8 of people in Buffalo don't even know that.

9 But I'm here tonight also as a
 10 member of the West Valley Coalition. And I've
 11 been active at Lewiston, the Niagara Falls
 12 storage site, since the outset in the '80s.
 13 I'm a retired pharmacist.

14 In the mid '90s, several years after
 15 the Coalition on West Valley Nuclear Wastes
 16 1987 court settlement with DOE, the public was
 17 promised that the legally required National
 18 Environmental Policy Act and State
 19 Environmental Quality Review Act impact
 20 statements for closure of the West Valley
 21 nuclear site would be sitewide in scope,
 22 covering all the facilities and land
 23 contaminated by both Nuclear Fuel Service's
 24 reprocessing operations and the Federal West
 25 Valley Demonstration Project, as well as the

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817-1

817-1 This EIS does present sitewide analysis and considers impacts beyond 10,000 years for the Sitewide Close-In-Place and No Action Alternatives, as was done in the 1996 *Draft Environmental Impact Statement for Completion of the West Valley Demonstration Project and Closure or Long-Term Management of Facilities at the Western New York Nuclear Service Center*.

DOE believes that this EIS meets the requirements of NEPA. While the Phased Decisionmaking Alternative would temporarily defer a final decision on the disposition of the Waste Tank Farm, the NDA, and the Construction and Demolition Debris Landfill, DOE believes that the impacts of this deferred decision are adequately analyzed within this current EIS. The environmental impacts of implementing Phase 1 of the Phased Decisionmaking Alternative are described for each resource area in Chapter 4 of this EIS. If this alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. For each resource area, Chapter 4 discusses the impacts that would occur if either removal or close-in-place is selected for Phase 2. The chapter also discusses which alternative(s) bound the impacts in the event that continued active management is selected for the SDA. The short-term impacts of a Phase 2 decision that involves continued active management of the SDA are bounded by either the removal or close-in-place impacts. The post-decommissioning impacts of a continued active management decision for the SDA, which include staffing, occupational exposure, and waste generation related to SDA monitoring and maintenance, as well as long-term impacts on public health and safety, would be similar to the no action impacts for the SDA.

The status of the Yucca Mountain project is acknowledged in this EIS, and the plan to store the vitrified high-level radioactive waste at WNYNSC is consistent with DOE's August 1999 ROD for the *Final Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste* (DOE/EIS-0200-F). The implications of the potential for orphan waste are discussed in this EIS.

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now

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1 two burial grounds, the State licensed
2 disposal area, and the NRC licensed disposal
3 area.

4 At that time the Coalition was also
5 promised by the DEIS contractor, SAIC, who's
6 here organizing this event tonight, that the
7 impact study would address impacts out 10,000
8 years from the present as best they could.
9 The resulting 1996 DEIS was released and
10 commented upon by the public. It was sitewide
11 in scope. It showed some radiation dose
12 impacts peaking well beyond 1,000 years in the
13 future.

14 The current DEIS fails to make the
15 legally required NEPA sitewide decision. In
16 fact, it only resolves 2 percent of the wastes
17 on the site. And it puts off the decision on
18 the remaining 98 percent of waste for another
19 30 years. Fifty years -- we're talking now 22
20 years ago, the Coalition sued to prevent waste
21 from being buried on site. Fifty years to
22 reach a decision on waste management of this
23 leaking physically most unsuitable site is not
24 acceptable.

25 We often hear from both the State

817-1
cont'd

contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

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1 and the DOE that the sitewide decision needs
2 to be delayed because, quote, there is
3 currently no place for some of the waste,
4 i.e., the orphan waste. At West Valley we're
5 talking vitrified high level waste, the logs,
6 and we're talking greater than class C waste.

7 This myth is a common ploy that DOE
8 has used here and at other sites around the
9 country. For example, while Yucca Mountain
10 may never open for West Valley's high level
11 waste logs, in earlier discussion with the
12 Coalition, DOE said that interim storage of
13 these logs at their Idaho facility would be a
14 possibility. Now they're acting as if they
15 need to build a whole new facility here at
16 West Valley, in the most unsuitable physical
17 location.

18 It's clear to me that when DOE wants
19 to, it can make this no-place-to-go problem
20 vanish. In the case of its Federal Fernald
21 uranium refineries, the Cold War facility that
22 produced most of the uranium that was refined
23 in this country for all the Cold War atomic
24 weapons. After Linde and the other Manhattan
25 Project refineries closed, Mallinckrodt in

817-1
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1 St. Louis, the Federal government established
2 Fernald, outside Cincinnati.

3 In the case of Fernald, when DOE's
4 contractor, Fluor Daniel was anxious to
5 collect a large work acceleration bonus, DOE
6 soon found a place for Fernald's high level
7 K-65 residues. These are highly concentrated
8 radium-bearing ores, residues from Belgian
9 Congo uranium ores, that are actually rated a
10 class C waste --

11 MS. ROBINSON: One minute.

12 JAMES RAUCH: -- if you want to look
13 at it that way. DOE soon found a place for
14 these wastes.

15 When Utah wouldn't take them, they
16 are well-organized in Utah, DOE moved these
17 wastes to a private facility, Waste Control
18 Specialists in Texas, that did not even have a
19 disposal license for these dangerous radium-
20 bearing materials, only a storage license.

21 Since I have more to go, I will just wait.

22 MS. ROBINSON: Thank you, sir.

23 Brian Smith followed by Robert Ciesielski.

24 **BRIAN SMITH:** Thank you for the
25 opportunity to comment again. My name's

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1 Brian Smith, and I am Western New York Program
 2 Director for Citizens Campaign For the
 3 Environment, representing 80,000 members in
 4 New York City.

5 The site contains vast amounts of
 6 nuclear and hazardous wastes which threaten
 7 public health, our environment, the economy,
 8 and quality of life. The safest, most
 9 responsible, and cost-effective solution
 10 presented in the DEIS is the sitewide removal
 11 option, which will comprehensively clean up
 12 and excavate the entire site as soon as
 13 possible, leaving a safer site in 64 years.

14 We strongly oppose a DOE and NYSERDA
 15 Preferred Alternative of phased decision
 16 making, which will clean-up only about
 17 1 percent of the radioactivity now, and wait
 18 up to 30 years to decide what to do with the
 19 remaining 99 percent of the dangerous
 20 radioactivity on site.

21 Erosion is a powerful and
 22 fast-moving force at the West Valley site, as
 23 it sits on a geologically young and
 24 continuously changing landscape. Scientists
 25 estimate that erosion could cause the disposal

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818-1

818-2

818-3

818-1 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

818-2 DOE and NYSERDA note the commentor's opposition to the Phased Decisionmaking Alternative. It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

Regarding the 30-year timeframe cited by the commentor, the Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

818-3 DOE and NYSERDA recognize that erosion is a concern and have addressed it in detail in Appendix F of this EIS. This EIS analyzes the long-term (multi-century) consequences of erosion for local as well as Lake Erie and Niagara River water users. Please see the "Concerns about Potential Contamination of Water" Issue Summary for a discussion of potential long-term radiological impacts on the Great Lakes.

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1 areas to be breached in less than a thousand
2 years, and as quickly as 150 years. Leaving
3 nuclear waste buried on site is dangerous,
4 threatens our Great Lakes, and passes on even
5 greater costs to future generations.

6 The Great Lakes contain 20 percent
7 of the world's freshwater, over 90 percent of
8 the United States supply, and provide drinking
9 water to over 40 million people. They hold
10 the key to our economy, recreational
11 opportunities, and irreplaceable family
12 experiences. The Lakes generate more than
13 \$50 billion a year in economic activity to the
14 regional economy annually from fishing,
15 wildlife viewing, and tourism.

16 The West Valley nuclear waste site
17 sits in the Great Lakes watershed, with
18 tributaries running adjacent to the site. A
19 breach of the site would be a catastrophic
20 failure, leaking high concentrations of
21 radioactive waste into the watershed and then
22 quickly into Lake Erie. Currently there is a
23 large plume of contaminated groundwater moving
24 towards Buttermilk Creek, adjacent to the
25 site. Top scientists agree that the lakes are

818-3
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1 currently on the tipping point of ecological
2 collapse, and further toxic contaminations
3 would be extremely detrimental to the
4 ecosystem.

5 The New York State Ocean and Great
6 Lakes Conservation Council, which is composed
7 of several State agencies, is working to
8 implement ecosystem-based management, or EBM,
9 to protect our coastal resources in New York
10 State. EBM is a cutting-edge program that
11 looks at managing our coastal resources from a
12 holistic approach.

13 A recent council report highlighted
14 that a critical component of protecting our
15 treasured coastal resources is to virtually
16 eliminate persistent toxic substances from
17 entering the lakes. Leaving waste on site and
18 risking a breach is not consistent with the
19 goals of the EBM plan.

20 Leaving radioactive waste on site is
21 expensive. The sitewide removal option
22 provides the most cost-effective approach over
23 the long-term, according to a recent study.
24 An independent, state-funded study, *The Real*
25 *Costs of Cleaning Up Nuclear Wastes*, revealed

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818-4 818-4

The report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., has been addressed in this CRD consistent with the Council on Environmental Quality's NEPA regulations. Please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for further discussion of the report's issues and DOE's and NYSERDA's response.

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1 leaving buried waste at the site is both high
2 risk and expensive, while a waste excavation
3 clean up presents the least risk to a large
4 population at the lowest cost. Over 1,000
5 years, waste excavation costs \$9.9 billion,
6 while on site buried waste costs \$13 billion,
7 and \$27 billion if a catastrophic release
8 occurred.

9 Protection and restoration of the
10 Great Lakes is paramount to our region's
11 economy. A recent report by the Brookings
12 Institution indicated that an investment in
13 Great Lakes restoration would yield \$80- to
14 \$100 billion in short- and long-term economic
15 gains, including \$1.1 billion to the City of
16 Buffalo alone. Radioactive contamination of
17 the lakes from a breach at West Valley would
18 not only cost billion of dollars to clean up,
19 it would also thwart economic recovery and
20 development from ongoing and future
21 restoration efforts.

22 Leaving waste on site is very
23 dangerous. There is no safe level of exposure
24 to radioactive waste. Every exposure
25 increases the risk of serious, adverse health

818-4
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818-5

818-5 The commentor is correct that scientific studies have not clearly demonstrated the existence of a threshold below which exposure to ionizing radiation conveys no risk of health effects. By assuming that the risk of health effects at low doses is proportional to the exposure (i.e., doubling the exposure also doubles the risk), regulatory agencies such as EPA and NRC have adopted a prudent approach to establishing standards to protect human health and the environment from the effects of ionizing radiation. EPA typically regulates radiation exposure based on a lifetime cancer risk of 1×10^{-6} to 1×10^{-4} (1 in a million to 1 in 10,000), consistent with its approach for chemical carcinogens. NRC's license termination dose criterion of 25 millirem per year total effective dose equivalent is consistent with the recommendations of advisory bodies such as the International Commission on Radiological Protection to limit exposures to members of the public from individual sources of radiation. Estimated exposures from the alternatives considered in this EIS are presented throughout this document in a manner that allows a comparison with these levels of protection.

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1 impacts, including cancer, reproductive
2 disorders, and neurological effects. We must
3 not pass along this burden to future
4 generations. It is irresponsible, immoral,
5 and costly.

6 Every day that we wait, the risk of
7 human and environmental exposure increases,
8 and the solutions become much more costly.
9 CCE strongly supports the safest, most
10 cost-effective solution to the West Valley
11 Nuclear Waste site -- the sitewide removal
12 option, which will ensure comprehensive
13 clean-up and excavation of the entire site as
14 soon as possible. Thank you.

15 MS. ROBINSON: Thank you. Next is
16 Robert Ciesielski, followed by Barbara Warren.

17 **ROBERT CIESIELSKI:** Good evening,
18 Ladies and Gentlemen. I'm Robert Ciesielski,
19 Chairman of the Sierra Club's Niagara Group
20 situated in Western New York. The Sierra Club
21 nationally has 750,000 members, and there are
22 about 2,500 members in Western New York.

23 I'm here to speak on behalf of
24 immediate and total clean-up and removal of
25 the radioactive waste from the West Valley

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||| 819-1

819-1

DOE and NYSERDA note the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. DOE and NYSERDA are prepared to begin implementation of the decommissioning decision immediately after it is determined and documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

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Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

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1 nuclear site. We ask the Department of Energy
 2 and NYSERDA not to forego immediate clean-up.

3 The mentality of the United States
 4 has always been that our wealth, intelligence,
 5 technology will be able to handle any clean-up
 6 or environmental problem when it arises in the
 7 future. But the current economic
 8 circumstances and meltdown shows that we
 9 cannot always depend on sufficient resources
 10 to handle massive cleanups. Even if they
 11 seriously threaten the public health. The
 12 problems of global warming question our use of
 13 technology, and the meltdown of General Motors
 14 and AIG question our intelligence.

15 As a Synapse study shows, the West
 16 Valley site is built on a plateau of loose
 17 soil, which is subject to erosion.
 18 Substantial erosion has already sent
 19 significant amounts of earth near the waste
 20 site towards Buttermilk Creek and the
 21 tributaries which lead into Cattaraugus Creek.

22 The migration of radioactive
 23 materials underground has also been detected.
 24 A leak of radioactive materials in the
 25 Cattaraugus Creek will affect drinking waters

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819-1
cont'd

819-2 DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. Please see the Issue Summary for "Concerns about Potential Contamination in Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

Chapter 4, Section 4.1.6, of this EIS also presents the results of an ecological risk assessment showing the projected long-term ecological impacts of the alternatives. The results of the human health and ecological impacts analysis imply that any impacts on wildlife and recreational aspects of the region would be negligible.

DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for a discussion of the report's issues and DOE's and NYSERDA's response.

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1 of Cattaraugus, Chautauqua, Erie, and Niagara
2 Counties and all of Western New York.

3 The counties and the City of Buffalo
4 will have to spend massive amounts of money
5 just to provide safe drinking water to their
6 citizens. This does not take into account the
7 effect on fish, bird life, and plant life
8 throughout the area, nor on the ability to use
9 the lake for swimming and recreational
10 purposes. Even the waters drawn from Lake
11 Erie and Lake Ontario for industrial purposes
12 will subject the workers and the general
13 population to threats of radiation.

14 Yesterday's Buffalo News mentioned
15 that \$74 million will be made available for
16 the clean-up from the Federal stimulus
17 package. Whether this available money is
18 serendipity or a message from heaven, it comes
19 at a time when you are determining the course
20 of the clean-up of the West Valley site. I
21 believe the available money is telling you
22 that we should do the clean-up immediately.

23 We cannot leave this clean-up for
24 future generations. They've already been
25 burdened with too many of our problems, from

819-2
cont'd

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1 global warming to debts incurred by military
2 to financial bailouts. At least in this
3 instance, we should care for creation, we
4 should give our children in future generations
5 the opportunity to live a life in the area
6 without the threat of nuclear contamination of
7 their water supply and the source of all life.
8 Thank you.

9 MS. ROBINSON: Thank you, sir. Next
10 is Barbara Warren, followed by Phil Dibble.

11 **BARBARA WARREN:** Good evening. My
12 name's Barbara Warren; I'm representing
13 Citizens Environmental Coalition, a statewide
14 Coalition.

15 I want to mention that we are
16 subject to a lot of advertising on television,
17 and one of the things that's advertised is a
18 credit card, and we go through what you can
19 buy with that credit card. At the end they
20 say certain moments are priceless.

21 Well, what we're talking about in
22 this hearing are a lot of priceless things.
23 And one of them is the Great Lakes, priceless.
24 Drinking water, priceless. The public health,
25 the future, our children and grandchildren,

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1 priceless. All priceless things. And those
2 priceless things are really jeopardized by the
3 West Valley site.

4 I want to follow-up on my earlier
5 question, which was regarding the rationale on
6 the 1 percent of the waste that's being
7 handled. And the answer was, essentially,
8 that they were choosing the most dangerous
9 waste. And I really would like to have that
10 analysis that demonstrates that. If the
11 agencies could provide that to me. So maybe I
12 guess I won't see it till you come out with
13 the Final EIS, but anyway, I'm asking for
14 that.

15 And I want to talk about tonight --
16 I've tried to vary my comments at every
17 hearing from Monday on. This is my last
18 chance, so I'm going to talk to you about the
19 NDA, the NRC disposal area. Radioactive --
20 radionuclides removed from the -- this is out
21 of the vitrifying activity of the high level
22 waste. Radionuclides were removed from water,
23 they were combined in sludge, and that sludge
24 was packaged in drums and disposed of as
25 radioactive waste. Much of this sludge was

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820-1 820-1

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

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1 buried in the NRC licensed disposal area,
2 mostly after closure of the SDA in 1975.

3 Okay. Now I will move to another
4 page. Also buried in the NDA are 42 ruptured
5 spent fuel elements from the Hanford nuclear
6 reactor.

7 Okay. Among the elements in the NDA
8 that are long lived, plutonium, not just
9 cesium, but plutonium and strontium, quite a
10 bit of that. So that gives you some idea of
11 how long the stuff is hazardous.

12 I want to describe some of the
13 description of this site, the NDA. About
14 6,600 cubic feet of leached cladding from
15 reprocessed fuels, also known as hulls, are
16 buried in approximately 100 deep holes located
17 in the eastern portion of the U-shaped site.
18 Most of those holes are 2.7 feet by 6.5 feet
19 by 50- to 70-feet deep. Well, 70-feet deep
20 goes down into the Kent Recessional Sequence,
21 you know, one of the layers under the site.

22 Approximately 230 special holes that
23 were Nuclear Fuel Service's holes, are located
24 in the northern and western portions of the
25 NFS burial area. These holes are about

820-2

820-2

The NDA with its inventory that includes the ruptured N-reactor fuel elements and its leached hulls is addressed in the analysis of each EIS alternative.

DOE and NYSERDA acknowledge the commentor's objection to the Phased Decisionmaking Alternative.

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1 20-feet deep with various lengths and widths,
 2 which most are about 12-feet wide and 20- to
 3 30-feet long.

4 So essentially, what we're being
 5 told here, is that we've got a huge amount of
 6 waste that's in the site that is not going to
 7 be handled. The NDA is not being handled in
 8 Phase 1, and essentially it's got a lot of
 9 very, very hazardous and very dangerous
 10 material. Some of the material that was put
 11 in there was exceeding 200 millirems per hour
 12 that was buried there.

13 So essentially, we're objecting to
 14 this plan.

15 The other piece of this, of course,
 16 is the flood plain. Your influence of
 17 flooding on the site could affect the NDA.

18 So obviously, you know, as we've
 19 said, the EIS is inadequate. There's a lot of
 20 radioactivity that is not really being
 21 handled, not being dealt with in this Phase 1,
 22 1 percent, and we would like the justification
 23 and rationale for not dealing with the whole
 24 site.

25 And we fully support the sitewide

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820-2
cont'd

820-3 The impacts of alternatives on local flood plains are analyzed in this EIS.

820-4 DOE has prepared this single, comprehensive EIS for decommissioning and long-term stewardship of WNYNSC. This EIS adequately analyzes the totality of environmental impacts, including costs, of a broad spectrum of reasonable alternatives that meet the respective purposes and needs of DOE and NYSERDA (Sitewide Close-In-Place, Phased Decisionmaking, and Sitewide Removal), as well as a No Action Alternative.

This EIS presents the impacts of Phase 1 and Phase 2 of the Phased Decisionmaking Alternative. The environmental impacts of implementing Phase 1 of the Phased Decisionmaking Alternative are described for each resource area in Chapter 4 of this EIS. If this alternative is selected, the options for Phase 2 (exclusive of the SDA) are sitewide removal of the remaining facilities and contamination (Sitewide Removal Alternative), close-in-place of the remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives. For the SDA only, NYSERDA is also considering continued active management consistent with permit and license requirements. For each resource area, Chapter 4 discusses the impacts that would occur if either removal or close-in-place is selected for Phase 2. The chapter also discusses which alternative(s) bound the impacts in the event that continued active management is selected for the SDA. The short-term impacts of a Phase 2 decision that involves continued active management of the SDA are bounded by either the removal or close-in-place impacts. The post-decommissioning impacts of a continued active management decision for the SDA, which include staffing, occupational exposure, and waste generation related to SDA monitoring and maintenance, as well as long-term impacts on public health and safety, would be similar to the no action impacts for the SDA. See the response to Comment no. 819-1 regarding the timing of the Phase 2 decision.

820-3
820-4

820-5

820-5 DOE and NYSERDA acknowledge the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

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1 removal, as we said every other night of this
 2 week. Thank you.

3 MS. ROBINSON: Thank you. The next
 4 speaker will be Bill Dibble, followed by
 5 Russell Brown.

6 **BILL DIBBLE:** Evening. Bill Dibble
 7 from Allegheny County. A couple comments.

8 First, I'm in favor of the sitewide
 9 complete removal. We as a nation have a
 10 socioeconomic thing we should do. A few years
 11 ago we had treated with the Seneca Nation of
 12 Indians, and we violated that treaty and built
 13 Kinzua Dam. And that was the wrong thing to
 14 do. There were other alternatives.

15 Now we are suggesting that we don't
 16 take the lifestyle generation of Senecas to
 17 exposure. As a separate nation was also
 18 Province of Ontario and Toronto.

19 Looking at the site itself, the high
 20 level tanks should not be filled full of
 21 grout. In a few years, look at the erosion
 22 studies that will be exposed. It should be
 23 exhumed and out of there.

24 As far as the burial grounds, they
 25 will also be eroded. The high level defense

|| 820-5
cont'd

|| 821-1

821-1

DOE and NYSERDA note the commentor's preference for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response. Evaluation of the alternatives considers the effects of erosion. Erosion studies are discussed in Appendix F.

821-2

This Final EIS presents an analysis of potential impacts of erosion for alternatives that would leave waste on site. Please see the response to Comment no. 821-2 and refer to the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for a discussion of the results of the analysis.

NYSERDA is responsible for management of the SDA.

|| 821-1
cont'd

|| 821-2

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

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1 waste state burial ground, who owns that
2 waste, is responsible for it. Asked many
3 times at the CTF meeting. I still don't know,
4 but somebody is responsible for the defense
5 waste on the State burial grounds.

6 A couple years ago at the CTF
7 meeting, a fellow spoke from DOE, said the
8 site could be cleaned up within 10 years.
9 There is a letter in the file from me to him,
10 and the CTF records. And I will spend much
11 stimulus money -- how much would it cost to do
12 it in ten years? Let's clean the thing up and
13 get rid of the waste. Because we all know the
14 problems if we don't do that.

15 If it gets cleaned up, then what?
16 Well, suppose we take within the fence 200
17 acres, and have an Atomic Age Museum? Think
18 of the potential to bring people in to the
19 Falls to come down to the project area to see
20 what's happened here. We all are getting
21 tourists defectors coming in, great exposure.

22 The 3,000 acres outside the fence,
23 well we have Niagara Falls and the park
24 system. I don't know of any national park
25 close by in the east. The State can sell the

821-2
cont'd

821-3 821-3

Comment noted. Under the Sitewide Removal Alternative, the WNYNSC would be available for release for unrestricted use. The future use of the site has not been determined.

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1 3,000 acres to the State for a Federal park.
2 I've walked the streams and the gorge. It's a
3 truly beautiful place to go tent camping,
4 things like that. A couple things to do after
5 we clean it up. Use it for good. Thank you.

6 MS. ROBINSON: Thank you, sir. Next
7 speaker is Russell Brown followed by our last
8 signed-up speaker, Pat Shelly.

9 **RUSSELL BROWN:** My name's
10 Russell Brown; I am with the DOCS Resistance.
11 The reason why I was speaking is because I
12 came here tonight because someone told me
13 about this yesterday. And I'm very unfamiliar
14 with the whole West Valley thing. This is a
15 learning experience to me. And I have learned
16 a lot. But -- and I didn't plan on speaking,
17 that's why my name's on the end of the list
18 there. But what bothered me was -- two things
19 that set me off.

20 One, is that two people since I've
21 asked have said that 98 percent of the waste
22 is going to be there on the site in 30 years
23 from now. And all I got was an evasive,
24 double-talk answer that, you know, if you're
25 not sophisticated about nuclear waste, you

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822-1

822-1 It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Finding Statement, if the Phased Decisionmaking Alternative is selected (see below).

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1 know, I don't know what to make of it.
2 And the other thing is that when
3 someone asked about, you know, when they're
4 gonna have another hearing. You know, the
5 beauty of this thing, the reason why there is
6 a hearing happening tonight, is someone had a
7 foresight to make it a law that you were
8 required to do it before you do the next
9 action. And so it seems strange to me that
10 there is no way we may never have another
11 hearing for this. This could be it, according
12 to the answer that I understood from you
13 people there.

14 And the guy that was talking about
15 plasma. He was talking about all these kooks
16 that are out there, because he was in the
17 military, you know. Well, I think there's a
18 lot of kooks that are inside the government,
19 you know.

20 Like, seriously, Bush, Cheney,
21 Rumsfeld, all those people. And they went
22 about, and they started a war, they lied about
23 it. They destroyed the antiquities of Iraq,
24 they destroyed people from even before that,
25 500,000 people is what the United Nations --

**822-1
cont'd**

822-2

822-2 Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until a final decision is made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate the Phase 2 decision for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

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1 500,000 children were killed because of our
2 policies from the Gulf War to the current war.
3 And because we starved the kids and cause them
4 to have all kinds of diseases. The facts are
5 all there.

6 The point is, I don't trust the
7 government. And so if -- I wouldn't want to
8 look ahead to 30 years. We don't know who's
9 going to be in there and what kind of things
10 can happen down the road. You should know
11 that yourself.

12 The other thing that's disappointing
13 is that, how can these incredible people here,
14 with all this information that matters in a
15 really humane way know all this stuff, and you
16 people who are the experts, didn't share any
17 of that. I mean, it doesn't make sense to me,
18 you know, at all.

19 So I think you ought to get the
20 stuff out of there as quick as you can. And I
21 had no opinion when I came here. I didn't
22 even know what it was. But I think you ought
23 to get the stuff out as quickly as you can,
24 based on the information I heard tonight from
25 the speakers and from the people up here, and

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822-3

822-3

DOE acknowledges the commentor's support for the Sitewide Removal Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

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1 the presentation. I went around and listened
2 and talked to the people in the beginning.
3 Thank you.

4 MS. ROBINSON: Thank you, sir. Our
5 last speaker is Pat Shelly.

6 **PAT SHELLY:** Pat Shelly; I'm from
7 Buffalo, and I'm a Downstream Denison. And I
8 want to follow-up on comments made by
9 Agnes Williams on the nuclear chain. Agnes is
10 from the Indigenous Women's Initiative.

11 And first to the Department of
12 Energy. The waste from West Valley is from
13 nuclear power plants and processing from
14 around the country. DOE is promoting new
15 nuclear power and new reprocessing facilities,
16 and I'll note that these plans include our
17 sister states on the Great Lakes, Pennsylvania
18 and Ohio.

19 Yet here at West Valley, where
20 nuclear power reprocessing waste is buried and
21 stored and leaking, the DOE says it cannot,
22 you know, it does not have a clear vision of
23 how to clean it up. And yet there is a
24 support by the Department involved in cleaning
25 up this nuclear waste reprocessing site. And

||| 823-1

823-1

This EIS evaluates the environmental impacts of a range of alternatives for the decommissioning and/or long-term stewardship of WNYNSC.

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1 it seems illogical. And I just wish to point
2 that out to the representative from the
3 Department of Energy.

4 To NYSERDA, New York State has no
5 business even considering a new nuclear
6 reactor and adding onto this poisonous nuclear
7 chain that West Valley is -- that West Valley
8 represents but one link in this deadly
9 manufacture, this creation of humans.

10 And finally, to just situate the
11 proposed new nuclear power plant, it will be
12 at 9 Mile Point in Oswego, north of Syracuse,
13 on the shores of Lake Ontario. So I hope that
14 this does not become a new link that is even
15 closer to the St. Lawrence River, even closer
16 to the oceans and continues the deadly
17 aftermath of the creation of -- of nuclear
18 waste.

19 And I hope that all here will avail
20 themselves of signing a giant letter to
21 Governor Paterson, where these sentiments are
22 expressed. And I thank you.

23 MS. ROBINSON: Thank you. That is
24 the end of our signed-up speakers. Did I miss
25 anyone who already signed up?

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1 (No response from the audience.)
2 MS. ROBINSON: Okay. We did get
3 permission to stay a little longer in the
4 building, so if there is anyone who would like
5 to speak, who did not sign up, I would be glad
6 to call on you now. Sir, there in the red,
7 were you waving?

8 A SPEAKER: No. I'm sorry.

9 MS. ROBINSON: Is there anyone else
10 who would like to speak who did not sign up?

11 (No response from the audience.)

12 MS. ROBINSON: Okay. Anybody who
13 would like to speak who did sign up already
14 and didn't finish? Sir. Same time limits.

15 JAMES RAUCH: You know, after 14
16 years I have to laugh at this whole circus of
17 time limits.

18 MS. ROBINSON: Actually, sir, I will
19 say never mind about that because I didn't see
20 anybody else here. So speak as long as you'd
21 like.

22 JAMES RAUCH: That's very good,
23 thank you. Appreciate it. We had the same
24 thing happen in Tonawanda, folks. You know,
25 this kind of nonsense, politicians get up,

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1 talk for half an hour, go on and on at the
2 mouth, and the public just sits and waits and
3 winds up filtering out the back.

4 Excuse me, but I just have, you
5 know, at this point of the game after being at
6 this 30 years, I don't have a lot of tolerance
7 for nonsense. I will continue where I left
8 off.

9 New York's record on radioactive
10 waste management at its larger sites is quite
11 poor and doesn't inspire confidence for the
12 future.

13 The two agencies in charge, DEC and
14 DOH, are nine years overdue on promulgating
15 radioactive site clean-up regulations
16 corresponding to the Nuclear Regulatory
17 Commission's 1997 Federal license termination
18 rulemaking. This is the set of regulations
19 that is being employed on the decommissioning
20 aspect side of West Valley.

21 I put an aside on the LTR. Prior to
22 1997, you know, and I have a lot of experience
23 with this in pharmacy, in nuclear pharmacies,
24 there's industrial generators of radioactive
25 materials. Prior to this LTR, any site had to

Response side of this page intentionally left blank.

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1 meet the strict AEA, Atomic Energy Act,
2 regulatory regime. And a decommission of the
3 site meant for unrestricted use. That meant
4 it had to be cleaned up for unrestricted use,
5 including someone that wanted to farm on that
6 land, someone that wanted to sink a well in
7 the ground and drink water from that land,
8 someone that would breathe dust blowing on the
9 land, 24 hours a day, seven days a week, 365
10 days a year that was the standard we had prior
11 to 1997.

12 Well, we've got all these huge
13 problems that everybody's heard about tonight.
14 These huge problems from this nuclear fiasco,
15 Atoms For Peace. Well, it's joined at the hip
16 to the bomb project. It's joined at the hip,
17 and it always will be.

18 This LTR, it allows all this
19 performance assessment risk-based nonsense.
20 You will not get to an unrestricted use. You
21 have these huge sites that are leaking, that
22 have been poorly managed from day one.

23 Tonawanda is a classic example. The
24 effort was to get the bombs made, and the
25 environment be damned, the workers be damned.

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1 Why do you think we have the Energy Employees
2 Compensation Act? Because workers were
3 exposed. They didn't want to give them masks,
4 because they wouldn't work if they thought it
5 was hazardous. This is the legacy we've got
6 in this country. And it's high time the
7 public woke up and held their government
8 accountable.

9 The Tonawanda deal, you know, yeah,
10 we started spending a lot of money. They
11 spent 6 million dollars on an environmental
12 impact package there. They were going to go
13 forward with a clean-up that really wasn't
14 stringent enough in that area, that's subject
15 to intensive reuse, you know. I mean, it's an
16 area that's very favorable.

17 You know, originally when it was
18 settled, it was a very favorable location,
19 it's along the Niagara River. It's a great
20 place to live, you can grow -- you've got good
21 soils, you know, you can earn a living there,
22 people are going to build houses there. In
23 fact, the Town Fathers, appreciating full
24 well, they didn't want a tumulus in that area
25 because that's valuable land. They want

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EDITH E. FORBES (585)343-8612

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

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1 condominiums and apartments.
2 You can't put condominiums on
3 uranium mill tailings. They're hazardous for
4 500,000 years and more. People, you know,
5 will be getting radon out of their basements.
6 And they will be getting lung cancer.

7 So, you know, it's -- it's a gradual
8 erosion of standards we're facing here. The
9 problems have gotten so big, that government
10 has thrown up its hands and said, well, we'll
11 do risk analyses for it. We won't do
12 standards, you know, we won't clean up for
13 unrestricted use.

14 What happened to Tonawanda, DOE went
15 ahead and started doing some clean-up.
16 Congress decided they were spending too much
17 money, so they switched the program to Army
18 Corps of Engineers. And by the way, do it
19 under CERCLA, the Superfund Law, and do it on
20 risk assessments based on, you know, parkland,
21 where the average exposed person is, according
22 to the scenario, is there for a few hours a
23 week. Well, yeah, you can walk across it and
24 it's safe for a few hours a week, but you
25 can't use the property.

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EDITH E. FORBES (585)343-8612

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

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1 Or industrial use, light industrial
2 use. Well, yeah, it's zoned light industrial
3 now, but what about 100 years from now? No,
4 you know, that's not the answer.

5 The answer is to stop making the
6 stuff, and to clean up the stuff you've got,
7 and put it in the best physical storage
8 location.

9 That ultimately will cost money.
10 That should have been thought of at the
11 outset, but it wasn't. People were too intent
12 on building bombs. Congress was too intent on
13 handing its industry buddies liability
14 protection under Price Anderson. So they went
15 ahead and built 100 reactors in this country.
16 The wastes are all externalized to future
17 generations. That's where we're sitting right
18 now here today.

19 I digress. I was saying that the
20 State, the State record is poor. New York
21 State is in an agreement state, which means
22 they've been given authority by the Federal
23 government to operate radiation programs,
24 corresponding to the Federal programs. Some
25 states aren't rich enough to have their own

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EDITH E. FORBES (585)343-8612

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

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1 programs, they rely on the Federal government.
2 New York's lucky enough to have its radiation
3 program.

4 Well, DEC and DOH are nine years
5 overdue on promulgating radioactive site
6 clean-up regulations corresponding to the
7 Federal LTR. I wonder why that is?

8 The State regulations could be more
9 stringent than the Federal regulations. They
10 can be more stringent. They can protect the
11 citizens in New York State. Why haven't they
12 been done?

13 In fact, NRC has placed the State's
14 agreement state radiation programs on
15 heightened oversight for failing to meet this
16 deadline. Well, NRC will keep them on
17 heightened oversight forever, because the Feds
18 don't really care. Maybe we'll see a change
19 with the Obama administration, or I don't
20 know. I'm not that hopeful. I've been at
21 this too long. I'm too cynical.

22 Why do I bring this up? Because had
23 the State promulgated these regulations in a
24 timely fashion, it might have prevented
25 deficient clean-up decisions made by the Army

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EDITH E. FORBES (585)343-8612

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

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1 Corp. at the Tonawanda Manhattan Project
2 properties. In fact, the State did not
3 enforce its own existing AEA authorized
4 radiation regulations applicable to those
5 Tonawanda properties.

6 Truth be known, folks, Linde had a
7 State license on it. It was issued by the
8 State Department of Labor, which was then one
9 of the State program operators. The license
10 covered the Manhattan Project uranium residue
11 which contaminated the whole facility. The
12 license amendment was put on in 1978, prior to
13 the passage of UMTRCA, the Federal law that
14 Congress was forced to pass because of
15 horrendous health affects of the western mill
16 tailing sites.

17 And so why did they put the
18 amendment on? Well, that prevented Tonawanda
19 from going into the title 1 category of sites
20 that had to be cleaned up right away. It was
21 title 1 UMTRCA, and title 2 the Uranium Mill
22 Tailings Radiation Control Act.

23 So Tonawanda escaped title 1
24 clean-up, and it fell into a Federal liability
25 called FUSRAP, Formerly Utilized Sites

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EDITH E. FORBES (585)343-8612

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1 Remedial Action Program. FUSRAP is not an act
2 of Congress. FUSRAP is an annual
3 appropriation to address liabilities, Federal
4 liabilities, at sites that were contaminated
5 and then left contaminated when the Feds
6 pulled out. Contamination that exceeded
7 guidelines at the time when the Feds pulled
8 out. So they're liabilities, they're legal
9 liabilities. People can sue the Feds because
10 they violated the law. They violated Atomic
11 Energy Act standards. They left behind source
12 -- way above source material concentrations.
13 Source material is raw uranium that goes into
14 the refinery. Uranium ore. In those days it
15 also included the tailings.

16 And so here we are, because the
17 State didn't promulgate those and didn't
18 enforce its own. You know, we had a license,
19 the State terminated the license in 1996. DOL
20 -- FACTS organization wrote a letter to the
21 Commissioner Sweeney and informed him that
22 they violated the law. Because the New York
23 State law is all -- any -- any law for
24 governing radioactive materials license,
25 requires for a license termination, that the

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Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

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1 site be cleaned up. In those days it was
2 unrestricted use.

3 The State illegally terminated that
4 license, and nobody was paying attention, and
5 the DOE comes in and basically says, well,
6 we're only going to clean-up to this level.
7 Well, then Congress says they spent too much
8 money, and Army Corp. comes in, and Army Corp.
9 sets a clean-up standard for the uranium at
10 the Linde site 3,000 picocuries per gram. The
11 NRC clean-up level is 10 picocuries per gram.
12 This is the site that's going to be used,
13 presumably, intensively, forever.

14 The weak clean-up levels selected
15 for the Linde property has attracted national
16 attention.

17 In Lewiston, the State sat by in the
18 1980s while DOE made a mockery of the National
19 Environmental Policy Act impact process. NEPA
20 requires a Record of Decision before Federal
21 resources -- scarce Federal resources, and I
22 will talk about that at the end. NEPA
23 requires a Record of Decision before scarce
24 Federal resources are committed to a Federal
25 project.

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Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

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1 What does that mean? That means
2 that West Valley, that before you put caps on
3 burial grounds, before you put slurry walls in
4 the ground to prevent migration, the interim
5 measures, which is what -- all they are is
6 interim measures, you have to have some kind
7 of -- some kind of analysis that looks at the
8 whole range of impacts and costs. We don't
9 have that. And we're going to wait another 30
10 years, unless the public stands up and holds
11 these people accountable.

12 At the DOE-owned Niagara Falls
13 storage site, which is in Towns of Lewiston
14 and Porter, the State allowed DOE to perform a
15 number of interim actions. The most egregious
16 being the slurring of the high-level K-65
17 residues.

18 These are residues that the National
19 Academy of Science and National Research
20 Council in 1995, after all these actions had
21 been completed by DOE, stigmatizes no
22 different than hazards from high-level waste,
23 and recommended they be exhumed and either
24 vitrified or solidified in some other
25 treatment method.

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DOE and NYSERDA believe that this EIS adequately analyzes the totality of environmental impacts, including costs, of a broad spectrum of reasonable alternatives that meet the respective purposes and needs of DOE and NYSERDA (Sitewide Close-In-Place, Phased Decisionmaking, and Sitewide Removal), as well as the No Action Alternative. The uncertainty about the nature of the Phase 2 decision is addressed by analyzing two cases. The first case assumes Phase 2 is removal of the remaining facilities, while the second case assumes Phase 2 is in-place closure of the remaining facilities. See the response to Comment no. 816-1 regarding the 30-year timeframe.

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

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1 So the State sat by and allowed the
2 Feds, who own the 190-acre Niagara Falls
3 storage site, to slurry these wastes from a
4 silo into building basements -- these are,
5 this was model City TNT operation -- building
6 basements on that site to basements containing
7 water. Picture this, before they place the
8 waste, there is the water standing in the
9 basement foundations. It's an unengineered
10 bottom. It's made of soil, it's gonna leak.
11 It's gonna contaminate Lake Ontario. No two
12 ways about it. That's 2,000 curies
13 radium-226, uranium. That's enough to
14 contaminate all of Lake Erie's volume above
15 the 5 picocurie per liter Federal drinking
16 water standard.

17 So after all these interim actions
18 were done, and neither of them made a mockery
19 of -- the final decision to be made in the
20 impact statement -- it still hasn't been made
21 by the way -- and the interim actions were
22 completed in the mid '80s. So we're talking
23 20, 25 years beyond.

24 The final decision to be made is
25 simply whether to put a final, thicker,

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1 engineered clay cap on the tumulus, the
2 landfill. So they scraped up all these wastes
3 that they let weather down the creek system to
4 drain the site. They scraped up the R-10
5 pile, and these were concentrated residues
6 that were allowed to weather, contaminated
7 huge volumes of environmental media, they
8 scraped them up, and they called them wastes.
9 Well they're no longer residues, we don't have
10 to worry about it. Now, you know, they're not
11 hot enough to be within K-65 category. This
12 is just miserable waste management.

13 So we're still waiting for the
14 decision at Niagara Falls. At the time in the
15 '80s, there was criticism within the New York
16 State Department of Health about this DOE
17 subterfuge, as DOH's John Matuszek called it.

18 John Matuszek was the same fellow in
19 the radiological services laboratory of DOH
20 that became notorious at the time for the
21 fiesta dinnerware incident. People probably
22 can remember that. If you Google it, you can
23 read up on it.

24 But the department heads and
25 Governor Cuomo did nothing about it. And so

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Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

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1 here we are, the same problem. We're facing
2 the same type of situation, the same scenario
3 here tonight at West Valley.

4 At West Valley, both the DOE and the
5 State have let the north plateau strontium 90
6 plume spread to contaminate 1 million cubic
7 yards of soil rather than effectively dealing
8 with it decades ago, when it was first
9 discovered. In fact, it was known about when
10 NFS was operating, because it occurred during
11 operations.

12 A major spill occurred inside the
13 building, soaked into the concrete, and now it
14 has just been leaching out like a sponge into
15 the groundwater. But, hey, you know, as
16 someone said, you do the sexy stuff, you get
17 the Federal project in, you solidify the
18 high-level tank waste, and then you just let
19 the rest of the site unravel.

20 And that's really -- that's really
21 why I have been so critical of the State.
22 Because the State corporation, NYSERDA, in my
23 view is failing the public miserably here.
24 And I think it's time that people really
25 seriously consider this obligation being

817-3 817-3

The history of the North Plateau Groundwater Plume is discussed in Chapter 3, Section 3.6.2.1, of this EIS. The plume was first discovered in the early 1990s. This EIS was prepared to evaluate the environmental impacts of alternatives for the decommissioning and/or long-term stewardship of WNYNSC, including the North Plateau Groundwater Plume and its source. Under the Sitewide Removal and Phased Decisionmaking Alternatives, DOE would remove the source of the plume. Under any of the action alternatives, DOE would take actions to remove or mitigate the impacts of the plume. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

EDITH E. FORBES (585)343-8612

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

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1 transferred directly to the State government.
2 This kind of public corporation isn't working
3 here, it's not working in other public
4 corporations.

5 The cost to clean it up on discovery
6 would have been probably a million or a couple
7 million dollars. The estimated cost to
8 properly clean-up this million cubic yards of
9 contamination now is between \$1.5 and \$2
10 billion, depending on how much longer we wait.

11 If we follow DOE's plan, it will be
12 \$2 billion, because they want to wait 47
13 years. According to the full cost accounting
14 study, if you want to get at it right away,
15 you know, you can -- you can save 500 million.

16 Clearly, both the State and Federal
17 approach here is to allow that to dissipate
18 away by dilution. And I would point out to
19 anyone that isn't aware of this, that that is
20 actually the Federal NRC position now. That
21 is what it has become.

22 As if they can gradually dilute this
23 stuff out -- this used to be a fundamental
24 principle that dilution is not the solution.
25 Now it has become the solution. The idea

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817-4

DOE and NYSERDA have expressed a preference for the Phased Decisionmaking Alternative, but the agencies have not made their decision. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

DOE and NYSERDA are aware of the report, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site (Synapse Report)* by Synapse Energy Economics, Inc., including the three appendices, and it has been entered into the public comment record for this EIS. The substance of the *Synapse Report* has been addressed in this CRD consistent with Council on Environmental Quality NEPA regulations (40 CFR 1503.4). Please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for a discussion of the report's issues and DOE's and NYSERDA's response.

EDITH E. FORBES (585)343-8612

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

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1 being, that if you can trickle it out slow
2 enough and it's a short enough half-life
3 material, that you won't have -- you won't
4 have substantial impacts. You know, there's
5 something to be said for it. But it -- but it
6 doesn't -- but it doesn't answer the
7 fundamental point I'm making here. And that
8 is, there's a failure in management here, and
9 that plume represents a miserable failure in
10 waste management. And I see that being
11 repeated in the future if this plan goes
12 forward.

13 It's the scarce resources thing.
14 You know, I just have to make a comment.
15 After all these bailouts and all this bank,
16 you know, there's this huge bubble of
17 investments that really have no value, that
18 the banks created, and all the -- and all
19 these people that made these things, got their
20 commissions, and they're long gone. Now the
21 administration wants to make all these people
22 whole that unwittingly or otherwise bought
23 these investments. Well, that's hugely
24 inflationary, number one. Number 2, it's
25 highly unfair because it's going to destroy

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EDITH E. FORBES (585)343-8612

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1 our currency, and you know, we have people
2 that have worked hard and been responsible in
3 dire straits to bail out people that were
4 irresponsible and didn't -- you know,
5 investors that didn't do due diligence.

6 So you know, this is in relation to
7 scarce resources. Scarce resources. How does
8 that compute now when we're throwing trillions
9 of dollars out there? It doesn't for me.

10 You know, in 1996 the DEIS, the
11 estimated total green field clean-up of West
12 Valley was \$8 billion. 8 billion is pocket
13 change, what you hear on the radio today. I
14 mean, every day there's another program out.
15 We need to seriously address these problems,
16 not throw, you know, money at bad banks.

17 So I will just close, you know,
18 everybody's tired. I'm tired. You know, it's
19 high time that the public holds the
20 governments accountable. It's high time we
21 get a sitewide decision. And it's high time
22 to get on with the job of clean-up of West
23 Valley. Thank you.

24 MS. ROBINSON: Thank you, sir. And
25 now we will have some closing remarks from

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Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

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1 Cathy Bohan.
2 (Public speaking portion of the
3 hearing concluded at a time
4 of 10:17 p.m.)

5 * * *

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EDITH E. FORBES (585)343-8612

Comments from the Buffalo, New York, Public Hearing (April 2, 2009)

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1 STATE OF NEW YORK)

2 ss:

3 COUNTY OF GENESEE)

4

5

6 I DO HEREBY CERTIFY as a Notary Public
7 in and for the State of New York, that I did
8 attend and report the foregoing proceeding,
9 which was taken down by me in a manner by
10 means of machine shorthand.

11 Further, that the proceeding was then
12 reduced to writing in my presence and under my
13 direction. That the proceeding was taken to
14 be used in the foregoing entitled action.

15

16

17

18

19

20 SUSAN M. RYCKMAN, C.P.,
Notary Public.

21

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23

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Comments from the West Valley, New York, Video Teleconference (September 4, 2009)

VIDEO TELECONFERENCE
PROCEEDINGS

COMMENT SESSION REGARDING:

The Revised Draft Environmental Impact Statement
for Decommissioning and/or Long-Term Stewardship
at the West Valley Demonstration Project and
Western New York Nuclear Service Center
(Decommissioning and/or Long-Term Stewardship EIS)

Proceedings held at the Ashford Office
Complex, 9030 Route 219, West Valley, New York, on
September 4, 2009, commencing at 12:36 p.m., before
ANNE T. BARONE, RPR, Notary Public.

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Comments from the West Valley, New York, Video Teleconference (September 4, 2009)

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1 PRESENT IN WEST VALLEY:
2 LINDA ROBINSON, The Facilitator
3 BRYAN BOWER, Department of Energy
4 VIA VIDEO TELECONFERENCE FROM WASHINGTON, D.C.:
5 DR. INÉS TRIAY, Assistant Secretary
6 for Environmental Management
7 DIANE D'ARRIGO, Nuclear Information and
8 Resource Service
9 VIA VIDEO TELECONFERENCE FROM ALBANY:
10 FRANK MURRAY, NYSERDA President and CEO
11 HAL BRODIE, NYSERDA General Counsel
12 VIA AUDIO FROM BUFFALO:
13 LAURA KROLICZYK and KENDRA HARRIS,
14 on behalf of SENATOR KIRSTEN GILLIBRAND
15 SPEAKERS: JOANNE HAMEISTER - in West Valley
16 RAYMOND VAUGHAN -
17 via video teleconference from Buffalo
18 LEONORE LAMBERT - in West Valley
19 SISTER SHARON GOODREMOTE -
20 via video teleconference from Buffalo
21 BRIAN SMITH -
22 via video teleconference from Buffalo
23 ROBERT CIESIELSKI -
24 via video teleconference from Buffalo
25 JIM RAUCH - in West Valley

12:36:52 23

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Comments from the West Valley, New York, Video Teleconference (September 4, 2009)

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12:36:52 1 **MR. BOWER:** If we're ready to go ahead and
12:37:12 2 get started, first, I'd like to introduce myself.
12:37:14 3 I'm Bryan Bower, the Department of Energy director
12:37:16 4 at the West Valley Demonstration Project.
12:37:20 5 On the phone we have individuals from the
12:37:22 6 Department of Energy headquarters, including
12:37:24 7 Assistant Secretary Dr. Inés Triay, and the NYSERDA
12:37:28 8 president, Frank Murray, is joining us from Albany,
12:37:32 9 New York.
12:37:34 10 I'm going to go ahead and introduce our
12:37:36 11 facilitator for today, Linda Robinson, and she's
12:37:40 12 going to tell us how all this technology is going
12:37:42 13 to work and help us through this meeting so we can
12:37:44 14 make sure that all concerns are heard.
12:37:46 15 And then Dr. Triay and Mr. Murray, if you
12:37:50 16 would like to make some brief comments after we
12:37:52 17 explain how the technology works, then we'll be
12:37:56 18 ready to listen to the concerns and comments from
12:37:58 19 our members of the public. So, Linda.
12:38:02 20 **THE FACILITATOR:** Thank you. Welcome. I am
12:38:04 21 Linda Robinson, your facilitator for this comment
12:38:08 22 session. We are in four geographic locations
12:38:10 23 visually: Washington, D.C.; here at West Valley;

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12:38:14 1 Buffalo; and Albany. And in addition, there are
12:38:18 2 some audio-only participants on the line, and I'll
12:38:20 3 determine who they are shortly.

12:38:22 4 Dr. Inés Triay, assistant secretary for
12:38:26 5 environmental management at DOE, and Mr. Frank
12:38:28 6 Murray, president of NYSERDA, are both interested
12:38:32 7 in hearing the concerns of people about West
12:38:34 8 Valley, and so they have made themselves available
12:38:38 9 today to listen.

12:38:40 10 Like yours, their schedules are very busy,
12:38:44 11 and they need to leave at 2 o'clock, so those who
12:38:46 12 choose to speak today, I ask that you keep your
12:38:48 13 comments as direct and concise as possible so that
12:38:54 14 everyone has an opportunity to speak.

12:38:56 15 There is a court reporter right here, Anne
12:38:58 16 Barone, making a record of the comments so they can
12:39:02 17 be included in the DEIS comment control system.

12:39:08 18 In case you've never used televideo before,
12:39:10 19 here's how this is going to work. Those of you who
12:39:12 20 are in visual contact, we should be seeing four
12:39:16 21 locations on the screen. I certainly see four.

12:39:18 22 And the phone only picks up, however, a
12:39:24 23 voice from one location at a time, so that makes it

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Comments from the West Valley, New York, Video Teleconference (September 4, 2009)

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12:39:28 1 important that you not interrupt other people or
12:39:30 2 there becomes a garbling of the two voices for a
12:39:34 3 moment; there's a little skip in the audio. So
12:39:36 4 it's really very respectful if you would wait for
12:39:40 5 someone to finish a sentence or something and not
12:39:42 6 interrupt so we can all hear what everyone says.

12:39:44 7 We will take comments from each location and
12:39:48 8 from the audio people alternately going in
12:39:52 9 round-robin fashion. So once I determine who else
12:39:54 10 is on the line besides the four visuals, I will
12:39:58 11 then have a list of people so we can go around and
12:40:00 12 go place to place and get your comments.

12:40:04 13 Those of you at each location can decide the
12:40:08 14 order in which people will speak. We haven't
12:40:12 15 predetermined that because we don't know, of
12:40:14 16 course, how many people will be at each location.

12:40:16 17 To help the transcriptionist here, I ask
12:40:18 18 that everyone who makes comments speak clearly and
12:40:22 19 say your name and your organization before
12:40:26 20 commenting and, if needed, spell your name. And
12:40:28 21 then if not, please don't criticize us for
12:40:32 22 misspellings. She'll do her very best trying to
12:40:34 23 hear everybody.

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Comments from the West Valley, New York, Video Teleconference (September 4, 2009)

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12:40:36 1 Written comments may also be submitted today
12:40:40 2 at West Valley using the comment form. This is the
12:40:44 3 one -- the same one that was used in all of the
12:40:44 4 public meetings that were held before.

12:40:46 5 And anybody elsewhere can use the mailing
12:40:50 6 and faxing in the same system, that was e-mailing
12:40:56 7 also, that was used previously. And those
12:40:58 8 addresses are all available in the EIS materials
12:41:00 9 and on Web sites.

12:41:02 10 I thank you all in advance for your
12:41:04 11 cooperation working with technology. We're doing
12:41:08 12 something new to a lot of people here. I
12:41:12 13 appreciate your helping to make this a productive
12:41:14 14 and a respectful meeting.

12:41:16 15 So, Dr. Triay, I ask that you begin.

12:41:18 16 **DR. TRIAY:** Thank you very much. And I
12:41:22 17 would like to thank all of you who have taken time
12:41:26 18 from a Friday afternoon before Labor Day, you know,
12:41:28 19 to work with the Department of Energy and NYSERDA,
12:41:34 20 so thank you very much for being here.

12:41:36 21 Just wanted to make sure that you have
12:41:42 22 notice about our commitment to the cleanup of
12:41:46 23 West Valley and also to listen to your input and

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Comments from the West Valley, New York, Video Teleconference (September 4, 2009)

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12:41:50 1 make sure that we understand the reasons for you to
12:41:56 2 provide that input to us.

12:41:58 3 I understand that some individuals couldn't
12:42:00 4 be here today, and we intend to have another video
12:42:08 5 this coming week for those who couldn't make it
12:42:10 6 today to also have the opportunity to interact with
12:42:14 7 the Department of Energy and NYSERDA so that we can
12:42:18 8 understand the feedback, the input that you're
12:42:22 9 providing, as well as the facts behind that input.

12:42:26 10 With that, I turn the floor back to you.

12:42:30 11 **THE FACILITATOR:** Thank you. I would like
12:42:32 12 to find out now who's on the line in an audio-only
12:42:36 13 way. If you would please speak up, and I'm going
12:42:40 14 to identify -- oh, I'm sorry. Frank Murray, did
12:42:44 15 you wish to speak?

12:42:48 16 **MR. MURRAY:** Yes. Thank you very much.

12:42:48 17 **THE FACILITATOR:** Sorry, Frank.

12:42:50 18 **MR. MURRAY:** No problem. No problem.

12:42:52 19 Again, for those of you who don't know me,
12:42:54 20 I'm Frank Murray. I'm the president and CEO of
12:42:58 21 NYSERDA.

12:42:58 22 For those of you who have been engaged in
12:43:02 23 this issue for a considerable period of time, you

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12:43:06 1 may recall that this is my second time around at
12:43:08 2 NYSERDA. I joined -- rejoined NYSERDA in February
12:43:14 3 in my current role.

12:43:16 4 15 years ago I served as the chairman of
12:43:18 5 NYSERDA back in the days when New York State had a
12:43:22 6 state energy office. I was the state energy
12:43:24 7 commissioner, and by statute, the state energy
12:43:28 8 commissioner also served as the chair of NYSERDA.

12:43:30 9 But my involvement with West Valley goes
12:43:34 10 back considerably further than just that. In fact,
12:43:36 11 when I joined the state in 1977, under then
12:43:40 12 Governor Hugh Carey, virtually the very first issue
12:43:44 13 I was engaged in was West Valley.

12:43:46 14 I helped write the initial federal
12:43:50 15 legislation that became the West Valley
12:43:54 16 Demonstration Project. It's an issue that I
12:43:54 17 followed closely for many years.

12:43:58 18 I wanted to echo Dr. Triay's comments to the
12:44:00 19 members of the public. Thank you very much for
12:44:02 20 taking the time out of your very busy schedules,
12:44:06 21 especially on a Friday afternoon just before a
12:44:10 22 holiday.

12:44:10 23 I'm sure Dr. Triay shares my feelings that

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12:44:12 1 we wish we could have made this at a more
12:44:16 2 convenient time for you, but everybody's schedules
12:44:18 3 being what they are at this time of year, we both
12:44:22 4 concluded that even at this time it would be better
12:44:24 5 to get together than to not get together at all.

12:44:26 6 I just want to emphasize from NYSERDA's
12:44:30 7 point of view how important we consider your
12:44:32 8 involvement in this process. I've been following
12:44:34 9 closely the events out in Western New York over the
12:44:38 10 last few months.

12:44:38 11 From my point of view, I've found the
12:44:42 12 citizen and environmental community involvement in
12:44:44 13 this to be both responsible and respectful. I
12:44:48 14 assume that will characterize our discussions going
12:44:50 15 forward.

12:44:50 16 I certainly look forward to hearing from you
12:44:52 17 directly as your concerns regarding the DEIS. And
12:44:56 18 with that, I turn it back to you.

12:44:58 19 DR. TRIAY: Thank you, Mr. Murray. And I'm
12:45:00 20 going to start with your location. Are there
12:45:02 21 others at your location who are expecting to speak
12:45:04 22 and give comments?

12:45:08 23 MR. MURRAY: No. I am accompanied -- the

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12:45:10 1 good-looking gentleman right here is Hal Brodie.
12:45:14 2 As many of you know, Hal is the general counsel at
12:45:16 3 NYSERDA and has been engaged as well in the
12:45:20 4 West Valley matter for far longer than I think he
12:45:24 5 wishes to remember. But Hal will not be speaking.
12:45:26 6 **THE FACILITATOR:** Okay. Thank you. So when
12:45:26 7 we go round-robin, I won't need to include Buffalo
12:45:30 8 then in the round-robin.
12:45:30 9 **MR. MURRAY:** Albany.
12:45:32 10 **THE FACILITATOR:** I mean Albany. I'm sorry.
12:45:32 11 I don't need to call on you to speak. Okay.
12:45:36 12 All right. Then let me hear then from
12:45:38 13 Buffalo. Would one person at Buffalo please speak
12:45:42 14 up.
12:45:46 15 **UNIDENTIFIED SPEAKER:** We're here.
12:45:48 16 **THE FACILITATOR:** Okay. Somebody wave a
12:45:48 17 hand so I can tell which one it is we're seeing.
12:45:52 18 Okay. Got you. Thank you. Thank you.
12:45:56 19 All right. So when we do go round-robin to
12:46:00 20 Buffalo, there will be several people there who
12:46:02 21 will wish to speak, correct?
12:46:06 22 **UNIDENTIFIED SPEAKER:** Yes, that's correct.
12:46:06 23 **THE FACILITATOR:** Okay. Thank you. You'll

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12:46:08 1 be included in the round-robin.
12:46:10 2 All right. Now I'd like to hear who else is
12:46:12 3 on the line. If anyone is on the line as an audio
12:46:16 4 who does anticipate wanting to speak, would you
12:46:18 5 please identify yourself.
12:46:18 6 **MS. KROLCZYK:** Yes. This Laura Krolczyk and
12:46:22 7 Kendra Harris in Buffalo, New York, for the office
12:46:24 8 of Senator Kirsten Gillibrand.
12:46:28 9 **THE FACILITATOR:** Okay. So I'm going to
12:46:28 10 call you the senator's office when I go
12:46:32 11 round-robin?
12:46:32 12 **MS. KROLCZYK:** Right.
12:46:34 13 **THE FACILITATOR:** Okay. Because there are
12:46:36 14 multiple people. Okay. Senator's office will be
12:46:36 15 one.
12:46:36 16 Is there anybody else on audio who would
12:46:40 17 like to speak?
12:46:40 18 Okay then. I guess that's it.
12:46:50 19 At DOE headquarters are there any people who
12:46:52 20 would wish to be identified or speak?
12:46:56 21 **DR. TRIAY:** Yes. We have one person.
12:46:58 22 **THE FACILITATOR:** Okay. Who will speak?
12:47:02 23 **MS. D'ARRIGO:** Diane D'Arrigo, Nuclear

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12:47:04 1 Information and Resource Service.
12:47:06 2 THE FACILITATOR: And it's one person, so
12:47:06 3 I'll just call on you as Diane. Okay?
12:47:10 4 MS. D'ARRIGO: Okay.
12:47:10 5 THE FACILITATOR: Okay. When we do the
12:47:12 6 round-robin. Okay.
12:47:14 7 So we have to go around to -- and we have
12:47:16 8 here in West Valley, by the way, a room full of
12:47:18 9 people, so we'll have -- probably when we do the
12:47:20 10 round-robin, we'll exhaust some of the sites who
12:47:24 11 have smaller numbers, and we'll just then pick up
12:47:26 12 here and let people go on and on at this location.
12:47:32 13 And I'd like your help in deciding order
12:47:32 14 here.
12:47:34 15 MR. BOWER: Okay.
12:47:36 16 THE FACILITATOR: Thank you.
12:47:36 17 I guess since we have the largest number of
12:47:38 18 people here, let's go ahead and start with the
12:47:40 19 West Valley location as the first one.
12:47:42 20 The idea here is for the person who's going
12:47:46 21 to speak, in our case, to come up to the seat next
12:47:48 22 to me because we have a speaker that can make it
12:47:52 23 audio for everybody else.

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12:47:54 1 In each of your other locations, would you
12:47:56 2 all please make sure that you sit near wherever the
12:47:58 3 speaker is -- I mean, the microphone is. I didn't
12:48:02 4 mean speaker. I meant microphone. So that
12:48:04 5 everyone can hear.

12:48:06 6 And if we can't hear early on, you'll please
12:48:08 7 excuse me, I'll interrupt you. I'll wave my hand
12:48:12 8 or something to tell you, because it means we can't
12:48:14 9 hear you, and I'm going to ask you to maybe start
12:48:16 10 again or repeat something.

12:48:18 11 Okay. So the first person -- and I'm going
12:48:24 12 to ask in each case, I'll repeat, that you please
12:48:26 13 give your name and your organization, if you choose
12:48:28 14 to, for the court reporter.

12:48:34 15 **MS. HAMEISTER:** I'm Joanne Hameister. Last
12:48:36 16 name H-A-M-E-I-S-T-E-R.

12:48:40 17 I am here as an individual, and I want to
12:48:44 18 make that very clear. I happen to be chairman of
12:48:46 19 the steering committee for the Coalition on West
12:48:48 20 Valley Nuclear Waste.

12:48:50 21 **THE FACILITATOR:** Let me stop. Can you all
12:48:50 22 hear her?

12:48:52 23 **UNIDENTIFIED SPEAKERS:** Yes.

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12:48:54 1 **THE FACILITATOR:** Good. Okay. Go ahead.

12:48:54 2 **MS. HAMEISTER:** Thank you. I want to make

12:48:56 3 sure that everybody understands that no comments,

12:49:00 4 concerns, answers, or questions from any person

12:49:02 5 associated with the coalition is official today.

12:49:08 6 We are a coalition of individuals and

12:49:10 7 organizations, and I think in this context, without

12:49:12 8 having any -- any way to understand where everybody

12:49:18 9 is coming from, that the coalition cannot take

12:49:20 10 responsibility for any of these. And this applies

12:49:24 11 to my statements, questions, answers, and concerns.

12:49:28 12 I am speaking for myself.

12:49:32 13 I have three questions basically. And

12:49:36 14 perhaps Mr. Murray can answer one of them is:

12:49:40 15 Where is the NYSERDA suit, and is NYSERDA going to

12:49:46 16 require the Department of Energy to take

12:49:48 17 responsibility for DOD wastes in the state licensed

12:49:52 18 burial ground?

12:49:54 19 Number 3: With the -- number 2 -- I'm

12:49:58 20 sorry -- with the DEIS, there is no long-term

12:50:02 21 commitment or site-wide solution offered and no

12:50:08 22 guarantee of public participation. This is a very

12:50:10 23 big concern of a lot of people that I have dealt

901-1 This EIS analyzes three decommissioning alternatives that address WNYNSC. These alternatives are the Sitewide Removal Alternative, which would remove the waste and facilities from the site; the Sitewide Close-In-Place Alternative, which would provide for in-place closure and long-term stewardship (management) of the site; and the (Preferred) Phased Decisionmaking Alternative. If the Phased Decisionmaking Alternative is selected, Phase 1 activities would further characterize the site and research technology developments and engineering to aid consensus decisionmaking for Phase 2. The decision for implementation of Phase 2 could be sitewide removal of remaining facilities and contamination (Sitewide Removal Alternative), in-place closure of remaining facilities and contamination (Sitewide Close-In-Place Alternative), or a combination of activities from these two alternatives.

Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until a final decision is made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate the Phase 2 decision for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

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cont'd

12:50:12 1 with on this issue.
12:50:14 2 And then for the Department of Energy, we're
12:50:20 3 concerned about the stimulus recovery money, the
12:50:24 4 funding, and we'd like to know how it's currently
12:50:26 5 being used and what the plans are for it.
12:50:30 6 I think, you know, I might want to revise
12:50:32 7 and extend my remarks later on as everybody else
12:50:36 8 has had a chance to speak.
12:50:40 9 **THE FACILITATOR:** Thank you very much. I'll
12:50:44 10 go on to Buffalo at this point, unless anybody
12:50:48 11 needs to say something.
12:50:56 12 **DR. TRIAY:** Excuse me, but let me ask you a
12:50:58 13 question. Were we going to have an interaction
12:51:04 14 here, you know, so we can answer or at least try to
12:51:08 15 understand the issues that have been presented, or
12:51:12 16 are we going to go through and do that at the end?
12:51:14 17 **THE FACILITATOR:** That would be fine if you
12:51:16 18 do that.
12:51:18 19 **DR. TRIAY:** Okay. With respect to this
12:51:20 20 particular question, I was just going to ask, with
12:51:26 21 respect to the recovery project, you know, what we
12:51:28 22 have asked in the Department of Energy every field
12:51:32 23 office to do is to work closely with not only the

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12:51:36 1 regulators but with the stakeholders to explain
12:51:42 2 what is it that we have in the recovery project
12:51:44 3 portfolio.

12:51:46 4 And we want to hear from the stakeholders
12:51:48 5 their opinions of what we have in that recovery
12:51:50 6 project portfolio.

12:51:52 7 So in addition to that, we have a DOE-wide
12:51:56 8 conference call that Cynthia Anderson, the recovery
12:52:00 9 project lead for headquarters, conducts in addition
12:52:06 10 to the interactions -- the detailed interactions
12:52:08 11 that go on at the different field sites.

12:52:12 12 So what we're going to do is make sure that
12:52:14 13 Bryan Bower closes with you as to when his next
12:52:20 14 recovery project interaction is to go through the
12:52:22 15 detail of the scope associated with recovery.

12:52:26 16 And then in addition to that, we're going to
12:52:28 17 make sure that we have your name and your number so
12:52:32 18 that we can add you to the list of individuals that
12:52:36 19 participate in the DOE-wide monthly recovery
12:52:42 20 project stakeholder interaction. Thanks.

12:52:48 21 **MR. BOWER:** Joanne, we just did a
12:52:50 22 presentation at our -- I'm sorry. This is Bryan
12:52:54 23 Bower with the Department of Energy.

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12:52:56 1 We did a presentation on August 4th at our
12:52:58 2 quarterly public meeting. We have another
12:53:02 3 presentation scheduled at our next citizens task
12:53:04 4 force meeting on September 23rd. And we will also
12:53:10 5 be briefing recovery act at every one of our
12:53:12 6 quarterly public meetings. I believe the next one
12:53:14 7 is scheduled for November 10th.

12:53:20 8 Thank you, Joanne.

12:53:22 9 **DR. TRIAY:** And, Joanne, we really want to
12:53:24 10 hear, you know, your opinions and those of your
12:53:26 11 colleagues on the scope.

12:53:28 12 It so happens that Cynthia Anderson has just
12:53:32 13 walked into the room, who's the head of the
12:53:34 14 recovery act at the headquarters.

12:53:36 15 Wave, Cynthia.

12:53:40 16 **MS. ANDERSON:** Hi.

12:53:40 17 **DR. TRIAY:** And she holds the DOE-wide. And
12:53:44 18 we are going to be -- and anybody else who wants
12:53:46 19 to, please make sure that you have Bryan have a
12:53:54 20 sign-up sheet for the stakeholders who want to be
12:53:56 21 invited to that conference call that Cynthia has
12:53:58 22 DOE-wide.

12:54:00 23 **MS. ANDERSON:** Yes.

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12:54:02 1 **DR. TRIAY:** Back to you.
12:54:02 2 **THE FACILITATOR:** Thank you. Okay. I think
12:54:04 3 we've completed --
12:54:08 4 **MR. MURRAY:** May I respond to Joanne's
12:54:10 5 questions, please?
12:54:10 6 **THE FACILITATOR:** Please do.
12:54:10 7 **MR. MURRAY:** Okay. Joanne, I think you
12:54:12 8 raised two questions. One was the status of the
12:54:14 9 lawsuit. I'm going to defer, as any good
12:54:18 10 administrator does, to his lawyer, Hal Brodie here,
12:54:20 11 to fill you in on that.
12:54:22 12 With respect to the public participation,
12:54:24 13 again, let me echo Dr. Triay, we welcome and
12:54:28 14 encourage as much public involvement and
12:54:30 15 participation in the decision-making process as
12:54:32 16 possible.
12:54:32 17 I will certainly look closely at the
12:54:34 18 comments you may have already filed as part of the
12:54:38 19 EIS. But if there are ways you think we should be
12:54:42 20 improving our public participation, you certainly
12:54:44 21 can reach out to my office or Paul Bembia, who I
12:54:48 22 believe is probably right there in the room with
12:54:48 23 you at West Valley.

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12:54:50 1 And Paul speaks with me regularly, so he's
12:54:54 2 probably your most immediate and best conduit to
12:54:56 3 express any concerns about where we may not be
12:55:00 4 involving the public adequately in the
12:55:02 5 decision-making process.

12:55:04 6 With respect to the lawsuit, I'm going to
12:55:06 7 let Hal just kind of bring you up-to-date on where
12:55:08 8 that is.

12:55:10 9 **MR. BRODIE:** As most of you know, NYSERDA
12:55:12 10 brought a lawsuit approximately three years ago now
12:55:14 11 to clarify the financial responsibilities for all
12:55:20 12 aspects of the cleanup at West Valley.

12:55:22 13 Soon after we brought that lawsuit, we
12:55:28 14 entered into facilitated negotiations with the
12:55:30 15 Department of Energy. And I think most of you know
12:55:34 16 that we've -- we've been successful in those
12:55:40 17 negotiations to the extent that there is a draft
12:55:44 18 settlement agreement that is circulated among the
12:55:50 19 parties.

12:55:50 20 And we hope to be able to make an
12:55:54 21 announcement in the very near future about that and
12:55:56 22 be able to advise all of you about the specific
12:56:00 23 content of the settlement agreement, which at this

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12:56:04 1 point, is still confidential.

12:56:08 2 THE FACILITATOR: Okay. And so now that

12:56:10 3 we've set a pattern, after any speaker, if you,

12:56:16 4 Mr. Murray, or Secretary Inés, if you would want to

12:56:20 5 say something, please speak right afterwards so

12:56:22 6 that -- and I'll try to pause and then -- before I

12:56:26 7 call on the next person so I'll know that you do

12:56:28 8 wish to say something. Thank you.

12:56:32 9 DR. TRIAY: Thank you.

12:56:32 10 MR. MURRAY: Thank you.

12:56:34 11 THE FACILITATOR: Okay. Buffalo, let's hear

12:56:34 12 from Buffalo.

12:56:36 13 MR. VAUGHAN: Yes. This is Raymond Vaughan.

12:56:40 14 V-A-U-G-H-A-N. First letter of that is V as in

12:56:46 15 Victor. I'm a resident of Hamburg, New York,

12:56:48 16 between West Valley and Buffalo.

12:56:50 17 I'm a long-time member of the West Valley

12:56:52 18 Citizen Task Force, and I'm speaking here today on

12:56:56 19 behalf of myself.

12:56:58 20 I have just submitted extensive comments on

12:57:02 21 the draft EIS that is now under consideration. I

12:57:06 22 won't go over those in detail. My comments total

12:57:10 23 dozens of pages with many attachments, totaling

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12:57:12 1 over 400 pages in all. So I hope that the both
12:57:18 2 agencies will look very closely at some of the
12:57:20 3 comments I make, especially about the erosion
12:57:24 4 problems at the site.

12:57:26 5 It's well-known that the site is
12:57:30 6 particularly susceptible to -- is built on an
12:57:36 7 eroding platform that simply will not last for the
12:57:38 8 length of time that some of these wastes will
12:57:40 9 remain hazardous in a radioactive sense.

12:57:44 10 And when I talk about erosion, I hope that
12:57:48 11 you have had the opportunity to actually see the
12:57:50 12 site. I know that Frank Murray has. But we're not
12:57:54 13 talking about erosion on a small scale but
12:57:58 14 valley-wide erosion or geomorphological evolution,
12:58:04 15 basically. The development of a relatively young
12:58:08 16 valley system in steep terrain.

12:58:10 17 The terrain is steep enough to have very
12:58:14 18 high gradients and thus stream velocities whenever
12:58:18 19 you get a lot of rainfall, as we did during the
12:58:20 20 past month. We had an exceptional storm that
12:58:26 21 served, I think, as a real reminder of how
12:58:28 22 susceptible the site is to erosion.

12:58:30 23 So in making decisions about how to clean

902-1 902-1

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

DOE and NYSERDA do not believe that the occurrence of the August 2009 storm changes the estimate of long-term impacts for the WNYNSC decommissioning alternatives. The long-term hydrologic transport analysis includes the investigation of the effect of wetter and drier climates, as noted in Appendix H, Section H.3.1. The long-term erosion analysis includes investigation of the effect of wetter climates, as noted in Appendix F, Section F.3.1.6.4, of this EIS.

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12:58:32 1 the site up, I think it's important to recognize
 12:58:36 2 that any proposals to leave waste in place, whether
 12:58:40 3 temporarily in phased decision-making, or even
 12:58:44 4 worse, if there were to be a permanent decision to
 12:58:46 5 close waste in place, I think that that simply puts
 12:58:52 6 the site at risk of coming apart at the seams, as
 12:58:56 7 any protective measures are undercut by erosion and
 12:59:00 8 dissolved and suspended wastes simply move down the
 12:59:04 9 creek system into Lake Erie.

12:59:06 10 So for protection of the Great Lakes, I
 12:59:08 11 think it's crucial that the site be cleaned up
 12:59:10 12 sooner is better. I think it is extremely
 12:59:12 13 important for this decision-making cycle to
 12:59:16 14 consider full cleanup as the best option.

12:59:20 15 There are a number of errors in the draft
 12:59:22 16 environment impact statement that would argue
 12:59:26 17 against that. In other words, statements that are
 12:59:26 18 made in the draft environmental impact statement
 12:59:30 19 that suggest that closure in place is both safe and
 12:59:36 20 affordable.

12:59:36 21 My comments deal in some detail with why
 12:59:38 22 those comments or those statements in the draft EIS
 12:59:42 23 are largely incorrect. But in any case, this is an

902-1
cont'd

902-2 **902-2** DOE and NYSERDA acknowledge the commentor's opposition to an EIS alternative that would leave buried waste on site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" and "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

902-3 **902-3** DOE considers the information in this EIS to be accurate and defensible. Please see Comment no. 110 for responses to comments and responses raised by this commentor.

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12:59:46 1 important decision point.
12:59:48 2 I think that's enough I need to say for now,
12:59:52 3 and I thank you for this opportunity.
12:59:54 4 **DR. TRIAY:** Thank you very much. I am aware
12:59:56 5 of the erosion issues at West Valley, and we can
13:00:02 6 assure you that we're going to look at your
13:00:04 7 comments very carefully.
13:00:08 8 **MR. VAUGHAN:** Thank you.
13:00:10 9 **MR. MURRAY:** Ray, thank you very much. It's
13:00:12 10 been a while since I last saw you.
13:00:12 11 **MR. VAUGHAN:** Hi, Frank.
13:00:14 12 **MR. MURRAY:** I do appreciate your comments.
13:00:16 13 I think it's fair to say that the staff of NYSERDA
13:00:20 14 out there in West Valley has expressed some similar
13:00:24 15 concerns regarding the updated EIS model and
13:00:30 16 results with respect to erosion. And we do concur
13:00:32 17 certainly to the extent that this is an issue that
13:00:36 18 warrants additional investigation.
13:00:38 19 **MR. VAUGHAN:** Thank you.
13:00:40 20 **THE FACILITATOR:** Okay. Now let's move to
13:00:42 21 the senator's office. One of the two people there.
13:00:46 22 **MS. KROLCZYK:** We're just here to observe
13:00:50 23 today. As you know, the senator's called for

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13:00:52 1 cleanup of the West Valley site. We just want to,
13:00:56 2 you know, make sure that people's questions are
13:00:56 3 being answered and see where we can be helpful in
13:01:00 4 that process.

13:01:18 5 **THE FACILITATOR:** Thank you. So I guess I
13:01:20 6 won't call on your office next time in the
13:01:22 7 round-robin?

13:01:24 8 **MS. KROLCZYK:** Right. I think we're just
13:01:36 9 here to observe right now.

13:01:38 10 **THE FACILITATOR:** Okay. Now we go to Diane.

13:01:40 11 **MS. D'ARRIGO:** Yes. I'm a native Buffalo
13:01:44 12 resident, Western New Yorker, and work here in
13:01:48 13 Washington now with Nuclear Information Resource
13:01:50 14 Service.

13:01:50 15 I'm part of a collaboration of groups both
13:01:54 16 locally and state-wide and here that are very
13:02:00 17 concerned about the West Valley site.

13:02:02 18 My organization is concerned about all of
13:02:04 19 the problems around the country at the weapons
13:02:08 20 facilities. But in particular, this one, as Ray
13:02:10 21 pointed out, is highly subject to erosion. So I
13:02:14 22 had -- oh, is that guy here who's doing the slides?
13:02:16 23 Yeah.

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13:02:20 1 **DR. TRIAY:** Why don't you go find him so
 13:02:24 2 that he can help her.

13:02:26 3 **MS. D'ARRIGO:** We actually have four main
 13:02:28 4 points. I was going to present one of them, Brian,
 13:02:32 5 Sister Sharon, and Bob Ciesielski were going to
 13:02:36 6 make the other points.

13:02:38 7 My points on the EIS are that the
 13:02:40 8 information needed on monitoring and institutional
 13:02:44 9 controls, that there's information that's needed,
 13:02:48 10 that -- if there's not enough information in the
 13:02:48 11 EIS to make a decision to leave the waste.

13:02:52 12 We oppose the phased decision making. We
 13:02:56 13 believe the decision should be made now and that
 13:02:58 14 research in the future should be done toward how to
 13:03:02 15 clean up the site fully, not on whether to clean it
 13:03:02 16 up. And we're concerned about the recent flooding
 13:03:06 17 that took place.

13:03:08 18 So the first slide that I wanted to show is
 13:03:12 19 in -- these pictures are in the -- the map that was
 13:03:16 20 just up is the one that I wanted to show first.

13:03:18 21 It's the overview of the site from the full
 13:03:22 22 cost accounting study that was done with New York
 13:03:26 23 State senate funding. It shows simply that creeks

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- 903-1** As acknowledged in this EIS, long-term monitoring and maintenance would be required for alternatives that would leave waste on site. This EIS provides a summary description of current and potential future environmental monitoring programs. The descriptions of the alternatives were revised to further describe the use of engineered barriers and long-term monitoring and maintenance. Long-term monitoring and maintenance are described in Chapter 2, Sections 2.4.2.6 and 2.4.3.8. Long-term monitoring and institutional controls are also discussed in Chapter 6. Additional information about current and proposed monitoring and institutional controls is provided in Appendices C, H, and I. Chapter 2, Table 2-4, includes estimates of the environmental consequences if (1) monitoring and maintenance are successful (institutional controls remain in place) and (2) monitoring and maintenance programs fail (institutional controls are lost). Chapter 4, Section 4.2, of this EIS includes monitoring and maintenance costs for the alternatives that would leave waste on the site.
- 903-2** Detailed information regarding long-term monitoring and maintenance programs and institutional controls under alternatives that would leave radioactive waste stored on site has not been specifically defined at this time. Such definition would occur after an alternative is selected for implementation and would include consultation with appropriate regulatory authorities. An element of the long-term programs would be the development of plans and procedures for responding to emergencies. These plans and procedures would include coordination and agreements with local police and fire departments and medical facilities.
- 903-2** DOE and NYSERDA acknowledge the commentor's opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

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13:03:28 1 are cutting the site and draining down toward the
13:03:32 2 Cattaraugus and Lake Erie, and there have been
13:03:34 3 losses of material.

13:03:36 4 Radioactive activity in 1974 burst through
13:03:40 5 the trench caps, drained into the creeks and into
13:03:42 6 the lakes, and that was what led to shutting the
13:03:44 7 burial ground at that time.

13:03:46 8 What just happened in August was a big
13:03:50 9 flood. You'll see here in this photo that Frank's
13:03:54 10 Creek hugs the trenches. And next to that is a
13:03:56 11 high-level waste burial area, NRC licensed. There
13:03:58 12 are tanks, process building, and a plume of
13:04:04 13 radioactivity migrating toward the creeks up here.

13:04:06 14 So along Buttermilk Creek, which is, as I
13:04:10 15 understand, about a third of a mile away, in
13:04:12 16 August 8th, 9th, 10th, there was a major event with
13:04:14 17 five inches of rain in just an hour and a half.

13:04:18 18 And the erosion went from -- backed up --
13:04:22 19 the erosion eroded toward the trenches at least
13:04:26 20 15 feet, so that's the next slide that I wanted to
13:04:28 21 show. The pictures. Yes.

13:04:34 22 That picture that's up right now, that's a
13:04:36 23 picture that was taken by Jim Rock in 2008. That's

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13:04:40 1 before the flooding. And then the next picture,
13:04:44 2 with the material all eroded, that's taken by Paul
13:04:48 3 Bembia -- thanks, Paul -- from NYSERDA. And it
13:04:52 4 shows just in one day what the erosion was.
13:04:58 5 And it's my understanding that that's about
13:05:00 6 15 or 20 feet closer to the trenches. And that's
13:05:04 7 just in one day.
13:05:04 8 And then there's a close-up one taken of the
13:05:08 9 landslide area. And you can see -- I think that's
13:05:12 10 Joanne standing up there -- the dimensions of the
13:05:16 11 erosion and how steep it is.
13:05:18 12 So, and also this was a devastating flood
13:05:24 13 for the people downstream. And we don't know
13:05:28 14 really how much radioactivity, if any, got out in
13:05:32 15 this instance, but in years to come, we're
13:05:34 16 concerned that this is what our geologists -- the
13:05:36 17 geologists for the independent full cost accounting
13:05:40 18 study indicated that within 150 to 1500 years, this
13:05:44 19 whole valley is going to erode.
13:05:44 20 And much of the waste -- there's 14 pounds
13:05:46 21 of plutonium in those trenches at least, and so
13:05:50 22 we're looking at trying to isolate that against the
13:05:52 23 forces of nature.

903-3 903-3

DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F.

Regarding the report mentioned by the commentor, please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for further discussion of this report's issues and DOE's and NYSERDA's response.

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13:05:54 1 So in the EIS, the information -- we need
 13:05:58 2 more information on monitoring and institutional
 13:06:00 3 controls. We don't feel that the information even
 13:06:02 4 on this flooding situation was adequate, that
 13:06:06 5 public disclosure is adequate, that there appears
 13:06:10 6 to be a discrepancy in the DEIS and the
 13:06:16 7 decommissioning plan.
 13:06:16 8 We're concerned that the EIS process is
 13:06:20 9 still under way. We've got options for full
 13:06:22 10 cleanup. Clean up 1 percent of the radioactivity
 13:06:26 11 now and then wait -- you know, during the next
 13:06:30 12 30 years decide whether or not to clean up the
 13:06:30 13 rest.
 13:06:30 14 So we're going to spend a billion dollars
 13:06:32 15 now to clean up one leak and then wait to see
 13:06:36 16 whether or not to clean up the rest of the site,
 13:06:38 17 which is projected now to cost in the \$9.7 billion
 13:06:42 18 range to clean up the whole site now, and we're
 13:06:44 19 going to spend 1 billion on cleaning up
 13:06:48 20 one migration. How many more migrations will take
 13:06:50 21 place?
 13:06:50 22 So the disclosure of -- well, the
 13:06:54 23 decommissioning plan that's being reviewed by the

903-4 Please refer to the response to Comment no. 903-1 regarding monitoring and maintenance and institutional controls, as well as the response to Comment no. 903-3 regarding erosion concerns. The effects of erosion are analyzed in this EIS. The erosion predictions are based on an erosion model that was calibrated by considering the effects of storms of the magnitude that occurred in August 2009.

Every effort has been made to ensure consistency, as appropriate, between this EIS and the *Phase 1 Decommissioning Plan for the West Valley Demonstration Project (Phase 1 Decommissioning Plan)*.

903-5 It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the DOE Record of Decision, if that alternative were selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making the Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that the Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected

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Consistent with an agreement between NRC and DOE, DOE is preparing the *Phase 1 Decommissioning Plan* simultaneously with the preparation of this EIS. The proposed decommissioning approach described in the *Phase 1*

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13:06:56 1 nuclear regulatory commission is for this phased
 13:07:00 2 decision making to just clean up that plume and
 13:07:02 3 what they think is the source area -- we have
 13:07:06 4 questions on that -- rather than waiting for the
 13:07:10 5 full decision. And if the full decision is, as
 13:07:12 6 we're encouraging, the full cleanup, the
 13:07:14 7 decommissioning plan must be much more expanded,
 13:07:16 8 and we don't want to lose it.
 13:07:18 9 So we're concerned that both DOE and NRC are
 13:07:22 10 going to leave the site after this period and that
 13:07:24 11 public opportunity for input is going to be lost
 13:07:26 12 after this time. So there's the public disclosure
 13:07:28 13 discrepancies between the decommissioning plan and
 13:07:32 14 the EIS.
 13:07:32 15 There's the -- and also for Mr. Murray, the
 13:07:40 16 state law requires a complete cleanup plan in the
 13:07:44 17 DEIS. And SEQRA requires that the DEIS have a
 13:07:48 18 complete plan and that all the potential impacts be
 13:07:50 19 examined in detail.
 13:07:52 20 It does not allow for segmentation of the
 13:07:54 21 action and an incomplete plan as with a phased
 13:07:56 22 decision making would provide.
 13:07:58 23 So those are some of my comments, and we'll

Decommissioning Plan is consistent with the Preferred Alternative in this EIS. NRC recognizes that the use of the Preferred Alternative in the *Phase 1 Decommissioning Plan* before completion of this EIS is preliminary and subject to change based on the content of this Final EIS and DOE's Record of Decision. If DOE selects an action other than the current Preferred Alternative, the *Phase 1 Decommissioning Plan* would be revised to reflect the Record of Decision. While DOE is conducting the NEPA EIS and *Phase 1 Decommissioning Plan* preparation and review processes in parallel, the Agency has not yet made its final decision on its actions for completion of the WVDP.

903-6
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903-7

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903-8

DOE will remain on site until it completes its responsibilities as assigned under the West Valley Demonstration Project Act. DOE would not leave the site after completion of the Phase 1 actions because it would not have completed the actions required under the Act. The description of the Phased Decisionmaking Alternative in Chapter 2 of the EIS has been revised to clarify this, and the wording in the *Phase 1 Decommissioning Plan* has been revised to avoid the implication that DOE would leave the site at the end of Phase 1.

The commentor is referring to the fact that the decision to clean up the site would occur in separate phases (Phased Decisionmaking). It is NYSERDA's position that segmentation under SEQR refers to the improper division of one project into multiple smaller projects to circumvent NEPA (or SEQR) requirements. NYSERDA does not believe that improper segmentation would be involved under the Phased Decisionmaking Alternative because the Phase 1 actions proposed would be independent of and would not bias actions conducted in Phase 2. In other words, the actions proposed under Phase 1 would not automatically trigger certain actions under Phase 2; to the contrary, DOE and NYSERDA could opt for any alternative or combination of alternatives during Phase 2. The test for improper segmentation is whether or not projects (in this case Phase 1 and Phase 2) are interdependent. In this case, they are clearly not.

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13:08:04 1 split them up, so others will share the rest. And
13:08:06 2 I'll leave you with these photos.
13:08:08 3 DR. TRIAY: Very good. Yes. That would be
13:08:08 4 excellent. Thank you.
13:08:10 5 MS. D'ARRIGO: There's a copy of the
13:08:10 6 independent report that was done on full cost
13:08:12 7 accounting. The disc in the back has all the
13:08:16 8 appendices.
13:08:16 9 DR. TRIAY: Very good. Thank you very much.
13:08:18 10 MS. D'ARRIGO: And, Frank, you've got that
13:08:20 11 independent full cost accounting report, right?
13:08:22 12 MR. MURRAY: Yes, Diane. Good to see you
13:08:24 13 again.
13:08:24 14 MS. D'ARRIGO: Good to see you.
13:08:26 15 MR. MURRAY: It's been a while.
13:08:28 16 MS. D'ARRIGO: I'm glad that someone with
13:08:30 17 the knowledge of West Valley is in your position.
13:08:32 18 MR. MURRAY: Thank you.
13:08:34 19 MS. D'ARRIGO: We're hoping you'll reverse
13:08:36 20 that preference for the phased decision making.
13:08:50 21 THE FACILITATOR: Okay. This is Linda, the
13:08:52 22 moderator. And when I come on round-robin, is that
13:08:56 23 the end of your location then as far as being

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13:08:58 1 called on? I don't need to call on you again?
13:09:04 2 DR. TRIAY: Yes. She was the only one here,
13:09:06 3 yes.
13:09:06 4 THE FACILITATOR: Okay. Thank you.
13:09:08 5 Then that takes us back, then, to West
13:09:10 6 Valley, and Lee Lambert is our next person.
13:09:24 7 MS. LAMBERT: My name is Lee Lambert.
13:09:26 8 Actually Leonore, L-E-O-N-O-R-E, L-A-M-B-E-R-T.
13:09:34 9 I'm a member of the League of Women Voters
13:09:36 10 and have been monitoring this situation for many
13:09:40 11 years for the league, and I've been on the Citizen
13:09:42 12 Task Force for ten of its 12 years, I believe. Ten
13:09:48 13 or 11 of its 12 years.
13:09:52 14 The league has already submitted comments
13:09:56 15 and also a press release. And speaking for them, I
13:10:00 16 would just quickly reiterate some of those points
13:10:04 17 they made.
13:10:08 18 We are asking for full exhumation of the
13:10:10 19 radioactive and chemical contaminants at the West
13:10:14 20 Valley nuclear waste site, and we oppose the phased
13:10:22 21 decision making because one source of contaminants
13:10:26 22 would be removed immediately, while other sources,
13:10:28 23 including the radioactive plume, the underground

904-1 904-1

DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative and opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

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13:10:32 1 tanks, and two unlined burial sites would be
 13:10:34 2 monitored with decisions regarding potential future
 13:10:38 3 cleanup deferred for up to 30 years. This we are
 13:10:44 4 opposed to for three reasons.
 13:10:46 5 It's an unacceptable risk for a precious and
 13:10:48 6 scarce resource: The area's future water supply.
 13:10:52 7 It ignores the most economically sensible
 13:10:54 8 option, which I will speak of in a minute, and it
 13:10:58 9 removes cleanup from public scrutiny that the EIS
 13:11:02 10 process was enacted to promote.
 13:11:04 11 The DOE approach is appropriate neither from
 13:11:08 12 scientific nor an economic standpoint. And it
 13:11:12 13 removes from public scrutiny future decisions
 13:11:14 14 regarding waste that will remain radioactive for
 13:11:18 15 many, many years.
 13:11:22 16 The site was subject to high -- which we all
 13:11:26 17 know, high precipitation and aggressive erosion and
 13:11:28 18 is unsuitable for storage of hazardous chemical or
 13:11:32 19 any other radioactive waste underground because --
 13:11:36 20 primarily because of potential for contamination of
 13:11:40 21 the water system for millions of people in New York
 13:11:42 22 State, Eastern Canada, and the St. Lawrence region.
 13:11:44 23 The league's position is supported, of

904-1
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904-2 **904-2**

Please see the Issue Summaries for "Concerns about Potential Contamination of Water" and "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

904-3

Because of the interest in public participation expressed in the comments received on the Revised Draft EIS, DOE has decided that, should the Phased Decisionmaking Alternative be selected, DOE would seek additional public input prior to the Phase 2 decision regardless of the exact NEPA process utilized. Specifically, public involvement would continue until a final decision is made and implemented. Public meetings would continue to be held on at least a quarterly basis, and additional meetings would be held as necessary to assure timely communication with the public. DOE and NYSERDA would continue to support the West Valley Citizen Task Force, which is expected to remain in place during this time.

904-2
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NYSERDA would assess results of site-specific studies and other information during Phase 1. NYSERDA expects to prepare an EIS, or to supplement the existing EIS, to evaluate the Phase 2 decision for the SDA and balance of WNYNSC. In accordance with SEQR requirements, a public comment period would be held by NYSERDA along with public meetings to further solicit stakeholder input.

904-4 **904-4**

DOE and NYSERDA have reviewed *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Site (Synapse Report)* by Synapse Energy Economics, Inc., and have addressed this report in this CRD consistent with the Council on Environmental Quality's NEPA regulations. Please see the Issue Summary for "Conclusions of the *Synapse Report*" in Section 2 of this CRD for further discussion of the report's issues and DOE's and NYSERDA's response.

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13:11:46 1 course, by that study that Diane mentioned. The
 13:11:48 2 Real Costs of Cleaning Up Nuclear Waste, which
 13:11:52 3 concluded that in the long term, leaving buried
 13:11:56 4 waste on site is high risk and expensive, while
 13:12:00 5 full cleanup presents both decreased risk and
 13:12:04 6 decreased cost.
 13:12:04 7 In filing its opposition, the league
 13:12:10 8 asserted two basic beliefs of the organization:
 13:12:14 9 That public participation of citizens in
 13:12:16 10 governmental decision making is a vital part of
 13:12:20 11 democracy, and that the protection of public health
 13:12:22 12 and safety and of the environment is paramount in a
 13:12:26 13 civilized society.
 13:12:28 14 As for my own comments, I think if you talk
 13:12:32 15 to anyone about this, the first thing they'll say
 13:12:34 16 is: What is taking so long? This site goes way
 13:12:38 17 back to the late '60s, early '70s. It's been known
 13:12:42 18 as a danger from those years.
 13:12:46 19 And through the years, and especially on
 13:12:50 20 being on the task force, I've heard a lot about the
 13:12:54 21 different parts of the site and what was being done
 13:12:56 22 and was disturbed somewhat by NRC monitoring the
 13:13:00 23 plume, just monitoring the plume, monitoring the

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904-5

904-5 The history of the North Plateau Groundwater Plume is discussed in Chapter 3, Section 3.6.2.1, and Appendix C, Section C.2.13, of this EIS. The North Plateau is the only portion of the site where groundwater moves at a relatively rapid rate; therefore the North Plateau Groundwater Plume is the most mobile contamination on the site. Groundwater movement on the South Plateau is relatively slow because of the natural and engineered barriers that limit water infiltration and lateral flow. The extensive site characterization and monitoring data do not indicate the presence of any other plumes whose position would noticeably change over the next few decades. DOE and NYSERDA are adequately managing the North Plateau Groundwater Plume waste and contamination in its current configuration and releases are minimal, as demonstrated by the results from the ongoing environmental monitoring program that are reported in the annual site environmental reports.

All of the proposed decommissioning alternatives addressed in this EIS include provisions to remove or control the spread of the North Plateau Groundwater Plume. This EIS analyzes both the short- and long-term environmental consequences of these decommissioning alternatives, including the consequences to offsite and potential onsite individuals as a result of erosion across the site and movement of the North Plateau Groundwater Plume, as well as the consequences of various management strategies for the plume.

Implementation of the Phased Decisionmaking Alternative (the Preferred Alternative) would make an important advance in the decommissioning of WNYNSC within the initial 8 years. The cleanup that would take place during Phase 1, as explained in Chapter 2, Section 2.4.3, of this EIS, would reduce or eliminate potential health or environmental impacts by removing major facilities (such as the Main Plant Process Building and lagoons). In addition, the source area for the North Plateau Groundwater Plume would be removed, thereby reducing the source of radionuclides that are potential contributors to human health or environmental impacts.

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13:13:04 1 plume, monitoring the plume for years and years as
 13:13:06 2 the plume spread, and then disagreement between
 13:13:10 3 New York State and DOE over who's going to pay for
 13:13:12 4 stopping that or for removing it.
 13:13:16 5 And now the decision to clean up underneath
 13:13:20 6 the -- take down the building and eliminate that
 13:13:24 7 part of the plume, the source of the plume, the
 13:13:28 8 plume still remains and is moving at this time.
 13:13:32 9 Also was disturbed by the split in the EIS
 13:13:36 10 and the -- then the subject of disagreements
 13:13:40 11 between New York State and the DOE and now by both
 13:13:48 12 entities agreeing to defer decision-making, which
 13:13:52 13 would give us another 30 years to decide if we are
 13:13:56 14 even going to clean it up. And I find that very
 13:13:58 15 disturbing.
 13:14:00 16 Thank you.
 13:14:02 17 **THE FACILITATOR:** Thank you, Lee.
 13:14:04 18 Okay. Let's go --
 13:14:06 19 **MR. MURRAY:** Lee, may I ask you a question?
 13:14:06 20 **MS. LAMBERT:** Sure.
 13:14:08 21 **MR. MURRAY:** I wanted to ask Lee a question,
 13:14:10 22 if she wouldn't mind.
 13:14:10 23 **MS. LAMBERT:** Yeah.

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904-6

904-6 Chapter 1, Section 1.2, of this EIS provides an explanation of the development of this EIS, including why the 1996 *Draft Environmental Impact Statement for Completion of the West Valley Demonstration Project and Closure or Long-Term Management of Facilities at the Western New York Nuclear Service Center (Cleanup and Closure Draft EIS)* (DOE/EIS-0226-D) was split into two EISs. This EIS analyzes three decommissioning alternatives, all of which include DOE's completion of the WVDP as required under the West Valley Demonstration Project Act. The alternatives range from the Sitewide Removal Alternative, which would remove the waste and facilities from the site, to the Sitewide Close-In-Place Alternative, which would provide for closure and long-term stewardship (management) of the site. The Sitewide Removal and Sitewide Close-In-Place Alternatives are very similar to those analyzed in the 1996 *Cleanup and Closure Draft EIS*, but there have been changes in inventory, preliminary engineering designs, and analytical methods. DOE and NYSERDA believe that this EIS presents an accurate analysis of the impacts of the decommissioning alternatives, as well as the No Action Alternative, which is required by NEPA and SEQR but would not meet DOE's purpose and need to decontaminate and decommission the high-level radioactive waste tanks and facilities used under WVDP. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement.

Concerning disagreements between DOE and NYSERDA, in November 1996, DOE began the Core Team process with the agencies involved in this EIS to work toward resolution of technical issues that were impeding progress of the document. NYSERDA agreed to join this process in March 2007. Since that time, DOE and NYSERDA have worked cooperatively to advance the NEPA process for WNYNSC. In parallel, DOE and NYSERDA have engaged in settlement discussions, limited to issues of cost allocation, related to the December 18, 2006, legal action filed by NYSERDA.

DOE disagrees with many of the points raised in NYSERDA's View, which is included as the Foreword to this EIS. At the core, differences between DOE and NYSERDA center on different views about the nature of analysis required for an EIS and the attendant level of acceptable risk associated with any uncertainties in that analysis as it relates to decisionmaking. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, this EIS (1) acknowledges the information limitation and its relevance to environmental consequence, (2) summarizes existing credible

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13:14:12 1 **MR. MURRAY:** Lee, you mentioned that you had
 13:14:14 2 three reasons why you oppose the phased
 13:14:18 3 decontamination option, and the third one was that
 13:14:22 4 you said that that option would remove cleanup from
 13:14:26 5 public scrutiny. Could you explain that to me a
 13:14:30 6 little bit? What does that statement mean?
 13:14:34 7 **MS. LAMBERT:** Primarily because there's no
 13:14:36 8 guarantee of a proper EIS and public participation.
 13:14:54 9 **MS. D'ARRIGO:** This could end the EIS
 13:14:58 10 process.
 13:15:00 11 **MR. MURRAY:** Thank you.
 13:15:04 12 **THE FACILITATOR:** All right. Let us move on
 13:15:06 13 to Buffalo again.
 13:15:12 14 **SISTER GOODREMOTE:** Hello. This is Sister
 13:15:14 15 Sharon Goodremote, and I represent Catholic
 13:15:16 16 Charities of Buffalo, the Catholic Diocese Care for
 13:15:20 17 Creation Committee, and this issue is very
 13:15:24 18 important to the faith community.
 13:15:24 19 And that is why besides Catholic Charities
 13:15:28 20 and the Care for Creation Committee of the diocese
 13:15:30 21 and other sister groups, parish peace and justice
 13:15:34 22 committees and the presbytery have also added on to
 13:15:38 23 support the site removal -- the immediate site

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scientific evidence, and (3) presents an analysis using a theoretical approach that is generally accepted by the scientific community involved in such analyses. This Final EIS contains text boxes in the relevant subject matter areas that acknowledge the differences of opinion between DOE and NYSERDA. In general, DOE's position is that the Agency spent much time and effort engaging highly qualified and respected experts in hydrology and hydrological transport, landscape evolution (erosion), human health and environmental risk analysis, and other technical fields and stands behind the analyses performed for this EIS.

905-1

905-1

DOE and NYSERDA acknowledge the commentor's support for the Sitewide Removal Alternative and opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summaries for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes," "Concerns about Potential Contamination of Water," and "Conclusions of the Synapse Report" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

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13:15:42 1 removal alternative.
13:15:44 2 Cleaning up West Valley nuclear site now and
13:15:46 3 completely is the only response to good stewardship
13:15:50 4 and the only moral decision that can be made. The
13:15:54 5 reasons the faith community believes the site-wide
13:15:56 6 removal alternative is the correct decision and
13:16:00 7 shows good stewardship are, it doesn't have to be
13:16:06 8 proven that nuclear waste is toxic, radioactive,
13:16:10 9 and harmful to humans and all of creation.
13:16:14 10 Therefore, keeping nuclear waste in an area
13:16:16 11 that is unstable, as shown by the recent flooding,
13:16:20 12 and it was covered by Diane, is not only an immoral
13:16:26 13 decision, it doesn't make sense.
13:16:28 14 The possible health risks are obvious. With
13:16:32 15 creeks all around the nuclear site which eventually
13:16:34 16 flow into Lake Erie, it is unthinkable that we
13:16:38 17 would wait to remove the waste or leave some behind
13:16:40 18 for another time.
13:16:44 19 Water is one of God's great gifts, and how
13:16:46 20 can we humans, who are called to be stewards of
13:16:50 21 creation, make choices that will contaminate the
13:16:52 22 greatest source of fresh water in the United
13:16:56 23 States?

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13:16:56 1 The site-wide removal alternative will give
13:17:00 2 New York citizens peace of mind, healthy
13:17:04 3 environment, and gratitude to their government
13:17:06 4 leaders for making the right decision.

13:17:10 5 Secondly, the use of taxpayer dollars also
13:17:12 6 show the need for good stewardship. In this time
13:17:18 7 of a weak economy, how each dollar is spent is
13:17:22 8 important.

13:17:24 9 According to the independent state-funded
13:17:26 10 study, The Real Cost of Cleaning Up Nuclear Waste,
13:17:30 11 the full cost accounting of cleanup options for the
13:17:34 12 West Valley nuclear site, it may cost \$9 million to
13:17:38 13 do on-site removal now, and, in the future,
13:17:40 14 especially if there's any problem with the area and
13:17:46 15 any terrible weather there, it could cost
13:17:50 16 27 billion.

13:17:50 17 And, of course, all these numbers can change
13:17:52 18 according to the ups and downs of the economy, but
13:17:54 19 either way, definitely cleaning it up now --
13:17:58 20 cleaning the waste site up now will be cheaper than
13:18:00 21 cleaning it up in the future when there's more
13:18:04 22 problems.

13:18:06 23 So I believe that the faith community of

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13:18:10 1 Buffalo and of Western New York, because Catholic
13:18:14 2 Charities goes throughout the eight counties, agree
13:18:18 3 that God created the earth and said that it was
13:18:20 4 good, and we are dedicated and committed to helping
13:18:24 5 everyone and to helping this decision be made that
13:18:28 6 we clean the site as soon and as quickly as
13:18:32 7 possible.

13:18:32 8 Thank you.

13:19:02 9 **MR. MURRAY:** Thank you, Sister.

13:19:04 10 **SISTER GOODREMOTE:** You're welcome.

13:19:12 11 **THE FACILITATOR:** Okay. I know of Jim still
13:19:14 12 in Buffalo -- I mean, in West Valley. Is there
13:19:18 13 anybody else in the West Valley room who would wish
13:19:20 14 to speak who has not already identified themselves?

13:19:24 15 Okay. Is there anyone else still at
13:19:26 16 Buffalo? Let me go back to Buffalo. Are there
13:19:30 17 more speakers in Buffalo?

13:19:34 18 **MR. SMITH:** Yes.

13:19:34 19 **THE FACILITATOR:** Okay. Proceed.

13:19:38 20 **MR. SMITH:** My name is Brian Smith, and I am
13:19:44 21 Western New York program director for Citizens
13:19:46 22 Campaign for the Environment, and I'm here today on
13:19:48 23 behalf of our 80,000 members. Thank you for the

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13:19:52 1 opportunity to speak today.

13:19:54 2 We support the full site-wide removal option

13:20:00 3 for a number of reasons. I'm going to focus today

13:20:02 4 on one particular point that the plan -- or the

13:20:08 5 DEIS does not have a plan to fully clean up the

13:20:10 6 entire site, and we have some deep concerns about

13:20:14 7 the threats of leaving waste on site, and that's

13:20:16 8 what I'm going to focus my comments on today

13:20:18 9 because it is going to be more costly, and it poses

13:20:22 10 serious threats to public health and the

13:20:24 11 environment.

13:20:26 12 West Valley is simply not an appropriate

13:20:30 13 place for long-term storage of nuclear waste. As

13:20:34 14 several speakers have mentioned, erosion is a

13:20:38 15 powerful and fast-moving force at the site, which

13:20:40 16 was particularly hastened by recent storms.

13:20:44 17 And with global climate change, people are

13:20:48 18 accepting this as a reality. We're expecting more

13:20:50 19 frequent and intense storms. This will not be the

13:20:54 20 last of those types of storms, and we really don't

13:20:58 21 know how quickly radioactive waste will be exposed

13:21:02 22 and contaminate our waterways and our Great Lakes.

13:21:04 23 The modeling we have is not reliable, and

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906-1

906-1 DOE and NYSERDA acknowledge the commentor's opposition to an EIS alternative that would leave buried waste on site. The decision on the selected course of action and supporting rationale will be documented in DOE's Record of Decision and NYSERDA's Findings Statement. Please see the Issue Summary for "Support for Sitewide Removal of All Radioactive and Hazardous Wastes" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

906-2

906-2 DOE and NYSERDA recognize that erosion is a concern at WNYNSC. This EIS analyzes erosion and the long-term (multi-century) consequences on local as well as Lake Erie and Niagara River water users. The erosion predictions are based on an erosion model that was calibrated by considering the effects of storms of the magnitude that occurred in August 2009. This EIS also evaluates the potential human health impacts of a scenario whereby institutional controls are assumed to be lost and unmitigated erosion is assumed to occur over hundreds of years. These projected impacts are presented in Chapter 4, Section 4.1.10.3.3, and Appendix H of this EIS. Erosion studies are discussed in Appendix F. Please also see the Issue Summary for "Questions about Long-term Erosion Modeling" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

The EIS analysis of long-term performance addresses the impacts of climate and extreme weather events. See Appendix D, Section D.3.1.1, of this EIS for a discussion of how climate change was considered in developing the site conceptual model. Because there are no reliable projections of future specific climate changes in the WNYNSC region, the groundwater dose analysis uses sensitivity analysis to investigate the impacts of wetter or drier climates on the estimates of human health impacts. The methodology and results are presented in Appendix H, Section H.3.1. In addition, the analysis of doses due to unmitigated erosion uses a gully advance rate associated with a climate that is wetter than current site conditions.

As acknowledged in this EIS, long-term monitoring and maintenance would be required for alternatives that would leave waste on site. This EIS provides a summary description of current and potential future environmental monitoring programs. The descriptions of the alternatives were revised to further describe the use of engineered barriers and long-term monitoring and maintenance. Long-term monitoring and maintenance are described in Chapter 2, Sections 2.4.2.6, and 2.4.3.8. Long-term monitoring and institutional controls are also discussed

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13:21:06 1 this was even recognized by NYSERDA in the forward
 13:21:10 2 of the DEIS. When waste on site is a problem, the
 13:21:16 3 DEIS -- a problem there is it fails to recognize
 13:21:20 4 the site will have to be maintained and monitored
 13:21:24 5 into perpetuity if waste is left on site.

13:21:28 6 Of course, the waste will be dangerous for
 13:21:30 7 tens of thousands of years or longer, however, the
 13:21:36 8 DEIS does not even look at monitoring or
 13:21:40 9 maintaining a site for even a thousand years.

13:21:44 10 In the FCA study alluded to earlier,
 13:21:50 11 scientists have estimated that radioactive wastes
 13:21:54 12 could be exposed dangerously in as soon as 150
 13:21:56 13 years. The full cleanup, if started today, would
 13:22:00 14 take 65 years. To wait an additional 30 years
 13:22:04 15 before even making a decision on what to do is
 13:22:06 16 putting our communities and our water bodies of the
 13:22:10 17 Great Lakes at an unacceptable risk.

13:22:14 18 Of course, this poses a serious -- if
 13:22:18 19 catastrophic contamination were allowed to leak out
 13:22:22 20 of the site, if it was left on site, it would pose
 13:22:24 21 serious public health risks in the area.

13:22:26 22 In the FCA study it said that if a release
 13:22:30 23 of just 1 percent of the radioactivity made its way

906-2
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906-3

in Chapter 6. Additional information about current and proposed monitoring and institutional controls is provided in Appendices C, H, and I. Chapter 2, Table 2-4, includes estimates of the environmental consequences if (1) monitoring and maintenance are successful (institutional controls remain in place) and (2) monitoring and maintenance programs fail (institutional controls are lost). Chapter 4, Section 4.2, of this EIS includes monitoring and maintenance costs for the alternatives that would leave waste on the site.

Detailed information regarding long-term monitoring and maintenance programs and institutional controls under alternatives that would leave radioactive waste stored on site has not been specifically defined at this time. Such definition would occur after an alternative is selected for implementation and would include consultation with appropriate regulatory authorities. An element of the long-term programs would be the development of plans and procedures for responding to emergencies. These plans and procedures would include coordination and agreements with local police and fire departments and medical facilities.

DOE disagrees with many of the points raised in NYSERDA's View, which is included as the Foreword to this EIS. At the core, differences between DOE and NYSERDA center on different views about the nature of analysis required for an EIS and the attendant level of acceptable risk associated with any uncertainties in that analysis as it relates to decisionmaking. DOE believes the analysis in this EIS meets the requirements of NEPA and SEQR in that, when there is incomplete or unavailable information relevant to reasonably foreseeable significant adverse environmental impacts, this EIS (1) acknowledges the information limitation and its relevance to environmental consequence, (2) summarizes existing credible scientific evidence, and (3) presents an analysis using a theoretical approach that is generally accepted by the scientific community involved in such analyses. This Final EIS contains text boxes in the relevant subject matter areas that acknowledge the differences of opinion between DOE and NYSERDA. In general, DOE's position is that the Agency spent much time and effort engaging highly qualified and respected experts in hydrology and hydrological transport, landscape evolution (erosion), human health and environmental risk analysis, and other technical fields and stands behind the analyses performed for this EIS.

906-3

DOE and NYSERDA have reviewed *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Site (Synapse Report)* by Synapse Energy Economics, Inc., and have addressed this report in this CRD consistent with the Council on Environmental Quality's

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13:22:34 1 into local creeks and streams of the Great Lakes,
13:22:36 2 there could be hundreds of cancer deaths and would
13:22:38 3 cost hundreds of millions of dollars to supply
13:22:44 4 replacement water to the millions of people that
13:22:46 5 drink water from Lake Erie.

13:22:50 6 It is more expensive to leave waste on site.
13:22:52 7 The FCA study showed this. If we clean it up
13:22:56 8 quickly -- quickly clean it up now, we'll be paying
13:23:00 9 around \$9 billion. If we wait to -- and we have to
13:23:04 10 maintain and monitor in the long term, with leakage
13:23:08 11 into the Great Lakes, we'll be paying anywhere from
13:23:12 12 13 to \$27 billion.

13:23:16 13 Leaving waste on site is a tremendous threat
13:23:18 14 to the health of our Great Lakes. The Great Lakes
13:23:20 15 are the backbone really of our quality of life in
13:23:24 16 the region and to our economy. They supply over
13:23:26 17 40 million people with drinking water and support
13:23:30 18 billion-dollar industries such as fishing and
13:23:32 19 tourism.

13:23:32 20 In fact, site-seeing, tourism, recreation
13:23:36 21 supply over \$50 billion to the regional economy of
13:23:40 22 the Great Lakes annually.

13:23:42 23 Recognizing this, there are a number of

NEPA regulations. Please see the Issue Summaries for "Questions about Cost-Benefit Analysis" and "Conclusions of the *Synapse Report*" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

906-4 Please see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

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906-4

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13:23:44 1 efforts under way and have been for years to
13:23:48 2 protect and restore this important water body. All
13:23:50 3 of these efforts, including the Great Lakes Water
13:23:54 4 Quality Agreement, the Great Lakes Regional
13:23:56 5 Collaboration Strategy, even more recently, the New
13:24:00 6 York State's Ecosystem-Based Management Report, all
13:24:04 7 of these stress as a priority the need to eliminate
13:24:10 8 the introduction of toxic substances into the Great
13:24:12 9 Lakes as a critical component of protecting and
13:24:14 10 restoring our lakes for future generations.
13:24:18 11 By leaving waste on site and risking
13:24:20 12 catastrophic contamination really flies in the face
13:24:24 13 and contradicts all of these efforts.
13:24:26 14 More recently, the Obama administration has
13:24:30 15 made unprecedented commitment to protecting the
13:24:34 16 lakes, including a \$475 million Great Lakes
13:24:38 17 restoration initiative, will, among other things,
13:24:42 18 work to clean up legacy contamination.
13:24:46 19 If we leave waste on site, risk leaking
13:24:50 20 radioactive waste into the Great Lakes, again, we
13:24:52 21 contradict this important effort, and we threaten
13:24:56 22 the billions and billions of dollars that local,
13:24:58 23 state, and federal governments are investing in

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13:25:02 1 protecting and restoring this precious resource.
13:25:04 2 It's critical for public health and for the
13:25:08 3 future of the Great Lakes to clean these up --
13:25:10 4 clean this up as soon as possible.
13:25:12 5 Thank you.
13:25:16 6 **MR. MURRAY:** Thank you, Brian.
13:25:18 7 **DR. TRIAY:** Thank you.
13:25:20 8 **THE FACILITATOR:** Okay. Is there anyone
13:25:22 9 else at Buffalo who would like to speak?
13:25:28 10 **MR. CIESIELSKI:** One more, unless Paul is
13:25:30 11 going to speak.
13:25:30 12 My name is Robert Ciesielski.
13:25:36 13 C-I-E-S-I-E-L-S-K-I. I'm chairman of the Sierra
13:25:40 14 Club Niagara Group. Nationally, the Sierra Club
13:25:46 15 has over 750,000 members with some 40,000 in
13:25:52 16 New York State.
13:25:54 17 We're here to ask for the immediate cleanup
13:25:56 18 of the West Valley nuclear site. We're opposed to
13:26:00 19 a phased decision-making process concerning the
13:26:04 20 site.
13:26:06 21 As we see the phased cleanup proposal, the
13:26:12 22 major action of Phase I would be to demolish the
13:26:16 23 process building and to remove the plume of

**906-4
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907-1 907-1

DOE and NYSERDA acknowledge the commentor's support for immediate cleanup of the site and opposition to the Phased Decisionmaking Alternative. The decision on the selected course of action and supporting rationale will be documented in the DOE's Record of Decision and NYSERDA's Findings Statement.

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13:26:20 1 radioactive strontium 90, which has developed
 13:26:24 2 nearby. There's additionally some talk of placing
 13:26:30 3 groundwater barriers to prevent groundwater
 13:26:32 4 contaminations.

13:26:34 5 The balance of the phased program will wait
 13:26:40 6 up to 30 years for further action. The Phase I
 13:26:44 7 cleanup would address only 1.2 percent of the total
 13:26:48 8 radioactive material on the site.

13:26:52 9 The other 99 percent of the radioactivity is
 13:26:56 10 to be addressed in Phase II, which includes the
 13:27:00 11 high-level waste tanks at both radioactive burial
 13:27:06 12 sites, the northern disposal and southern disposal
 13:27:10 13 area. All of these areas currently contain more
 13:27:14 14 than 600,000 Curies of radioactivity.

13:27:18 15 There are several serious issues with the
 13:27:20 16 phased cleanup. The first is that the site itself
 13:27:26 17 was located by a private enterprise in an area
 13:27:30 18 totally unsuitable for the storage of radioactive
 13:27:34 19 material.

13:27:34 20 The site is located on a peninsula between
 13:27:38 21 two creeks that flow into Cattaraugus Creek and
 13:27:42 22 then into Lake Erie, Niagara River, and Lake
 13:27:44 23 Ontario. Millions of people reside along the

907-2

It is estimated that DOE vitrified almost 70 percent of the long-lived radionuclides at WNYNSC during previous WVDP operations. These radionuclides are now contained in the vitrified high-level radioactive waste canisters currently in storage at WNYNSC and will be removed consistent with recommendations from the blue ribbon commission convened to address management and ultimate disposition of high-level radioactive waste and spent nuclear fuel. About another 1 percent of the remaining long-lived radionuclides would be removed during Phase 1 of the Phased Decisionmaking Alternative. A decision on the remaining approximately 30 percent of these radionuclides would be decided as soon as practicable, but no later than 10 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected (see below).

907-3

The Phased Decisionmaking Alternative included in the November 2008 Revised Draft EIS allowed for a Phase 2 decision to be made anytime after the Phase 1 decision, but no later than 30 years from issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative were to be selected. In response to public comments expressing concern about the length of time that could elapse between the Phase 1 and Phase 2 decisions, DOE and NYSERDA have reconsidered this timeframe for making a Phase 2 decision. As a result, the Phased Decisionmaking Alternative presented in this Final EIS specifies that a Phase 2 decision would be made no later than 10 years after issuance of the initial DOE Record of Decision and NYSERDA Findings Statement, if the Phased Decisionmaking Alternative is selected.

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13:27:50 1 shores of these waters and depend on them for their
 13:27:52 2 drinking water.

13:27:52 3 The site is built on soft, gravelly, porous
 13:27:56 4 soil. It's not on bedrock. The problem with the
 13:28:04 5 plume is that it's developed in an area of soft
 13:28:06 6 soil, so it's migrating quite quickly.

13:28:10 7 Underneath the site is a sole-source
 13:28:16 8 aquifer. We're aware of the strontium 90 plume.
 13:28:20 9 There's already been substantial erosion of the
 13:28:24 10 banks of the peninsula into Buttermilk Creek, one
 13:28:30 11 of the tributaries of Cattaraugus Creek. The
 13:28:32 12 recent floods have been addressed.

13:28:36 13 Of course, we must clean up the strontium 90
 13:28:38 14 plume, which is part of Phase I; however, looking
 13:28:42 15 at the age, the manner of construction, and the
 13:28:46 16 location of the West Valley nuclear site waste
 13:28:50 17 dump, the development of another plume is almost
 13:28:54 18 guaranteed.

13:28:56 19 The original processing plant was built in
 13:28:58 20 the 1960s. We've already waited 50 years for
 13:29:04 21 removal of radioactive waste from this site.
 13:29:06 22 Another 30 years is unconscionable.

13:29:10 23 Additionally, the high-level waste tanks on

**907-3
cont'd**

907-3 Please see the Issue Summary for "Concerns about Potential Contamination of Water" in Section 2 of this CRD for further discussion of this issue and DOE's and NYSERDA's response.

907-4 Chapter 3, Section 3.6.2, of this EIS was revised to add additional information regarding the effectiveness of the North Plateau Groundwater Remediation System in reducing strontium-90. The history of the North Plateau Groundwater Plume is discussed in Chapter 3, Section 3.6.2.1, and Appendix C, Section C.2.13, of this EIS. The North Plateau is the only portion of the site where groundwater moves at a relatively rapid rate; therefore the North Plateau Groundwater Plume is the most mobile contamination on the site. Groundwater movement on the South Plateau is relatively slow because of the natural and engineered barriers that limit water infiltration and lateral flow. The extensive site characterization and monitoring data do not indicate the presence of any other plumes whose position would noticeably change over the next few decades. DOE and NYSERDA are adequately managing the North Plateau Groundwater Plume waste and contamination in its current configuration and releases are minimal, as demonstrated by the results from the ongoing environmental monitoring program that are reported in the annual site environmental reports.

907-4

All of the proposed decommissioning alternatives addressed in this EIS include provisions to remove or control the spread of the North Plateau Groundwater Plume. This EIS analyzes both the short- and long-term environmental consequences of these decommissioning alternatives, including the consequences to offsite and potential onsite individuals as a result of erosion across the site and movement of the North Plateau Groundwater Plume, as well as the consequences of various management strategies for the plume.

907-5

Implementation of the Phased Decisionmaking Alternative (the Preferred Alternative) would make an important advance in the decommissioning of WNYNSC within the initial 8 years. The cleanup that would take place during Phase 1, as explained in Chapter 2, Section 2.4.3, of this EIS, would reduce or eliminate potential health or environmental impacts by removing major facilities (such as the Main Plant Process Building and lagoons). In addition, the source area for the North Plateau Groundwater Plume would be removed, thereby

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13:29:14 1 the facility are nearing 50 years of age, which is
 13:29:16 2 their usual lifespan. All of the storage
 13:29:20 3 facilities and retention areas are aging, and as
 13:29:22 4 any engineer will attest, they will be breaking
 13:29:26 5 down in the relatively harsh winters of the West
 13:29:32 6 Valley area, which is located in the Lake Erie
 13:29:34 7 snowbelt.

13:29:34 8 The problem is -- with waiting to clean up
 13:29:38 9 one plume at a time is that the expense increases
 13:29:44 10 astronomically. As I understand the economic
 13:29:46 11 estimate of the cost of the phased cleanup, the
 13:29:52 12 Phase I would cost between 1.5 and \$2 billion. To
 13:29:56 13 clean up the entire site at this time would cost
 13:30:00 14 somewhat less than \$10 billion. The cleanup of one
 13:30:04 15 or two additional plumes would cost as much as the
 13:30:08 16 full cleanup completed now.

13:30:12 17 If the radioactivity does contaminate the
 13:30:16 18 waterways and lakes, just attempting to provide
 13:30:18 19 clean water for the populations which draw their
 13:30:24 20 waters from Cattaraugus Creek and the watershed
 13:30:26 21 would be three times the cost of a current cleanup.
 13:30:30 22 The drinking water is only a portion of the
 13:30:34 23 problem. You also have the effects on recreation,

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reducing the source of radionuclides that are potential contributors to human health or environmental impacts.

- 907-5** Please see the response to Comment no. 907-2.
- 907-6** DOE recognizes and has been managing the hazard associated with the underground tanks in the Waste Tank Farm. Following removal and solidification of the majority of the Waste Tank Farm inventory, DOE has developed and is implementing actions to reduce the potential for a leak from the underground tanks. Specifically, it is working to install a tank and vault drying system designed to dry the liquid heel remaining in the waste tanks. The installation of this system and the drying of the tank inventories is part of the Interim End State or EIS starting point. In addition to drying the tanks to reduce the potential for a leak, DOE operates the groundwater pumping system that reduces groundwater seepage into the tank vaults while still maintaining a hydraulic gradient so that any liquid flow is into, rather than out of, the vault system. DOE also maintains the tank leak detection equipment located in the tank pans and vaults and regularly samples the monitoring wells surrounding the tank vaults to ensure no leakage into the groundwater. Mitigation measures would be taken if any leakage were detected. It should be noted that none of the high-level waste tanks has ever leaked. While there is no quantitative estimate of risk from the tanks while the contents are being dried, it is clear that the risks are being further reduced by tank drying.
- 907-7** Additionally, much of the residual contamination in the tanks is attached (i.e., "fixed") to metal surfaces and is not readily mobile. Chapter 2, Section 2.3.1, of this EIS, as well as text in the *Phase I Decommissioning Plan for the West Valley Demonstration Project (Phase I Decommissioning Plan)*, have been clarified to acknowledge that the liquids remaining in the tanks will be dried as a result of installation and operation of the tank and vault drying system and that this drying will be complete before any Waste Tank Farm decommissioning actions are initiated.
- 907-8** DOE and NYSERDA actively maintain all facilities in a safe configuration and would continue to do so under the Phased Decisionmaking Alternative, if it is selected.
- 907-7** Chapter 4, Section 4.2, of this EIS presents an evaluation of cost-benefit considerations related to the alternatives. Section 4.2.1 compares costs; Section 4.2.2 summarizes the population doses for different work elements from each alternative; and Section 4.2.3 discusses the cost-effectiveness of each

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13:30:36 1 fish, birds, and wildlife.

13:30:40 2 There are other reasons for a full cleanup

13:30:42 3 now. While Phase I presumes that the source of the

13:30:46 4 current plume is from the process building in its

13:30:50 5 vicinity, compared to the other possible sources of

13:30:56 6 the plume and, of course, the cost of cleaning a

13:30:58 7 second plume, whether from an error in detecting

13:31:02 8 the source of the present strontium 90 or another

13:31:04 9 plume developing within five years, would be at

13:31:08 10 least another \$2 billion.

13:31:10 11 And what happens if another plume would

13:31:12 12 develop from the radioactive waste buried some

13:31:16 13 70 feet deep below the soil, that much closer to

13:31:22 14 the aquifer?

13:31:22 15 So the common-sense solution both

13:31:24 16 economically and from many viewpoints is for the

13:31:28 17 complete cleanup versus a Band-Aid put on a plume

13:31:32 18 that's now proven to be in effect.

13:31:36 19 We realize that the Department of Energy is

13:31:40 20 monitoring a number of radioactive sites throughout

13:31:42 21 the United States. West Valley may appear to be

13:31:46 22 just one more problem to leave as is, but it is the

13:31:52 23 unique location and potential to affect millions of

decommissioning alternative. The costs stated in the comment appear to be taken from the *Synapse Report*. Please refer to the Issue Summary on "Conclusions of the *Synapse Report*" in Section 2 of this CRD for further discussion of costs and DOE's and NYSERDA's response.

- | | |
|-------|---|
| 907-9 | <p>907-8 The potential human health impacts of the alternatives evaluated in this EIS are presented in Chapter 4, Section 4.1.9 (short-term), Section 4.1.10 (long-term), and 4.1.12 (transportation). Chapter 2, Section 2.6, presents a summary to facilitate a comparison of these potential impacts on public health and safety across the alternatives. Chapter 4, Section 4.1.6, of this EIS also presents the results of an ecological risk assessment showing the projected long-term ecological impacts of the alternatives. The results of the human health and ecological impacts analysis imply that any impacts on recreation or fishing would be negligible. The Issue Summary on "Concerns about Potential Contamination of Water" discusses potential impacts on offsite and Great Lakes water users.</p> <p>907-9 The extensive WNYNSC environmental monitoring program, which is designed to detect possible movement of contamination on the site, as well as specialized studies, have concluded that the source of the North Plateau Groundwater Plume is the Main Plant Process Building.</p> |
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13:31:56 1 people with radioactive waste stored here that is
13:31:58 2 very much greater than other sites, for the control
13:32:02 3 of contamination may be made easier by climate and
13:32:08 4 distance from freshwater drinking supplies.

13:32:10 5 One other issue I'd like to address. A
13:32:12 6 number of legislators and elected officials from
13:32:14 7 Western New York and throughout New York State had
13:32:18 8 requested a full cleanup at this time. The
13:32:22 9 legislators of Cattaraugus County, where the site
13:32:26 10 is located, Erie County and Niagara County have all
13:32:30 11 passed referendums requesting full cleanups.

13:32:34 12 Along the shores of Lake Erie, resolutions
13:32:36 13 have been passed by the Town of Evans, the City of
13:32:38 14 Lackawanna, the City of Buffalo, which is a
13:32:42 15 population of some 300,000 people, the Town of
13:32:46 16 Tonawanda, the City of Tonawanda, and the Town of
13:32:48 17 Amherst.

13:32:52 18 Both United States senators from New York,
13:32:54 19 Charles Schumer and Kirsten Gillibrand, and over
13:32:58 20 half the state congressional representatives
13:33:00 21 contacted you and requested a full and immediate
13:33:02 22 cleanup.

13:33:04 23 Additionally, some three dozen state

907-10 907-10 DOE and NYSERDA note the comment.

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13:33:06 1 senators and assembly persons have made a similar
13:33:10 2 request.

13:33:10 3 So we're asking the New York State
13:33:12 4 Department of Research & Development Agency to
13:33:16 5 please reassess its position about a phased
13:33:20 6 removal.

13:33:20 7 We're making a plea to Mr. Murray, sir, to
13:33:26 8 consider the will of the people of the State of
13:33:28 9 New York. The health of millions of people is at
13:33:32 10 stake. The health of the economy of Eastern Lake
13:33:36 11 Erie, the Niagara River, and Lake Ontario are at
13:33:40 12 stake, including fish, bird life, wildlife, and
13:33:42 13 plant life.

13:33:42 14 The economic health of the areas, including
13:33:46 15 industries which use water from the Great Lakes and
13:33:48 16 the tourist industry, are all at stake.

13:33:52 17 You may be concerned now about funding at
13:33:56 18 this time of financial hardship, but by the time
13:33:58 19 the monies become acquired for the cleanup, which
13:34:04 20 as Brian mentioned, will take years, the New York
13:34:06 21 State economy will have rebounded and the monies
13:34:08 22 will be available for the project. This is a
13:34:10 23 project which must be accomplished in full.

|| 907-10
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13:34:12	1	Thank you.
13:34:14	2	MR. MURRAY: Thank you, Robert.
13:34:20	3	THE FACILITATOR: All right. Is there
13:34:22	4	anyone else in Buffalo who would wish to speak?
13:34:30	5	UNIDENTIFIED SPEAKER: No.
13:34:32	6	THE FACILITATOR: That was a no?
13:34:36	7	MS. D'ARRIGO: Linda?
13:34:36	8	THE FACILITATOR: Yes.
13:34:36	9	MS. D'ARRIGO: This is Diane. I have just
13:34:38	10	two more points I wanted to make after everyone
13:34:42	11	else has had a chance.
13:34:44	12	THE FACILITATOR: Well, someone else also
13:34:46	13	wants to make the last points.
13:34:48	14	MS. D'ARRIGO: They don't have to be last.
13:34:50	15	THE FACILITATOR: Okay. Then go right
13:34:50	16	ahead.
13:34:52	17	MS. D'ARRIGO: Oh, okay. I wanted to say
13:35:00	18	that the discount rate -- in the environmental
13:35:02	19	impact statement, there is an assumption about an
13:35:04	20	economic discount rate, and the full cost
13:35:08	21	accounting study, The Real Costs of Cleaning Up
13:35:10	22	Nuclear Wastes at West Valley makes a very strong
13:35:14	23	case.

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903-9

903-9 DOE and NYSERDA have reviewed *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Site (Synapse Report)* by Synapse Energy Economics, Inc., and have addressed this report in this CRD consistent with the Council on Environmental Quality's NEPA regulations. Please see the Issue Summaries for "Questions about Cost-Benefit Analysis" and "Conclusions of the Synapse Report" in Section 2 of this CRD for further discussion of these issues and DOE's and NYSERDA's responses.

The cost-benefit analysis presented in Chapter 4, Section 4.2, of the Revised Draft EIS was performed to support NRC's request for cost-benefit information consistent with its as low as is reasonably achievable (ALARA) analysis guidelines. This cost-benefit analysis follows the principles in the NRC ALARA guidance presented in NUREG-1757, "NRC Consolidated Decommissioning Guidance." The analysis in Section 4.2 has been revised for this Final EIS and uses several discount rates (1, 3, and 5 percent) to investigate the sensitivity of the results to a range of discount rates. The use of a single discount rate of zero for the ALARA analysis is not consistent with the NRC guidance.

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13:35:14 1 There's a whole chapter on the immorality
 13:35:18 2 and the problems with using a discount rate, and so
 13:35:22 3 we are asking that a discount rate not be used in
 13:35:26 4 making the economic calculations for the site
 13:35:28 5 cleanup.

13:35:30 6 Also, there were unfair -- there were not
 13:35:36 7 the same assumptions used in all of the different
 13:35:38 8 options so that when you're looking at it
 13:35:40 9 economically, it looks like it's more expensive to
 13:35:42 10 do the full cleanup than it really might be.

13:35:46 11 Secondly, global warming was not considered,
 13:35:50 12 was not included in the evaluations in the EIS.

13:35:52 13 And, obviously, with global warming, what we're
 13:35:54 14 seeing is a chance for more storms like the one
 13:35:58 15 that took place the weekend of August 9th in
 13:36:02 16 Western New York.

13:36:02 17 And, finally, I had thought that there would
 13:36:06 18 be someone from the Seneca Nation of Indians
 13:36:08 19 speaking, and I wanted to just convey that the
 13:36:12 20 Seneca Nation of Indians has a very strong position
 13:36:14 21 for the full cleanup of the site, as they testified
 13:36:18 22 at the hearing in Irving, New York, as it was
 13:36:20 23 presented at the press conference Tuesday in

**903-9
cont'd**

903-10 **903-10** The analysis in this EIS recognizes the potential for climate change to influence the long-term consequences of waste management. Climate changes, whether natural or influenced by human actions, could change the nature and amount of precipitation. Appendix H, Section H.3.1, of both the Revised Draft EIS and the Final EIS discusses the sensitivity of groundwater flow to changes in annual precipitation. The revised erosion prediction used for the unmitigated erosion dose analysis is based on the assumption that storms could occur more frequently than indicated by current records. This prediction includes the effects of storms of greater severity than the one that occurred in the region in August 2009. The use of this higher erosion rate associated with an elevated precipitation rate is discussed in Appendix H, Section H.2.2.1. Chapter 4, Section 4.3.5, has been revised to include a discussion of how the uncertainties about future climate change are addressed in this EIS.

903-11 DOE and NYSERDA note the comment.

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13:36:24 1 Buffalo in front of the NYSERDA offices and their
13:36:28 2 ongoing position. And I believe that they have
13:36:32 3 also done additional comments.

13:36:34 4 So I just wanted to make those three points,
13:36:36 5 and then also put it in the perspective that the
13:36:40 6 Department of Energy, just as I was walking down
13:36:42 7 the hall to come to this office, has many offices
13:36:46 8 promoting new nuclear power, new reprocessing. And
13:36:48 9 that's the waste that we're dealing with here, just
13:36:50 10 from six years of reprocessing and from about
13:36:56 11 12 years of burial.

13:36:56 12 And I think that it should be a condition of
13:37:00 13 producing any more of this waste that this
13:37:02 14 particular site be cleaned up because it is the
13:37:06 15 waste that resulted from those practices. And we
13:37:10 16 need to not pretend that that waste can be dealt
13:37:14 17 with if, in fact, we really can't deal with this
13:37:16 18 waste.

13:37:18 19 Thanks.

13:37:20 20 **THE FACILITATOR:** All right. We have one
13:37:22 21 more speaker here. That would be Jim Rauch.

13:37:26 22 Is that true, Jim?

13:37:28 23 **MR. RAUCH:** Yes. I'm just wondering if Tony

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13:37:30 1 wanted to make a comment. I guess not.
13:37:32 2 THE FACILITATOR: He previously did not.
13:37:34 3 MR. RAUCH: Okay. My name is Jim Rauch,
13:37:38 4 R-A-U-C-H. I've been involved in a number of
13:37:44 5 nuclear waste sites over the years, dating back to
13:37:46 6 the early '80s, and so I'm hoping to bring to
13:37:52 7 Mr. Murray and Ms. -- Dr. Triay the perspective of
13:37:58 8 a number of years and experience at other sites as
13:38:00 9 well.
13:38:06 10 I'd like to just maybe open my comments with
13:38:08 11 some of that experience and ask Frank Murray if
13:38:14 12 he's aware that at the Manhattan Project,
13:38:22 13 Tonawanda, New York, site, a citizen lawsuit was
13:38:28 14 basically taken out of court by an act of Congress
13:38:34 15 that took the site from DOE and gave it to Army
13:38:40 16 Corps of Engineers to implement.
13:38:46 17 MR. MURRAY: No, I was not aware.
13:38:50 18 MR. RAUCH: That happened, that transfer of
13:38:54 19 implementation but not responsibility for the
13:39:00 20 so-called FUSRAP site, Formerly Utilized Site
13:39:04 21 Remedial Action Program sites, which are actually
13:39:10 22 federal liabilities from sites that were improperly
13:39:12 23 abandoned following the Manhattan Project and early

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13:39:16 1 Atomic Energy Act, energy commission activities.
13:39:22 2 Problems at these sites has prompted the
13:39:24 3 federal Department of Energy to come back and
13:39:28 4 address issues.
13:39:30 5 For example, at Tonawanda, concentrations
13:39:32 6 way in excess of source material licensed
13:39:36 7 concentrations were left at that site in the '50s.
13:39:42 8 An oil refinery was built where the waste residues
13:39:46 9 were disposed of south of the -- east of the South
13:39:50 10 Grand Island Bridge, and it's become a massive
13:39:52 11 remediation.
13:39:54 12 The Linde Air Products Company, division of
13:40:00 13 Union Carbide, was the principal contractor in the
13:40:02 14 '40s for the Manhattan Project in this area. They
13:40:06 15 did refining of uranium ores, including very high
13:40:10 16 radium content ores from the Belgian Congo up to
13:40:14 17 65 percent uranium. Very high radium-bearing ores.
13:40:22 18 And these were refined in Tonawanda, now the
13:40:24 19 Praxair facility. It was, at that point, Union
13:40:28 20 Carbide's Linde division.
13:40:30 21 The refining of these ores produced some of
13:40:36 22 the U-235 that went into the Hiroshima bomb. Many
13:40:40 23 people in Buffalo aren't even aware of that. Or in

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13:40:44 1 New York State, for that matter.
13:40:46 2 And, yet, we have a multi -- it's going to
13:40:48 3 be hundreds of millions of dollars eventually to
13:40:50 4 clean this site up properly.
13:40:52 5 In any case, DOE did a \$6 million
13:40:58 6 environmental impact study. SAIC was involved, as
13:41:00 7 it is here at West Valley. That study came up with
13:41:06 8 cleanup criteria on the order of 60 picoCuries per
13:41:10 9 gram for uranium.
13:41:16 10 The Army Corps, after Congress transferred
13:41:18 11 the implementation of FUSRAP, but once again, not
13:41:24 12 the legal responsibility, which remains with DOE,
13:41:28 13 to Army Corps -- basically what that did, Frank,
13:41:32 14 was it took the AEA regulatory regime out of the
13:41:36 15 picture.
13:41:38 16 Congress first just transferred the program
13:41:40 17 in the first fiscal year, which was 1997, if my
13:41:46 18 memory's correct. And then in the following year,
13:41:50 19 they gave the further direction to use CERCLA for
13:41:56 20 the decision process -- the cleanup decision
13:41:58 21 process.
13:42:00 22 The use of CERCLA basically took our court
13:42:04 23 case out of court, because under CERCLA, the SARA

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13:42:08 1 Amendments of 1986, citizens can't sue until a
13:42:14 2 cleanup is implemented and completed.
13:42:16 3 So we had sued for the Atomic Energy Act --
13:42:18 4 when I say we, I'm talking about a group of Praxair
13:42:22 5 employees and local citizens called F.A.C.T.S., For
13:42:26 6 A Clean Tonawanda Sites.
13:42:28 7 I'm curious if you ever heard of this
13:42:30 8 organization.
13:42:32 9 **MR. MURRAY:** No.
13:42:36 10 **MR. RAUCH:** We had a pro bono attorney who
13:42:40 11 came to us from the Mid-Atlantic States Legal
13:42:42 12 Foundation, and he brought the case. And he also
13:42:44 13 worked for Westlaw as an editor. A very thorough
13:42:50 14 researcher. He had a lot of research capabilities.
13:42:54 15 He brought what I thought was quite a good
13:42:56 16 case, calling for NRC regulation to be applicable
13:43:02 17 under UMTRCA Title II at Tonawanda because
13:43:08 18 Tonawanda had a state license for this material.
13:43:14 19 The amendment was put on prior to the
13:43:16 20 enactment of UMTRCA, the Uranium Mill Tailing
13:43:20 21 Radiation Control Act, in 1980. The license
13:43:24 22 amendment for Linde, who had other radioactive
13:43:30 23 materials on site, for testing of wells, et cetera,

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13:43:34 1 sources.
13:43:34 2 That the uranium material had contaminated
13:43:36 3 the site and was illegally left at high
13:43:40 4 concentrations following ADC's accessing and
13:43:44 5 withdrawal from the property in the early '50s,
13:43:50 6 that those concentrations were subject to
13:43:54 7 regulation.
13:43:56 8 And so what happened was they were regulated
13:43:58 9 under the New York State agreement with NRC.
13:44:02 10 New York State was an agreement state in 1962, and
13:44:06 11 under that agreement, New York State was approached
13:44:10 12 by the DOE predecessor at that point -- or I guess
13:44:18 13 it was DOE -- 1974, right? It was DOE.
13:44:24 14 And they had a meeting at Linde, and the
13:44:28 15 state was involved, and the outcome of that meeting
13:44:32 16 was that they would put a license amendment
13:44:38 17 covering the uranium materials that were
13:44:40 18 contaminating that facility. It was placed, and
13:44:44 19 then it was removed illegally by DOL Commissioner
13:44:48 20 Sweeney in 1996.
13:44:52 21 Our organization wrote a letter to
13:44:54 22 Commissioner Sweeney protesting the removal. It
13:45:00 23 was Rita Aldrich was then in charge of that

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13:45:04 1 license, and she terminated it illegally.
13:45:06 2 State Code Rule 38 required that site to be
13:45:08 3 properly decontaminated under the state code rule.
13:45:12 4 It was not. The license was terminated, and DOE
13:45:16 5 was allowed basically to do what they wanted to do
13:45:18 6 with that site. The state totally abdicated its
13:45:22 7 responsibility at Tonawanda.
13:45:26 8 Are you aware of that?
13:45:28 9 **MR. MURRAY:** No, Jim.
13:45:34 10 **MR. RAUCH:** Do you think you should be?
13:45:38 11 **MR. MURRAY:** Well, I guess my own response,
13:45:40 12 Jim, is you're talking about events, as important
13:45:42 13 as they are, that go back 15, 20, and in some
cases, almost 40 years.
13:45:46 14 **MR. RAUCH:** I'm sorry. They go back to the
13:45:50 15 '90s. The lawsuit that our organization brought
13:45:52 16 was in 1998, two years after the initial West
13:45:56 17 Valley draft, 1996, we had a site-wide draft here
13:46:02 18 at West Valley.
13:46:06 19 I'm trying to shed a little experience here,
13:46:10 20 Mr. Murray. Sorry to call you Frank, but, you
13:46:14 21 know, Mr. Murray, it's --
13:46:18 22 **MR. MURRAY:** It's all right.
13:46:18 23

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13:46:20 1 **MR. RAUCH:** I'm trying to give you a little
13:46:22 2 bit of experience, where experienced citizens are
13:46:28 3 coming from here.

13:46:28 4 The state failed miserably at Tonawanda.
13:46:32 5 Army Corps implemented -- is implementing a ROD at
13:46:36 6 Tonawanda that was subject of national scrutiny.
13:46:40 7 3,000 picoCuries per gram surface -- I'm sorry --
13:46:46 8 600 picoCuries per gram surface, 3,000 picoCuries
13:46:52 9 per gram subsurface. That's their cleanup level.

13:46:56 10 The appropriate cleanup level for Tonawanda
13:46:58 11 is 10 picoCuries per gram as determined by the NRC
13:47:04 12 in a 1981 branch technical position paper that has
13:47:08 13 been applied at other sites referred to as surplus
13:47:12 14 SDMP sites.

13:47:16 15 Because Tonawanda was a big site and the
13:47:18 16 Department of Energy secretary at the time UMTRCA
13:47:22 17 was passed did not want the site included in
13:47:26 18 Title I, which were these western mill tailing
13:47:28 19 sites that were horribly contaminated where people
13:47:34 20 were getting lung cancer from residues being used
13:47:36 21 in building materials, the energy secretary didn't
13:47:42 22 think Tonawanda deserved to be in Title I, so it
13:47:44 23 wasn't addressed quickly.

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13:47:46 1 It, therefore, became subject to Title II,
13:47:48 2 which meant it's subject to NRC regulations,
13:47:52 3 including this branch technical position, which is
13:47:54 4 what we were arguing for, and which should be
13:47:56 5 appropriately applied at Tonawanda because the area
13:48:00 6 at Tonawanda is choice riverfront in the case of
13:48:04 7 the Ashland property.

13:48:06 8 In the case of Linde, it's prime -- it was
13:48:08 9 originally prime agricultural land, and over the
13:48:12 10 course of the hazard period for these wastes, well
13:48:16 11 over 500,000 years, the site's going to see
13:48:22 12 intensive reuse, and it's likely going to see
13:48:26 13 agriculture use again.

13:48:26 14 So NRC rightly says, for a resident farmer,
13:48:30 15 these uranium mill tailing sites need to be cleaned
13:48:34 16 up to 10 picoCuries per gram. We didn't get that.
13:48:36 17 The state failed us.

13:48:38 18 Enough said about Tonawanda.

13:48:38 19 We've got a similar problem at Lewiston.
13:48:42 20 We've got residues from Tonawanda and from
13:48:46 21 Mallinckrodt in St. Louis during the Manhattan
13:48:52 22 Project years. These same Belgian Congo K-65 ores
13:48:56 23 were processed in St. Louis. There's 2,000 Curies

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13:49:02 1 of radium 226 out at the Niagara Falls storage
13:49:06 2 site. This is a federally-owned property owned by
13:49:08 3 DOE.

13:49:08 4 Army Corps has been given the task to decide
13:49:12 5 what to do with it, but it's DOE's responsibility.

13:49:16 6 They've abdicated it. An MOU, basically, DOE
13:49:20 7 decided to let Army Corps go ahead and do their
13:49:22 8 thing, and then maybe afterwards, they'll try and
13:49:24 9 figure out if it's enough. Well, if it isn't
13:49:28 10 enough in Tonawanda, it's not likely to be enough
13:49:30 11 at Lewiston.

13:49:32 12 There's a tumulus there in the '80s. A
13:49:36 13 real -- to my way of thinking, it was the first
13:49:40 14 time I ever saw NEPA so thoroughly trashed.

13:49:46 15 A draft EIS was released while interim
13:49:50 16 actions were going on. These K-65 residues were in
13:49:54 17 a silo following their deposition there in the
13:49:58 18 '50s. They were slurried into the basement of a
13:50:00 19 building, and other wastes that had escaped down
13:50:02 20 the drainage-ways from the site that were just
13:50:06 21 littered and left on the surface were scraped back
13:50:08 22 up and put in this tumulus.

13:50:10 23 The tumulus with -- an interim cap was

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13:50:14 1 placed over this tumulus, and the object of the
13:50:18 2 environmental impact statement was whether to put a
13:50:20 3 final clay cap over the tumulus. This was all done
13:50:24 4 under interim actions.

13:50:26 5 We're seeing the same type of thing at West
13:50:28 6 Valley. Interim actions are occurring now that are
13:50:30 7 geared toward putting the site into a long-term,
13:50:34 8 onsite management mode. They're illegally being
13:50:40 9 done, in my opinion.

13:50:44 10 So now we have, at Tonawanda, you know, this
13:50:48 11 tumulus. There's a news report recently that, you
13:50:50 12 know, there's leaks. Army Corps is denying that
13:50:52 13 it's coming from the tumulus.

13:50:56 14 The bottom of this tumulus doesn't meet the
13:50:58 15 NRC standards 10 CFR 40, Appendix A criteria, which
13:51:08 16 call for the site must meet 200 years minimum that
13:51:12 17 it doesn't contaminate environmental media,
13:51:14 18 preferably a thousand years.

13:51:16 19 It's an unlined -- it's a native soil
13:51:18 20 bottomed landfill. The sides are engineered clay,
13:51:22 21 and the cap is engineered clay, but the bottom
13:51:26 22 isn't. It's full of discontinuities. The local
13:51:28 23 soils are. It's likely leaking.

908-1

908-1

Chapter 2, Section 2.3.1, of this EIS addresses the activities that would be completed before the starting point of the EIS, called the Interim End State. As stated in that section, these various closure, decontamination, removal, disposal, and other activities have been evaluated in prior NEPA reviews.

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13:51:34 1 It's half a million dollars a year to
13:51:36 2 maintain that site, according to Bob Seay of DOE.
13:51:40 3 It would cost a couple hundred million to have
13:51:44 4 cleaned it up properly in the '80s. Do the math.
13:51:48 5 **MS. D'ARRIGO:** This is Diane in Washington.
13:51:50 6 I wanted to just -- I don't want to cut off
13:51:54 7 anything, but I really would like to hear from
13:51:58 8 Dr. Triay and Frank Murray at some point what it's
13:52:00 9 going to take to get a full cleanup decision at
13:52:04 10 West Valley. And we only have about 12 minutes, so
13:52:06 11 let's gauge that into how much more time we talk
13:52:10 12 about the other sites --
13:52:10 13 **MR. RAUCH:** Thank you.
13:52:12 14 **MS. D'ARRIGO:** -- which are very important
13:52:14 15 and instructive.
13:52:14 16 **MR. RAUCH:** Thank you, Diane, for orienting
13:52:18 17 me to the time. I wasn't really paying attention.
13:52:20 18 Because I would like to focus on West Valley in the
13:52:22 19 remaining time here.
13:52:24 20 **MS. D'ARRIGO:** But we also want to hear from
13:52:26 21 them too, so you don't get all 12.
13:52:28 22 **MR. RAUCH:** Well, they don't appear to have
13:52:30 23 much to say, Diane. In other words, they're not

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13:52:34 1 familiar with what's happened at other sites, and
 13:52:34 2 they should be, and that's why I give this
 13:52:40 3 background.

13:52:40 4 A lot of money is being spent at these other
 13:52:42 5 sites and has been spent, and it hasn't been spent
 13:52:46 6 effectively.

13:52:48 7 For example, at West Valley, this plume that
 13:52:50 8 people talk about, strontium plume, this occurred
 13:52:54 9 during operations when NFS, the operator, had a
 13:52:58 10 spill in one of the buildings, soaked into the
 13:53:02 11 concrete. Had it been addressed then properly by
 13:53:04 12 the state regulator or, you know, the NRC, that
 13:53:08 13 would have been remediated at less than a million
 13:53:12 14 dollars cost. But instead, it was left there, like
 13:53:14 15 a sponge, to soak out into the groundwater, that
 13:53:18 16 north plateau.

13:53:20 17 Now the draft impact statement, which delays
 13:53:24 18 implementation, is talking about \$2 billion to
 13:53:28 19 clean up 200 Curies of strontium. It's ridiculous.
 13:53:32 20 It's a total failure of waste management.

13:53:34 21 The FCAS, full cost accounting study, says
 13:53:38 22 it will cost 1.5 billion if they start more
 13:53:42 23 quickly. So we're looking here at -- we're looking

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The costs stated in the comment appear to be taken from the *Synapse Report*. Please refer to the Issue Summary on "Conclusions of the *Synapse Report*" in Section 2 of this CRD for further discussion of costs and DOE's and NYSERDA's response.

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13:53:46 1 here at, you know, the more we delay, the more it's
13:53:50 2 going to cost.
13:53:52 3 MR. CIESIELSKI: Excuse me, Ms. Robinson.
13:53:52 4 THE FACILITATOR: Yes.
13:53:58 5 MR. CIESIELSKI: Could we hear from
13:53:58 6 Mr. Murray, perhaps? I appreciate this gentleman's
13:54:02 7 comments also, but could we hear, as Diane
13:54:04 8 mentioned, a little bit from Mr. Murray and some of
13:54:06 9 the others, please?
13:54:22 10 THE FACILITATOR: Are you willing to --
13:54:24 11 MR. RAUCH: No, I'm not. I'd like to
13:54:26 12 continue with what I have to say. I'd like to
13:54:28 13 briefly talk about this recent August weather
13:54:30 14 event.
13:54:30 15 MR. CIESIELSKI: Sir?
13:54:32 16 MR. RAUCH: Yes.
13:54:32 17 MR. CIESIELSKI: Sir, I appreciate your
13:54:32 18 comments, but --
13:54:32 19 DR. TRIAY: Let's go ahead and continue, you
13:54:36 20 know, for a moment. We will make it a point, you
13:54:42 21 know, for Frank and I to have some time, you know,
13:54:44 22 to discuss, you know, so let's let the speaker --
13:54:52 23 Frank, do you have a very hard deadline at 2 p.m.?

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13:54:58	1	MR. MURRAY:	No. I'm here, Secretary.
13:55:02	2	DR. TRIAY:	Okay. Very good. So maybe --
13:55:06	3		maybe another five to ten minutes so that we can
13:55:10	4		understand, you know, the comments, and then Frank
13:55:12	5		and I will address the stakeholders.
13:55:20	6	MR. RAUCH:	Thank you.
13:55:22	7		I'd like to address this August severe
13:55:26	8		storms event that happened on the 8th, 9th, and
13:55:28	9		10th of August that affected West Valley. It
13:55:30	10		affected the whole Cattaraugus Creek watershed,
13:55:34	11		basically.
13:55:34	12		My father was a weatherman in World War II,
13:55:36	13		stationed on Gander, Newfoundland, and so I have
13:55:40	14		great interest in weather.
13:55:40	15		The -- I'll just read a brief statement here
13:55:44	16		about what happened in this weather event.
13:55:48	17		The three-day August 8th to 10th
13:55:50	18		thunderstorm event in the Cattaraugus County
13:55:56	19		watershed was an excursionary rainfall event for
13:55:58	20		the local area. It created a new high flow record
13:56:00	21		for Cattaraugus Creek. It was preceded by
13:56:02	22		approximately two inches of rainfall on 8/5, the
13:56:08	23		prior Wednesday, which left area soils well-wetted,

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908-3 908-3

Storms of the magnitude of the August 2009 storm in Cattaraugus County have been accounted for in the erosion analysis in Appendix F of this EIS. The analysis in the EIS recognizes the potential for climate change to influence the long-term consequences of waste management. Climate changes, whether natural or influenced by human actions, could change the nature and amount of precipitation. Appendix H, Section H.3.1, of both the Revised Draft EIS and the Final EIS discusses the sensitivity of groundwater flow to changes in annual precipitation. The revised erosion prediction used for the unmitigated erosion dose analysis is based on the assumption that storms could occur more frequently than indicated by current records. This prediction includes the effects of storms of greater severity than the one that occurred in the region in August 2009. The use of this higher erosion rate associated with an elevated precipitation rate is discussed in Appendix H, Section H.2.2.1. Chapter 4, Section 4.3.5, has been revised to include a discussion of how the uncertainties about future climate change are addressed in this EIS.

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13:56:10 1 if not saturated. A very important point that
13:56:12 2 shouldn't be ignored.
13:56:14 3 Doppler radar data collected by the NWS
13:56:18 4 service Buffalo office indicated that approximately
13:56:20 5 four inches of rain fell in the West Valley area
13:56:22 6 during the 8/9, Sunday, 24-hour period. This was
13:56:26 7 from an initial conversation with Steve McLaughlin
13:56:30 8 from Buffalo NWS.
13:56:32 9 Doppler radar rainfall estimates can be in
13:56:36 10 error by as much as 50 percent or more. This
13:56:40 11 according to Dave Zaff, NWS Buffalo.
13:56:42 12 Fortunately, a conscientious NWS spotter in
13:56:46 13 Perrysburg, 20 miles to the west of the western
13:56:48 14 Cattaraugus Creek corridor, an area where the
13:56:52 15 greatest rainfall intensity occurred during this
13:56:54 16 three-day event, using an NWS manual rain gauge,
13:56:58 17 determined that 5.9 inches of rain fell in a single
13:57:00 18 hour-and-a-half period Sunday evening, and a total
13:57:02 19 of 7.27 inches fell for the 24-hour period Sunday.
13:57:08 20 The maximum intensity was estimated by NWS
13:57:10 21 Buffalo to be approximately five inches per hour.
13:57:12 22 This rate was derived from the ground truth
13:57:16 23 measurements by the spotter in Perrysburg, which

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13:57:18 1 enabled the Buffalo NWS to adjust its radar image
13:57:22 2 rates and totals by approximately less one inch.
13:57:24 3 This is a direct quote from NWS: Over the
13:57:26 4 course of a couple of hours late Sunday evening,
13:57:30 5 roughly between 10:30 p.m. and 12:30 a.m., some of
13:57:32 6 the highest short-term rainfall totals ever
13:57:34 7 recorded in Western New York occurred, with as much
13:57:38 8 as five inches per hour near Perrysburg and
13:57:42 9 Silver Creek, end quote.

13:57:44 10 Buffalo office meteorologist Tom Niziol was
13:57:48 11 reported in the Buffalo News to say that such
13:57:50 12 intensity is more typical of hurricane areas in the
13:57:52 13 southern states. This was clearly an excursionary
13:57:56 14 rainfall event for this area, likely indicative of
13:57:58 15 climate change and worse events to come.

13:58:02 16 I have some images here that you probably
13:58:06 17 can't see, but this is the Buffalo office's storm
13:58:10 18 total, and it shows one gray rectangle, about five
13:58:18 19 miles west of the Perrysburg spotter's location,
13:58:24 20 where possibly just under nine inches fell.

13:58:28 21 This is using the spotter's ground truthing
13:58:32 22 with a plus one inch adjustment. This silver area
13:58:38 23 is up to eight inches. Anywhere between 6 and

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13:58:42 1 8 inches. So that area centered on the Silver
13:58:46 2 Creek reservoir area is where the heaviest
13:58:48 3 precipitation in this event occurred.

13:58:52 4 THE FACILITATOR: Would you be willing to
13:58:56 5 have this offer that you have just been given to
13:58:58 6 speak at another time?

13:59:00 7 MR. RAUCH: Well, no. I'd just like to
13:59:02 8 finish this. It will be a couple more minutes.

13:59:04 9 THE FACILITATOR: Well, then she will need
13:59:06 10 to leave probably.

13:59:06 11 MR. RAUCH: Well, I just want to --

13:59:06 12 DR. TRIAY: It's all right. Give him a
13:59:08 13 couple more minutes.

13:59:08 14 Go ahead, sir. Please put the pictures on
13:59:12 15 the record, you know, so that my staff can PDF
13:59:16 16 those images to me and to Frank.

13:59:18 17 MR. RAUCH: Yes, I will.

13:59:18 18 DR. TRIAY: Go ahead.

13:59:20 19 MR. RAUCH: Thank you.

13:59:20 20 While this was not the maximum short-term
13:59:24 21 total event possible in the area -- for example, in
13:59:26 22 1947, 20 inches fell in nearby Erie, Pennsylvania,
13:59:32 23 in a 24-hour period. I don't have any intensity

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13:59:36 1 data on that event. 24 -- 20 inches in 24 hours
13:59:42 2 could be less than an inch an hour.
13:59:44 3 Intensity is very important here because
13:59:46 4 once the ground is saturated, you know, virtually
13:59:50 5 all that falls runs off, and that's why we saw a
13:59:52 6 five-foot surge in Cattaraugus Creek. A five-foot
13:59:58 7 wall of water basically came down Cattaraugus Creek
14:00:00 8 and caused all that damage downstream in the low
14:00:04 9 land areas, Gowanda, et cetera.

14:00:08 10 The latest EIS for the West Valley site,
14:00:12 11 approved for release by both NYSERDA and DOE,
14:00:16 12 assumes continuation of previous climate conditions
14:00:20 13 and does not consider or attempt to evaluate
14:00:22 14 impacts resulting from such climate change. It is
14:00:26 15 simply foolish to ignore climate change, especially
14:00:30 16 its excursionary aspects.

14:00:32 17 It is precisely these excursionary storm
14:00:36 18 events that will hasten the inevitable breaching of
14:00:38 19 the burial grounds and other facilities at West
14:00:42 20 Valley. The 150- to 300-year worst-case breaching
14:00:48 21 predictions may turn out, in fact, to be
14:00:50 22 conservative if we see accelerating climate change.

14:00:54 23 I have another graphic here that I will

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14:00:56 1 enter into the record. This was the Buffalo
14:01:00 2 weather service -- by the way, both Dr. Triay and
14:01:04 3 Mr. Murray, I refer you to the Buffalo Weather
14:01:08 4 Office Web site. There are two links there, two
14:01:12 5 summaries of the two events that occurred on
14:01:16 6 Sunday. There was an early storm event in the
14:01:18 7 afternoon and an evening storm event.

14:01:20 8 The early -- the early event included a term
14:01:28 9 I hadn't even been familiar with, derecho,
14:01:34 10 D-E-R-E-C-H-O, which is a bowed-front thunderstorm
14:01:38 11 line that has high winds. In fact, the area
14:01:40 12 experienced 70-plus miles an hour winds.

14:01:44 13 So this is, you know, much more damaging,
14:01:46 14 according to the NWS Buffalo, than a tornado, which
14:01:52 15 may affect a very limited swath. This was a wide
14:01:54 16 path of area that was affected by very high winds,
14:01:58 17 straight-line winds.

14:01:58 18 This image was an aerial satellite photo
14:02:00 19 taken three days after the floods.

14:02:04 20 And just to finish, there are two summaries
14:02:08 21 on the Buffalo Weather Office. One focused on the
14:02:12 22 flooding that resulted from the Sunday storms, and
14:02:14 23 the other focused on the whole event, or the

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14:02:16 1 afternoon event. You should look at both. Both of
14:02:18 2 you should look at those.

14:02:20 3 I ask you both to look at those and read
14:02:22 4 them thoroughly. It's an excellent job the Buffalo
14:02:24 5 Weather Office has done in summarizing what brought
14:02:28 6 these -- what brought these storms together and the
14:02:34 7 impacts.

14:02:36 8 This is an aerial photo that shows turbidity
14:02:38 9 plumes from the sediment load being carried out of
14:02:44 10 the mouth of Cattaraugus Creek, down the east shore
14:02:46 11 of Lake Erie, through the Niagara River, which is
14:02:50 12 really a strait, and out into Lake Erie. And they
14:02:54 13 are on the Buffalo Weather Office Web site. I ask
14:02:58 14 that you look carefully at these.

14:03:00 15 I also would just like to say that the
14:03:04 16 weather data was not collected at Buffalo -- I'm
14:03:08 17 sorry -- at West Valley on site because of power
14:03:12 18 outages and insufficient backup.

14:03:16 19 And I have here a \$23 rain gauge that I'd
14:03:18 20 like to present to Paul Bembia of NYSERDA, because
14:03:24 21 ultimately, NYSERDA is responsible for the site.
14:03:28 22 The State of New York is ultimately responsible for
14:03:30 23 the site and for collecting the data necessary for

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14:03:34 1 a proper environmental assessment, an EIS.
14:03:38 2 So the Perrysburg spotter, using a CoCoRaHS
14:03:42 3 device very similar to this that's used by
14:03:46 4 volunteer spotters across the country -- the cost
14:03:48 5 of this is \$23 -- she gathered the intensity data
14:03:52 6 that corrected the Doppler data and gave us a
14:03:56 7 better ground truthing of the actual event's
14:04:00 8 intensity.

14:04:00 9 Here is a \$23 CoCoRaHS device. I ask that
14:04:04 10 NYSERDA deploy it and that NYSERDA have dedicated
14:04:10 11 personnel to take such readings.

14:04:12 12 The failure of the DOE contractor, WVES, to
14:04:18 13 collect storm data has happened in the past. This
14:04:22 14 isn't the first time. I have e-mail from the --
14:04:28 15 from a WVES person responsible for this complaining
14:04:32 16 about power outages killing -- quote, killing his
14:04:34 17 Met data.

14:04:38 18 This is inexcusable for a site that needs
14:04:40 19 this data to make the decision.

14:04:42 20 Thank you.

14:04:46 21 DR. TRIAY: Well, let me thank you and thank
14:04:52 22 all of the speakers for your excellent comments.

14:04:56 23 Frank, myself, and the rest of the

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14:04:58 1 Department of Energy staff and NYSERDA staff, as
14:05:02 2 well as the regulators, we will work very closely
14:05:06 3 to make sure that every single one of your comments
14:05:10 4 and the great points that you have expressed get
14:05:12 5 taken into account as we move forward.

14:05:18 6 For my part, some of the recommendations
14:05:20 7 that have been made, the information that I need to
14:05:24 8 personally be briefed on and understand, I assure
14:05:28 9 you, you know, that I will do so.

14:05:32 10 And in moving forward, as you know, we're in
14:05:34 11 the middle of a comment period, you know, for this
14:05:38 12 environmental impact statement, but we assure you
14:05:42 13 that we will --

14:05:42 14 **MR. RAUCH:** Doctor, I would --

14:05:44 15 **DR. TRIAY:** Yeah, go ahead.

14:05:46 16 **MR. RAUCH:** I would just like to clarify.
14:05:48 17 Sorry for the interruption. I apologize. If I
14:05:50 18 didn't make clear, I would like to just make clear
14:05:52 19 that these comments are made on behalf of myself
14:05:54 20 and the F.A.C.T.S. organization, not the West
14:05:58 21 Valley Coalition. Thank you.

14:06:02 22 **DR. TRIAY:** Very good. Thank you very much.

14:06:04 23 So anyhow, so in moving forward, we will

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14:06:08 1 take your comments extremely seriously. We will
14:06:12 2 understand all this information that you have
14:06:14 3 presented and have already put on the record. We
14:06:18 4 will ask for clarification where we need it.

14:06:20 5 And you have our commitment, you know, that
14:06:24 6 NYSERDA, the Department of Energy, and the other
14:06:26 7 regulators involved will work very closely to
14:06:30 8 address the issues that you have expressed here
14:06:30 9 today.

14:06:36 10 Frank?

14:06:36 11 **MR. MURRAY:** Thank you, Secretary.

14:06:40 12 Again, I echo what the secretary said with
14:06:42 13 respect to where we are in the decision-making
14:06:44 14 process. I'm still learning what I can and cannot
14:06:50 15 say at this stage of the process, but let me make
14:06:54 16 the folks out in Western New York a couple of
14:06:56 17 observations and the principles that will guide us
14:07:00 18 in the decision-making process.

14:07:02 19 One, we as an institution and I personally
14:07:04 20 believe very strongly that all cleanup decisions
14:07:08 21 for West Valley must be scientifically based and
14:07:12 22 supported by definitive environmental analysis.

14:07:16 23 It is no secret that we've identified, as

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14:07:20 1 the citizen groups have identified, a number of
14:07:22 2 issues in the current DEIS which we do not believe
14:07:26 3 are adequately addressed, and we'll continue to
14:07:28 4 engage in discussions with DOE with regard to that.
14:07:30 5 The second point -- and this came up in the
14:07:34 6 context of some of the comments made today -- we
14:07:36 7 believe, again, both institutionally and
14:07:40 8 personally, that public involvement in all phases
14:07:42 9 of this process cleanup going forward is essential.
14:07:46 10 And we would look with great scepticism on any sort
14:07:50 11 of arrangement that did not provide for full public
14:07:54 12 involvement in evaluating various cleanup
14:07:58 13 strategies. And I suspect that the folks at the
14:08:00 14 DOE feel exactly the same way.
14:08:04 15 I would make the observation that whether
14:08:06 16 one goes forward with the phased decontamination
14:08:12 17 cleanup process or the full cleanup process, as
14:08:12 18 many of you have advocated, it seems to me
14:08:18 19 essential that we move forward as quickly as
14:08:20 20 possible in addressing those problems that have
14:08:22 21 been identified, such as the MMP -- excuse me --
14:08:28 22 MPPB, the vitrification building, the five
14:08:30 23 contaminated waste treatment lagoons, and the

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14:08:32 1 source of the north plateau groundwater plume.
14:08:36 2 Whether we eventually embrace a full cleanup
14:08:40 3 or a phased approach to the cleanup, it seems to me
14:08:44 4 that's work we should try to move forward on as
14:08:48 5 quickly as possible.
14:08:50 6 I have heard a lot of comments about --
14:08:52 7 again, we heard today many references to phrases I
14:08:58 8 believe that are contained in the DEIS that suggest
14:09:00 9 that if we do a Doppler phase approach to the
14:09:04 10 cleanup, that the folks in Western New York would
14:09:06 11 have to wait up to 30 years to know what we would
14:09:08 12 do after the first stage of cleanup.
14:09:12 13 If I were living in Western New York, I
14:09:14 14 would not find that an acceptable alternative --
14:09:20 15 acceptable frame. I want to be careful here.
14:09:22 16 I would like to see us -- again, we share
14:09:26 17 this with the folks at DOE -- we would like to see
14:09:28 18 the decision timetable speeded up so that the folks
14:09:32 19 in Western New York, folks here in the state don't
14:09:36 20 have to wait up to 30 years to find out the fate of
14:09:40 21 the West Valley facility.
14:09:42 22 I hope I said that in such a way that I'm
14:09:44 23 not prejudging where we come out in the final

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14:09:46 1 analysis. I'm still learning a lot, and I'd
14:09:50 2 characterize what I just said right now as
14:09:52 3 observation at this point in the process.

14:09:54 4 However, the first two I would think are
14:09:56 5 guiding principles, and we need to be guided here
14:09:58 6 in the decision-making process by both sound
14:10:00 7 science and defensible environmental analysis, and
14:10:04 8 that public involvement in the process all the way
14:10:06 9 through is not only integral but essential to sound
14:10:12 10 decisions.

14:10:12 11 And, again, thank you all for taking time
14:10:14 12 out of your busy schedules, particularly on a
14:10:18 13 Friday afternoon before a holiday, to spend some
14:10:20 14 time educating both myself and the secretary
14:10:22 15 regarding your concerns.

14:10:26 16 **THE FACILITATOR:** Thank you.

14:10:28 17 **DR. TRIAY:** Thank you again to all. And I
14:10:30 18 believe that the two guiding principles that
14:10:36 19 NYSERDA has put forth are something that DOE not
14:10:40 20 only can embrace but will embrace in moving
14:10:44 21 forward.

14:10:44 22 So we don't have any -- please have no doubt
14:10:52 23 that we want your input at every stage of this

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14:10:54 1 cleanup and that we want to -- especially, you
14:10:58 2 know, when it comes to erosion, when it comes to
14:11:02 3 these flooding situations that you have explained,
14:11:04 4 that we want the most sound science to be able to
14:11:08 5 make decisions moving forward.

14:11:10 6 **MS. D'ARRIGO:** Can I ask one more thing?

14:11:12 7 **DR. TRIAY:** Sure.

14:11:12 8 **MS. D'ARRIGO:** This is Diane. This is why I
14:11:16 9 wanted a little time after you spoke so that we
14:11:16 10 could perhaps respond.

14:11:18 11 I've heard Bryan Bower say that the full
14:11:22 12 cleanup option is not scientifically justified by
14:11:28 13 the existing EIS.

14:11:30 14 So if what I'm hearing from the two agency
14:11:34 15 heads is that we must make our decisions
14:11:36 16 scientifically based and there's a perception that
14:11:40 17 the full cleanup option is not scientifically
14:11:42 18 based, it sounds to me like a justification for
14:11:46 19 continuing with the phased decision. And it also
14:11:48 20 sounds like maybe you might want to shorten the
14:11:50 21 number of years from 30 to maybe 15 or ten and say,
14:11:56 22 we're being more reasonable.

14:11:56 23 But our response to that right off is that

903-12 903-12 DOE and NYSERDA believe that the impact analyses of a full range of alternatives in this EIS are reasonable and scientifically based. Please see the response to Comment no. 903-5 and the Issue Summary for the "Modified Phased Decisionmaking Alternative" in Section 2 of this CRD, which addresses the duration of Phase 1 of this alternative. The Issue Summary for "Conclusions of the *Synapse Report*" discusses the full cost accounting study referred to in the comment and provides DOE's and NYSERDA's response.

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14:11:58 1 no amount of delay is acceptable. We've already
14:12:04 2 waited long enough. We've got migration. And
14:12:08 3 there's going to need to be research and study no
14:12:10 4 matter what option is chosen. And we would push
14:12:12 5 for a scientifically-based cleanup plan to be
14:12:18 6 developed for the entire site and look closely at
14:12:20 7 the full cost accounting study done by the
14:12:24 8 independent scientists that do justify the full
14:12:26 9 cleanup option.

14:12:30 10 **DR. TRIAY:** We completely appreciate that,
14:12:32 11 and just to be clear, the reason that Frank and I
14:12:38 12 are understanding personally your concerns is
14:12:42 13 because we want to make sure that we understand
14:12:44 14 from your point of view the way forward.

14:12:52 15 **THE FACILITATOR:** Okay. I believe we have
14:12:54 16 completed this meeting. I appreciate everybody's
14:12:56 17 participation, especially getting along with
14:12:58 18 technology. I think we did just fine in that
14:13:02 19 regard, so let us break up the meeting, I suppose.

14:13:02 20 (Proceedings concluded at 2:13 p.m.)

14:13:02 21

14:13:02 22 * * *

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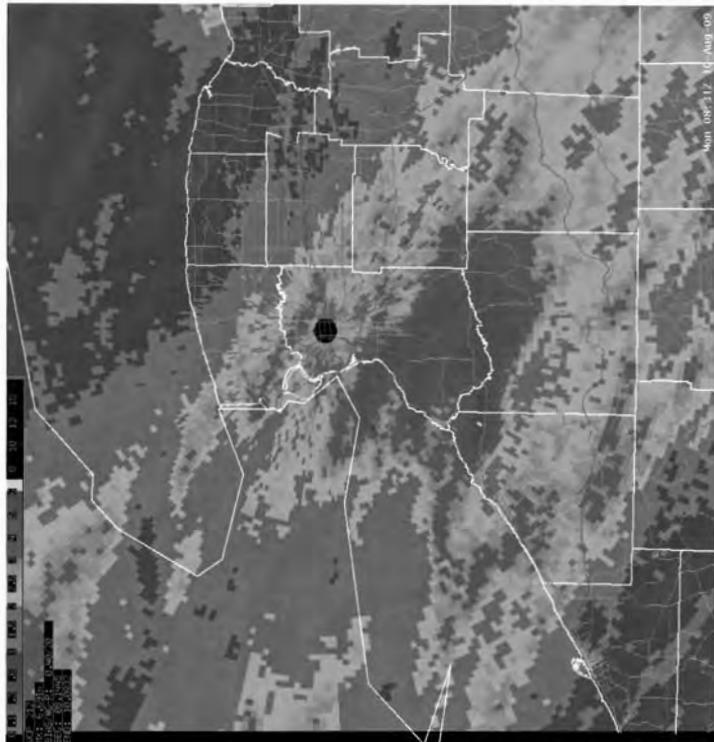
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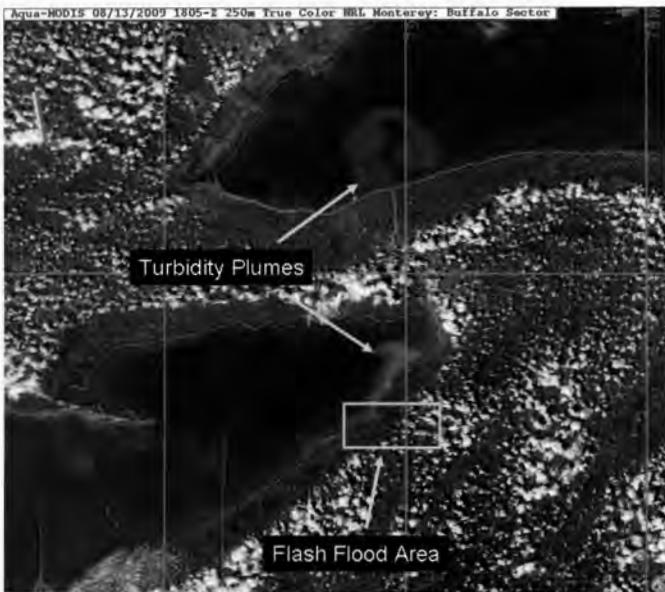
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MODIS full color image at 2:05PM EDT August 13, 2009, 3 days after the floods. clearly evident in the lighter green colors on the east end of Lake Erie as well as Niagara River where it empties into Lake Ontario.

http://www.crh.noaa.gov/buf/srvwx/web_090810_Flashflood/plume3.png

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Key Points on West Valley Nuclear Site Cleanup Plan

A Summary Critique of the Draft Environmental Impact Statement

The Department of Energy (DOE) and NYS Energy Research & Development Authority's (NYSERDA) Draft Environmental Impact Statement (DEIS) focused on four cleanup options for the West Valley nuclear waste site: 1) Sitewide Removal; 2) Sitewide Close-In Place; 3) Phased Decision Making; and 4) No Action. In the DEIS, the agencies recommend adoption of the Phased Decision Making Alternative to remediate an estimated 1% of the site's radioactivity in the short-term and delay cleanup decisions for the remaining waste for up to 30 years. DOE also submitted a Decommissioning Plan on the preferred alternative to the Nuclear Regulatory Commission.

This memo briefly covers the following key testimony points.

- 1) **Support Sitewide Removal Alternative: A Waste Excavation Cleanup.**
- 2) **Oppose Leaving Buried Waste On Site: It is Expensive and a Serious Environmental and Public Health Risk.**
- 3) **Oppose Phased Decision-Making (Agency Preferred Alternative): Delays Cleanup of an Estimated 99% of the Site's Radioactivity for up to 30 Years.**
- 4) **Revisions Needed on Flawed Draft Environmental Impact Statement (DEIS)**

1) Support Sitewide Removal Alternative

The Sitewide Removal is the only Alternative that achieves the following objectives.

- Provides a complete and comprehensive cleanup of the entire site through excavation of radioactive and toxic waste, including any off-site contamination.
- Provides a permanent and safe solution that removes radioactive waste from a site with serious erosion problems, earthquake hazards, and a sole source aquifer.
- Prevents any catastrophic releases which could cause pollute community drinking water supplies, Lakes Erie and Ontario, harm public health and cost billions of dollars.
- Significantly lowers health risks to nearby communities, leaving behind a contamination-free area after 64 years
- Provides the most cost-effective approach over the long term according to a recent study. An independent, state-funded study, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site*, revealed leaving buried waste at the site is both high risk and expensive while a waste excavation cleanup presents the least risk to a large population and the lowest cost. Over 1000 years, waste excavation costs \$9.9 billion while onsite buried waste costs \$13 billion, and \$27 billion if a catastrophic release occurred.

2) Oppose Leaving Buried Waste On Site: It is Expensive and a Serious Environmental and Public Health Risk.

- Erosion is a powerful and fast moving force at the West Valley site as it sits on a geologically young landscape which is undergoing a relatively rapid rate of erosion. Michael P. Wilson, Ph.D., SUNY Fredonia Professor of Geosciences found in the FCA study that "Nuclear wastes, radioactive for tens of thousands of years, will be

903-12 903-13 This attachment is identical to the attachment to Commentor no. 245. Please refer to that document for DOE's and NYSERDA's responses.

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addresses only 1.2% of the total radioactivity on the site. Decisions on a majority of the waste, or 99% of the radioactivity, will be addressed in Phase 2 including high-level waste tanks, and both radioactive waste burial areas (NDA and SDA), or approximately 600,000 curies. Public participation on the Phase 2 decision making process is not explained.

■ **The potential environmental and health impacts of leaving 99% of the radioactivity on site for another 30 years was not studied.** For instance, the high-level waste tanks, with 320,000 curies of radioactivity, are nearing the end of their useful life (50 years) and any leaks could seriously pollute the sole source aquifer. The Decommissioning Plan (DP) claims that the high-level waste tanks will be empty at the start of Phase I, yet neither the DEIS or DP state how and when the tanks would be actually emptied.

■ **Given the past record of decades of delay, the two phased approach with a lengthy 30 year timetable is not responsive or responsible in addressing dangerous contamination.** The site sits on top of a sole source aquifer and has been plagued with problems, such as radioactive contaminated groundwater, and radioactivity from the site has been found as far away as the shore at the juncture of the Niagara River and Lake Ontario demonstrating a potential for the leaking site to contaminate drinking water supplies. For instance, the buried high-level waste area (NDA) has been undergoing measures to limit water flow, and a large amount of high-level radioactive waste is buried in deep holes 50 to 70 feet deep which pose a significant risk of leaks to the sole source aquifer.

■ **The public was provided with almost no information on the data collection under Phase I, which is essential to determining the extent of future decontamination work in Phase 2.** If data collection is inadequate, a safe cleanup in Phase 2 is less likely. There is no plan for future public participation on Phase 2 activities.

4) Revisions Needed on Flawed DEIS.

■ **Information Needed on Monitoring and Institutional Controls.** The DEIS includes cleanup options where long-lasting radioactive waste is left buried on site, yet there is a serious lack of information on the monitoring and maintenance of engineering and institutional controls to ensure radioactive waste is safely contained. Funds and procedures should also be described that will be in place to respond immediately to any toxic releases. This information is absolutely critical to evaluate whether or not the site can be safely maintained if waste is left buried on site. **The full monitoring, maintenance and institutional control program needs to be described in detail under each alternative.**

■ **Public Disclosure is Inadequate.** There appears to be a major discrepancy in the two documents; the DEIS states that DOE will be involved in both Phase I & 2 of the Phased Decision Making Alternative. But, the Decommissioning Plan appears to describe a situation where DOE could leave the site and any responsibility at the end of Phase I in approximately 30 years. If this were the case, it could leave New York State with the responsibility for cleaning up an estimated 99% of the site's radioactivity. This would obviously be a major change, yet there are only a few references in the Plan. **It is**

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Drinking Water Costs & Public Health Impacts

The study evaluated the following public health and social costs and impacts: treating contaminated drinking water, lost land revenues and radiation doses and cancer deaths.

Drinking Water Costs

The site poses a significant danger to people who live along Buttermilk and Cattaraugus Creek, the residents of Buffalo and the large population along the shores of Lakes Erie and Ontario. These populations are endangered by the risk of a radionuclide leak. We estimated water replacement costs if there were a catastrophic release of radionuclides approximately 500 years from the time of closure expected in the Onsite Buried Waste option. The costs are substantial in the first year—at over \$272.7 million dollars—and then decline to \$27.5 million per year to maintain the Buffalo and Erie County Water Authority's water treatment plants. This is only a case example, and does not include a substantial population along Lakes Erie and Ontario who could also be impacted.

Exposures to Radioactive Pollution and Projected Cancer Deaths

We evaluated the public's exposure to West Valley radionuclides from both a rapid leak and a continuous leak scenario. We found that the radioactive waste buried at the site poses an unacceptable risk to the populations in the surrounding area, including those that draw their water from Lake Erie. Potential radiation doses from various exposure pathways could lead to enormous doses and illnesses. The doses to people living downstream and those drinking contaminated surface water will exceed standards, leading to adverse health effects as well as unnecessary deaths from cancer. Leaving these wastes in the ground presents a significant burden and public health threat to future generations as the waste will be radioactive for thousands to millions of years.

Scenario 1: Over 800,000 Lake Erie Water Users Exposed to Substantial Radiation

If just one percent (1%) of radioactivity leaked from the site in a particular year, we calculated that a large population of over 800,000 Lake Erie water users would be exposed to substantial radiation, and that people downstream along the Buttermilk and Cattaraugus Creeks would be exposed to doses well in excess of federal and state standards.

Scenario 2: One Plant's Polluted Water Could Result in 334 Cancer Deaths

If just 1% of the radioactivity leaks, starting in year 100 to 1,000 years into the future, it is expected that 400,000 people receiving Lake Erie water from the Sturgeon Point Water Treatment Plant would be exposed to up to 334,320 person-rems,* resulting in the cancer deaths of up to 334 people. *This means that from 100 to 1,000 years into the future it is expected that up to 334 of the people receiving their water from one Treatment Plant are expected to die of cancer as a result of their exposure to contaminated water from Lake Erie.* The number of cancer fatalities would be greater if it included the entire population in the United States and Canada which receive their drinking water from Lake Erie, although it would be spread throughout a larger total population.

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Valuing the Future:

The Viability of Institutional Controls Over 1,000 Years

The report investigated the risks of losing institutional controls for the Onsite Buried Waste approach and examined issues surrounding very long periods of time: continuity of governments, language, ethical issues with leaving an enormous hazard to future generations and valuing future costs.

Institutional Controls Unreliable Over the Long-Term

Wastes that would be left at the site are extremely long-lived. For example, one of the longest lasting radionuclides, thorium-232, has a half-life of 14 billion years. If the buried waste is left at West Valley, government would need to monitor the waste for thousands of years; such monitoring and control activities are called institutional controls. However, controls are not foolproof and have failed at many sites resulting in the need for additional remediation. Controls failed multiple times at West Valley, including the overflowing trenches in the State Disposal Area. *These incidents are not unique to the site and such failures speak to the unreliability of controls as a long term strategy for preventing harm to people.* Understanding that there is no guaranteed place or technology to truly isolate long-lasting radioactive waste, these failures suggest that the real solution is to first minimize additional production of nuclear waste from atomic power, weapons and the nuclear fuel chain.

1,000 Year Continuity in Government and Language Improbable

Maintaining institutional controls at a nuclear waste site first requires a continuity of government and language. A fundamental obstacle to maintenance of institutional controls is the improbability of thousand-year continuity in either government or language. A thousand years is a long time for any government to endure, let alone institutional controls at a particular waste site. It is of course impossible to look forward in time and see the world of 3008; as an alternative, we can look the other way, at the world of a thousand years ago. In 1008, Vikings were attacking England; the Norman Conquest was still decades away. Of the governments and nations that exist today, only Iceland has an unbroken lineage spanning the last thousand years. If the government of any country (other than Iceland) had made a commitment in 1008 to protect an important site for a thousand years, there is no guarantee that anyone would still know about that commitment today.

A thousand years is also a long time in the history of language—long enough for a language to change beyond recognition. While something called the English language has existed for centuries, it changes fast enough so that modern readers cannot understand words written a thousand years ago. The English literature classic that dates back a thousand years, *Beowulf*, is no longer readable, and has to be translated into modern English in order for anyone but a few specialists to understand it. A warning from the author of *Beowulf* written in the English of roughly 1000 years ago would be incomprehensible to all but a handful of experts today. In 3008, when the English of this report is as ancient as the language of *Beowulf* is today, will casual readers and potential intruders on a waste site be able to read our warning signs? There is no reason to assume that the Department of Energy could adequately address safety and communication issues at West Valley for the Onsite Buried Waste option.

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History of West Valley

Thirty miles south of Buffalo, New York, the West Valley nuclear waste site sits on a plateau slowly but certainly eroding away with time. In the 1960's, when Nuclear Fuel Services began reprocessing nuclear fuels, the potential dangers were rapidly outweighed by the enthusiasm for nuclear reprocessing and the economic prosperity it promised. After nearly a half century, there is no doubt that this decision was a mistake for the region's safety and health. The six years in which this facility reprocessed nuclear fuel have been dramatically overshadowed by decades of fierce debate about the cleanup of the site.

Radioactive Contamination

The site is in the Town of Ashford in Cattaraugus County, NY. At least 250 of the 3,345 acres have been heavily contaminated with nuclear and hazardous wastes. By today's standards, a nuclear facility would not be allowed on land as erosion-prone as the West Valley site. *The site is burdened with vast amounts of toxic and radioactive wastes, many of which will remain radioactive for tens of thousands of years, some for millions of years.* The list of contaminated wastes reads like a laundry list of dangerous elements: cesium-137, plutonium-238, -239, -240, and -241, uranium-238, iodine-129, tritium, and thorium-234, amongst others. These elements, if ingested or inhaled, lodge in human tissues, fat, or bone and are known to be responsible for leukemias and cancers at very low doses. There is no known safe level of exposure to radioactive chemicals—each exposure increases the likelihood that cancer and other health effects may occur.

*The site has been plagued with problems from the start, including leakage of radioactive and toxic waste in several areas, such as a significant underground plume of radioactive elements spreading through groundwater. Waste from the site has been found as far away as the sediment along the shore at the juncture of the Niagara River and Lake Ontario.**

Site Created by Country's Failed Commercial Reprocessing Facility

The site is the nation's only venture into commercial reprocessing of irradiated nuclear fuel. The Nuclear Fuel Services (NFS) facility was a Plutonium Uranium Extraction process plant and the process included storing spent fuel assemblies; chopping the assembly rods; dissolving the uranium, plutonium, and radioactive products in acid; separating and storing the radioactive wastes, and separating uranium nitrate from plutonium nitrate. In 1959, New York became the only state to accept a federally-initiated plan to form a public-private partnership to reprocess nuclear material and in 1961, the state purchased the land in the Town of Ashford, for what would become the Western New York Nuclear Services Center owned by NFS, a company that continues to this day. The facility operated for six years (1966-1972) and reprocessed about 640 metric tons of irradiated fuel. In 1972, reprocessing ceased and changes in safety and environmental regulations required NFS to undergo a complete licensing review. In 1976, NFS determined it would cost over \$600 million to comply and decided to leave the site, passing on responsibility for all wastes to the government.

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Severe Erosion Problems at West Valley Site

The report found that erosion is a powerful and fast moving force at the West Valley site. West Valley sits on a geologically young landscape which is undergoing a relatively rapid rate of erosion. Within the next few hundred years, erosion is estimated to create damaging gullies. This region could expect to have hundreds of new gullies form with erosion removing the plateau surface in the next few thousand years. Wastes that would be left at the site are extremely long-lived and radioactive for thousands to millions of years. It is easy to imagine that if erosion is uncontrolled, gullies will penetrate a buried waste area.

Predicted Erosion Breaches Buried Waste Areas

Unless erosion and other institutional controls are rigorously maintained, we predict that the disposal areas could be breached in less than 1000 years and as quickly as 150 years from now without any controls in place. This breach would be a catastrophic failure, leaking high concentrations of radioactive waste into the watershed and then quickly into Lake Erie. Since severe erosion problems are estimated to occur at the site within hundreds of years, clearly, the long-term disposal of buried waste at the site is not an environmentally sound approach. Currently, there is a large plume of contaminated groundwater moving towards Buttermilk Creek. However, even more worrisome for the downstream population and the priceless resource of the Great Lakes is the potential for streams near the site to undercut or expose buried wastes. The following is a summary of the erosion problems that were investigated in the report.

Estimated 500 Gullies in 10,000 Years

There are approximately an estimated 64 gullies and streams per square mile in this region. Over the roughly 15,000 year period that this landscape has evolved, we estimate that the density of gullies doubles every 3,000 years. This region could expect to have over 500 new gullies, or stream splits, form in the next 10,000 years. It is easy to imagine that if erosion is uncontrolled, at least one of these gullies will penetrate a buried waste area. In fact, it will take far fewer than 500 gullies and far less time for the entire plateau surface to erode.

20 % of Plateau Surface Estimated to Erode in 10,000 Years

Using a bench-scale (30 x 50 ft) experiment as a model for the evolution of the site landscape, we estimated that within 10,000 years, 20% of the plateau surfaces that are un-gullied today will have eroded away across the lower Buttermilk watershed. There are various reasons why this is a conservative rate. First, Buttermilk Creek tributary gullies drop more rapidly and over more waterfalls than in the bench-scale model which lead to faster erosion rates in reality. Deforestation and impervious surface runoff increase erosion rates, and we expect climate change to result in more severe storm events, when the most severe erosion occurs.

Erosion Will Create Damaging Gullies Within a Few Hundred Years

A 1993 document concluded from 35 years of repetitive air photos that the head cut on Franks Creek advanced an average of 7.5 feet per year and on Erdman Brook advanced 10.5 feet per year. From these rates, we would expect that within several hundred years, this erosion will have opened new areas on the adjacent plateaus to damaging gullies. At the rate of plateau-edge removal anticipated for Franks Creek, we

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List of Proposed Nuclear Power Reactors and Irradiated Fuel Reprocessing Facilities in the US

1) States with Proposed Nuclear Reprocessing Facilities

Proposed Reprocessing for Global Nuclear Energy Partnership (GNEP) in ID, IL, NM, OH, SC, TN and WA.

Idaho

- EnergySolutions, LLC, Atomic City
- Regional Development Alliance, Inc., Idaho National Laboratory

Illinois

- General Electric Company, Morris

Kentucky

- Paducah Uranium Plant Asset Utilization, Inc., Paducah Gaseous Diffusion Plant

New Mexico

- Eddy Lea Energy Alliance, Hobbs
- EnergySolutions, LLC, Roswell

Ohio

- Piketon Initiative for Nuclear Independence, Portsmouth Gaseous Diffusion Plant

South Carolina

- EnergySolutions, LLC, Barnwell
- Economic Development Partnership of Aiken and Edgefield Counties, Savannah River National Laboratory

Tennessee

- Community Reuse Organization of E. Tennessee, Oak Ridge National Laboratory

Washington

- Tri-City Industrial Development Council/Columbia Basin Consulting Group, Hanford Site

2) States with Proposed Nuclear Power Reactors

Combined License Applications Received by the US Nuclear Regulatory Commission in AL, FL, GA, LA, MD, MI, MS, MO, NY, NC, PA, SC, TX and VA.

Alabama

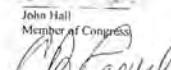
- Belkfonte Nuclear Station Units 3 and 4 AP1000 Tennessee Valley Authority (TVA)

Florida

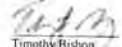
- Levy County Units 1 and 2 AP1000 Progress Energy Florida, Inc. (PEF)

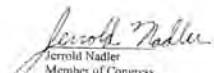
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Comments from the West Valley, New York, Video Teleconference (September 4, 2009)


John Hall
Member of Congress
CB Engel
Charles B. Engel
Member of Congress


Eliot L. Engel
Member of Congress


Timothy Bishop
Member of Congress


Jerrold Nadler
Member of Congress


Carolyn Maloney
Member of Congress


Joseph Crowley
Member of Congress


Paul Tonko
Member of Congress

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Comments from the West Valley, New York, Video Teleconference (September 4, 2009)



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SECTION 4

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4.0 REFERENCES

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