

### C.3.1.2 Nez Perce Tribe Correspondence

**To:** Mr. Patrick Sobotta, Nez Perce Tribe  
**From:** Mr. James E. Rasmussen, U.S. Department of Energy  
**Date:** December 9, 2002  
**Subject:** Tank Closure Environmental Impact Statement (EIS)

**To:** Mr. Patrick Sobotta, Nez Perce Tribe  
**From:** Ms. Mary Beth Burandt, U.S. Department of Energy  
**Date:** March 12, 2003  
**Subject:** Response to Comments on the Proposed Scope of the "Environmental Impact Statement (EIS) for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks at the Hanford Site"

**To:** Mr. Patrick Sobotta, Mr. Mike Sobotta, Ms. Vera Sonneck, and Dr. Rico Cruz, Nez Perce Tribe  
**From:** Ms. Annabelle Rodriguez, U.S. Department of Energy  
**Date:** August 12, 2003  
**Subject:** Notification of a Section 106 Cultural Resources Review (see page C-173)

**To:** Mr. Patrick Sobotta, Nez Perce Tribe  
**From:** Mr. Joel Hebdon, U.S. Department of Energy  
**Date:** September 3, 2003  
**Subject:** Cultural Resources Review (CRR) of "Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks (Tank Closure) Environmental Impact Statement" (HCRC# 2003-200-044)

**To:** Mr. Gabriel Bohnee, Nez Perce Tribe  
**From:** Mr. Roy J. Schepens, U.S. Department of Energy  
**Date:** March 8, 2005  
**Subject:** Response to Technical Requirements Document for "Tank Closure (TC) Environmental Impact Statement (EIS)" Analysis

**To:** Mr. Gabriel Bohnee, Nez Perce Tribe  
**From:** Mr. Roy J. Schepens, U.S. Department of Energy  
**Date:** March 7, 2006  
**Subject:** *Tank Closure and Waste Management Environmental Impact Statement (EIS)* Meetings with the Nez Perce Tribe and the U.S. Department of Energy, Office of River Protection (ORP)

**To:** Mr. Gabriel Bohnee, Nez Perce Tribe  
**From:** Mr. Roy J. Schepens, U.S. Department of Energy  
**Date:** January 16, 2007  
**Subject:** Quarterly Meetings with the Nez Perce Tribe and the U.S. Department of Energy, Office of River Protection (ORP)

**To:** Nez Perce Tribe Representatives  
**From:** Ms. Ellen Prendergast-Kennedy, Pacific Northwest National Laboratory  
**Date:** March 27, 2007  
**Subject:** Invitation to Participate in Cultural Resources Survey for Portions of the Area C Borrow Pit Area and the 600 Area for the *Tank Closure and Solid Waste EIS/NHPA 106 Compliance* (see page C-196)

**To:** Mr. Gabriel Bohnee, Nez Perce Tribe  
**From:** Mr. Doug S. Shoop, U.S. Department of Energy  
**Date:** April 6, 2007  
**Subject:** Transmittal of Area of Potential Effect (APE) for *Tank Closure and Waste Management Environmental Impact Statement (TC & WM EIS) for the Hanford Site, Richland, Washington*

**To:** Mr. Gabriel Bohnee, Nez Perce Tribe  
**From:** Ms. Shirley J. Olinger, U.S. Department of Energy  
**Date:** July 20, 2007  
**Subject:** *Tank Closure and Waste Management (TC & WM) Meetings with the Nez Perce Tribe and the U.S. Department of Energy, Office of River Protection (ORP)*

**To:** Nez Perce Tribe Representatives  
**From:** Ms. Annabelle Rodriguez, U.S. Department of Energy  
**Date:** September 5, 2007  
**Subject:** *Draft Tank Closure and Waste Management Environmental Impact Statement (TC & WM EIS) Memorandum of Agreement*

**To:** Mr. Gabriel Bohnee, Nez Perce Tribe  
**From:** Ms. Shirley J. Olinger, U.S. Department of Energy  
**Date:** November 7, 2007  
**Subject:** *Tank Closure and Waste Management (TC & WM) Environmental Impact Statement (EIS) Cultural Information*

**To:** Nez Perce Tribe Representatives  
**From:** Ms. Ellen Prendergast-Kennedy, Pacific Northwest National Laboratory  
**Date:** May 29, 2008  
**Subject:** Notification of a Section 106 Cultural Resources Review

**To:** Mr. Gabriel Bohnee, Nez Perce Tribe  
**From:** Ms. Shirley J. Olinger, U.S. Department of Energy  
**Date:** June 4, 2008  
**Subject:** Environmental Impact Statement Groundwater Modeling Progress

**To:** Mr. Samuel N. Penney, Nez Perce Tribe  
**From:** Ms. Shirley J. Olinger, U.S. Department of Energy  
**Date:** February 3, 2010  
**Subject:** *Draft Tank Closure and Waste Management Environmental Impact Statement (TC & WM EIS) Consultation*

*Tank Closure and Waste Management Environmental Impact Statement for the  
Hanford Site, Richland, Washington*

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**NEZ PERCE TRIBE – December 9, 2002**



**U.S. Department of Energy**  
**OFFICE OF RIVER PROTECTION**

P.O. Box 450  
Richland, Washington 99352

02-ED-017

**DEC 09 2002**

Mr. Patrick Sobotta, Director  
Environmental Restoration/  
Waste Management Program  
Nez Perce Tribe  
P.O. Box 365  
Lapwai, Idaho 83540

Dear Mr. Sobotta:

**TANK CLOSURE ENVIRONMENTAL IMPACT STATEMENT (EIS)**

The U.S. Department of Energy, Office of River Protection (ORP), intends to start work within the next two years that will culminate in the closure of all the high-level waste storage tanks at Hanford by 2028. This will be a huge endeavor with potentially significant impacts on the environment and people of this area.

ORP is required to prepare an EIS before starting this work. An EIS will give us the information we need from the Tribal governments, regulators, elected officials, Hanford stakeholders, and the public to make effective decisions about tank closure.

ORP is in the early stages of preparing this EIS. Presently we are performing pre-scoping work, and this is the best time to listen to the views of Tribal governments, stakeholders, and regulators about how the EIS should be designed and what it should cover. ORP wants to hear from you before we issue a Notice of Intent and conduct public scoping meetings early next year.

Per our phone call, we are currently planning to meet with you on December 10, 2002, at 11:00 a.m. to discuss current planning for the EIS and, mainly, to listen to you talk about issues and concerns you have about tank closure. I acknowledge that you and your staff are busy this time of year. We propose to take only an hour of your time. We very much want to talk with you about this important project.

If you have any questions, please contact me, or Mary Beth Burandt, of my staff, (509) 373-9160.

Sincerely,

James E. Rasmussen, Director  
Environmental Division

ED:GMN

cc: J. L. Hanson, INNOV  
K. V. Clarke, RL  
P. F. X. Dunigan, Jr., RL

**NEZ PERCE TRIBE – March 12, 2003**



**U.S. Department of Energy  
Office of River Protection**

P.O. Box 450  
Richland, Washington 99352

**MAR 12 2003**

03-ORP-022

Mr. Patrick Sobotta, Director  
Environmental Restoration and  
Waste Management Program  
Nez Perce Tribe  
P.O. Box 365  
Lapwai, Idaho 83540-0365

Dear Mr. Sobotta:

**RESPONSE TO COMMENTS ON THE PROPOSED SCOPE OF THE ENVIRONMENTAL IMPACT STATEMENT (EIS) FOR RETRIEVAL, TREATMENT, AND DISPOSAL OF TANK WASTE AND CLOSURE OF SINGLE-SHELL TANKS AT THE HANFORD SITE**

Reference: Nez Perce Tribe letter from P. Sobotta to Mary Beth Burandt, ORP, "Notice of Intent to Prepare an Environmental Impact Statement for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks at the Hanford Site, Richland, Washington," dated February 12, 2003. (*Attached*)\*

Thank you for your comments contained in the above referenced letter and your continued interest and involvement in Hanford's tank waste cleanup.

The U.S. Department of Energy's Office of River Protection (ORP) has developed a primer to help Tribal Nations, stakeholders, and others gain a better understanding of the history of the Hanford Site and National Environmental Policy Act of 1969 process. The primer explains in more detail the immediate issues that ORP is facing and why we need to make decisional changes to the project. I have enclosed a copy of the draft primer (Enclosure 1), as well as a copy of the presentation (Enclosure 2) used at the public scoping meetings for your information and use.

With the completion of the public comment period on March 10, 2003, our next task will be to develop the draft EIS, which we will provide to the Tribal Nations, stakeholders, and others in the fall of 2003. In that document, you will be able to see how scoping comments were addressed. We will also provide periodic updates to organizations in the region, and we would be pleased to return to Lapwai at your convenience to provide an update on the development of the draft EIS.

\* Nez Perce Tribe letter dated February 12, 2003, not reproduced here. See page C-326 for a copy of the letter.

**NEZ PERCE TRIBE – March 12, 2003 (continued)**

Mr. Patrick Sobotta  
03-ORP-022

- 2 -

MAR 12 2003

Thank you again for the comments and your continued participation in the tank waste cleanup project at Hanford. If you have any questions or concerns, please feel free to contact me at (509) 373-9160, or Erik Olds, Office of Communications, (509) 372-8656.

Sincerely,

*Mary Beth Burandt*

Mary Beth Burandt  
NEPA Document Manager

ORP:TEO

Enclosures (2)

cc w/o encls:

M. A. Wilson, Ecology  
N. Ceto, EPA  
K. Niles, OOE  
K. V. Clarke, RL

cc w/encls:

D. Stock, Columbia Energy  
B. Herrington, SAIC

| \* Enclosures not included.

**NEZ PERCE TRIBE – September 3, 2003**



03-RCA-0377

**Department of Energy**  
Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

**SEP 3 2003**

Mr. Patrick Sobotta, Director  
Environmental Restoration/  
Waste Management Program  
Nez Perce Tribe  
P.O. Box 365  
Lapwai, Idaho 83540

Dear Mr. Sobotta:

CULTURAL RESOURCES REVIEW (CRR) OF RETRIEVAL, TREATMENT, AND  
DISPOSAL OF TANK WASTE AND CLOSURE OF SINGLE-SHELL TANKS (TANK  
CLOSURE) ENVIRONMENTAL IMPACT STATEMENT (HCRC# 2003-200-044)

Enclosed is a CRR completed by the U.S. Department of Energy, Richland Operations Office's (RL) Hanford Cultural Resources Laboratory (HCRL) on August 28, 2003, for the subject project located on the Hanford Site, Richland, Washington. The results of the records and literature review conducted by HCRL staff are described in the enclosed CRR. RL concurs with the findings as stated in the enclosed CRR. Pursuant to 36CFR 800.2 (4), we are providing documentation to support these findings and to involve your office as a consulting party in the NHPA Section 106 Review process. If you have any questions, please contact Annabelle L. Rodriguez, of my staff, on (509) 372-0277.

Sincerely,

Joel Hebdon, Director  
Regulatory Compliance and Analysis Division

RCA:ALR

Enclosure\*

cc w/o encl:  
E. L. Prendergast, PNNL

cc w/encl:  
V. Sonneck, NPT

\* Enclosure is not reproduced here. See September 3, 2003, letter to the Confederated Tribes and Bands of the Yakama Nation on page C-179, which includes the same enclosure.

*Tank Closure and Waste Management Environmental Impact Statement for the  
Hanford Site, Richland, Washington*

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**NEZ PERCE TRIBE – March 8, 2005**



**U.S. Department of Energy**

**OFFICE OF ENVIRONMENTAL MANAGEMENT**

P.O. Box 450, MSIN H6-60  
Richland, Washington 99352

05-ED-012

**MAR 08 2005**

Mr. Gabriel Bohnee  
Nez Perce Tribe  
Environmental Restoration  
and Waste Management  
P.O. Box 365  
Lapwai, Idaho 83540

Dear Mr. Bohnee:

**RESPONSE TO TECHNICAL REQUIREMENTS DOCUMENT FOR TANK CLOSURE (TC)  
ENVIRONMENTAL IMPACT STATEMENT (EIS) ANALYSIS**

Reference: Nez Perce letter from G. Bohnee to R. J. Schepens, ORP, "Technical Requirements Document for Tank Closure Environmental Impact Statement Vadose Zone and Groundwater Revised Analysis," dated February 10, 2005.

Thank you for meeting with Zack Smith of my staff in Dayton, Washington, on February 25, 2005, to establish the framework for communications associated with the TC EIS development process. As you are aware, we have attempted to meet at least quarterly on the TC EIS to communicate activity progress. I want to reassure you that my expectation has always been open communication. Your continued support of the EIS process is extremely important to the U.S. Department of Energy (DOE).

The Technical Requirement Document is an evolving effort. There have been several changes to the document since the one reviewed with you in December 2004 (Reference) and we would like the opportunity to review those changes with you. The document is now a Technical Guidance Document (TGD). Also, the TGD recognizes that different analyses being done on site to support efforts such as development of an EIS, a closure plan risk assessment, or a performance assessment may differ depending on the objectives of the document.

The following is provided in response to some of your specific technical concerns associated with the EIS:

- The Richard's equation is the fundamental governing relation expressing the conservation of mass and the movement of moisture under potential gradients. We have addressed the issues you raise specific to the 200 Area; and
- The Easterly Groundwater flow field was chosen for specific reasons in the TC EIS, as well as how we are going to address modeling uncertainties related to changes in conditions such as land use, precipitation, and infiltration which could influence the results.

**NEZ PERCE TRIBE – March 8, 2005 (continued)**

Mr. Gabriel Bohnee -2-  
05-ED-012

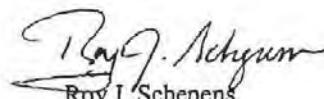
MAR 08 2005

We would like to review the technical issues you raised in more detail, as well as share the revised TGD with you on March 21, 2005, as scheduled with your staff.

DOE is committed to working with you and your staff as we have in the past, recognizing development of an EIS is an iterative process and therefore continued communication is essential.

If you have questions, you may contact Mary Beth Burandt, Environmental Division, (509) 373-9160 or Zack Smith, Acting Assistant Manager, Tank Farms Project, (509) 372-9735.

Sincerely,



Roy J. Schepens  
Manager

ED:MEB

cc: S. Harris, CTUIR  
S. L. Dahl, Ecology  
M. A. Wilson, Ecology  
N. Ceto, EPA  
K. Niles, Oregon DOE  
K. V. Clarke, RL  
R. Jim, YN

*Tank Closure and Waste Management Environmental Impact Statement for the  
Hanford Site, Richland, Washington*

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**NEZ PERCE TRIBE – March 7, 2006**



**U.S. Department of Energy**

**OFFICE OF RIVER PROTECTION**

P.O. Box 450, MSIN H6-60  
Richland, Washington 99352

**MAR 07 2006**

06-ORP-012

Mr. Gabriel Bohnee, Director  
Environmental Restoration/  
Waste Management Program  
Nez Perce Tribe  
P.O. Box 365  
Lapwai, Idaho 83540

Dear Mr. Bohnee:

**TANK CLOSURE AND WASTE MANAGEMENT ENVIRONMENTAL IMPACT  
STATEMENT (EIS) MEETINGS WITH THE NEZ PERCE TRIBE AND THE U.S.  
DEPARTMENT OF ENERGY, OFFICE OF RIVER PROTECTION (ORP)**

This letter is to follow up on conversations ORP has had with you and your staff regarding the Tank Closure and Waste Management EIS. ORP would like to thank you for your interest in our offer to have a more focused meeting to discuss this issue, and looks forward to hearing from you or your staff to schedule a time for this meeting. Please note the TC & WM EIS comment period ends April 10, 2006, and ORP would like to meet with you prior to that date and with enough time to facilitate required staffing of comments.

Enclosed is a copy of the Scoping meeting schedule and contact information for your use. If you have any questions or comments, please contact me, or your staff may contact Mary Beth Burandt, (509) 373-9160.

Sincerely,

Roy J. Schepens, Manager  
Office of River Protection

ORP:SDS

Enclosure\*

cc w/o enclosure:  
K. S. Ballinger, Nuvotec  
K. V. Clarke, RL

\* Enclosure is not reproduced here. See March 7, 2006, letter to the Confederated Tribes and Bands of the Yakama Nation on page C-191, which includes the same enclosure.

**NEZ PERCE TRIBE – January 16, 2007**



**U.S. Department of Energy**  
**Office of River Protection**  
P.O. Box 450, MSIN H6-60  
Richland, Washington 99352

07-ORP-004

JAN 16 2007

Mr. Gabriel Bohnee, Director  
Environmental Restoration/  
Waste Management Program  
Nez Perce Tribe  
P.O. Box 365  
Lapwai, Idaho 83540

Dear Mr. Bohnee

**QUARTERLY MEETINGS WITH THE NEZ PERCE TRIBE AND THE U.S. DEPARTMENT OF ENERGY, OFFICE OF RIVER PROTECTION (ORP)**

ORP would like to meet with members of the Nez Perce Tribe and its technical staff on a quarterly basis. We believe a quarterly meeting with the Nez Perce Tribe will better facilitate an ongoing dialogue on issues of interest to both of our organizations and support our mutual cleanup goals.

We look forward to scheduling meetings with you and would like to suggest the following timeframes for the quarterly meetings:

February (week of the 12<sup>th</sup>)  
May (week of the 14<sup>th</sup>)  
August (week of the 13<sup>th</sup>)  
November (week of the 12<sup>th</sup>)

Please let us know if dates within the suggested timeframes work with you and your staff's schedules. ORP staff will work with you and your staff to put together an agenda prior to each meeting.

If you have any questions or comments, please contact me, or your staff may contact Erik Olds, (509) 372-8656.

Sincerely,

A handwritten signature in black ink, appearing to read "Roy J. Schepens".

Roy J. Schepens, Manager  
Office of River Protection

ORP:TEO

cc: K. S. Ballinger, INNOV  
K. V. Clarke, RL

*Tank Closure and Waste Management Environmental Impact Statement for the  
Hanford Site, Richland, Washington*

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**NEZ PERCE TRIBE – April 6, 2007**



**Department of Energy**  
Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

07-SED-0221

APR 6 2007

Mr. Gabriel Bohnee, Director  
Environmental Restoration/Waste  
Management Program  
Nez Perce Tribe  
P.O. Box 365  
Lapwai, Idaho 83540

Dear Mr. Bohnee:

**TRANSMITTAL OF AREA OF POTENTIAL EFFECT (APE) FOR TANK CLOSURE AND  
WASTE MANAGEMENT ENVIRONMENTAL IMPACT STATEMENT (TC & WM EIS)  
FOR THE HANFORD SITE, RICHLAND, WASHINGTON**

The purpose of this letter is to initiate the National Historic Preservation Act (NHPA) Section 106 process and to provide your office with the APE for the proposed activities under evaluation in the TC & WM EIS "the project." This notification is in accordance with 36 CFR Part 800.4(a). The Notice of Intent (NOI) to prepare the Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington which describes the project, was published February 2, 2006 in the Federal Register (Enclosure 1). The project is determined to be an undertaking that may affect historic properties. In accordance with 36 CFR 800.8, the U.S. Department of Energy, Richland Operations Office (RL) plans to coordinate its NHPA Section 106 review with the ongoing EIS process which will consider all aspects of the cultural environment.

The NHPA Section 106 process for "Borrow Area C" was started in coordination with the Hanford Site Solid Waste EIS (HSW EIS). The RL received feedback at that time indicating that other areas should be considered in the APE, including Rattlesnake Mountain and its viewshed. RL subsequently decided to consolidate several proposed actions into the scope of the TC & WM EIS as described in the NOI. The APE is based on the TC & WM NOI, and includes areas with auditory or visual effects (Enclosure 2, maps and figures).

The regulations for protection of historic properties, at 36 CFR 800.4(b)(2), allow for a phased approach for the identification and evaluation of historic properties. The alternatives under consideration consist of multiple large land areas and RL may use a phased approach to identify and evaluate historic properties. For example, a February 2006 cultural resource review (HCRC# 2006-600-008) was prepared for a portion of "Borrow Area C." This project is proceeding under a Comprehensive Environmental Response, Compensation, and Liability Act review which incorporates National Environmental Policy Act values. Based on comments received, RL plans to prepare a Memorandum of Agreement for and will provide a draft to your office and the State Historic Preservation Officer for review.

**NEZ PERCE TRIBE – April 6, 2007 (continued)**

Mr. Gabriel Bohnee  
07-SED-0221

-2-

APR 6 2007

Rattlesnake Mountain, Gable Butte, Gable Mountain, and Goose Egg Hill are known to be revered by area tribes for traditional, cultural and spiritual reasons and have been treated by RL as traditional cultural properties. Surveys, are being planned for the first and second weeks of April 2007. Tribal cultural representatives from your staff have been invited to participate in the surveys.

If you have any questions, please contact Pete J. Garcia, Jr., Director, Safety and Engineering Division, on (509) 372-1909.

Sincerely,

*Doug S. Shoop*  
Doug S. Shoop, Assistant Manager  
for Safety and Engineering

SED:ALR

Enclosures\*

1. Federal Register, Vol 71, No. 22
2. Maps and Viewshed Photos

cc w/encls:

A. Smith, NPT  
M. Sobotta, NPT  
Vera Sonneck, NPT

cc w/o encls:

E. P. Kennedy, PNNL

\* Enclosures are not reproduced here. See April 6, 2007, letter to the Confederated Tribes and Bands of the Yakama Nation on page C-197, which includes the same enclosures.

*Tank Closure and Waste Management Environmental Impact Statement for the  
Hanford Site, Richland, Washington*

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**NEZ PERCE TRIBE – July 20, 2007**



**U.S. Department of Energy  
Office of River Protection**  
P.O. Box 450, MSIN H6-60  
Richland, Washington 99352

07-ORP-018

JUL 22 2007

Mr. Gabriel Bohnee, Director  
Environmental Restoration/  
Waste Management Program  
Nez Perce Tribe  
P.O. Box 365  
Lapwai, Idaho 83540

Dear Mr. Bohnee:

**TANK CLOSURE AND WASTE MANAGEMENT (TC & WM) MEETINGS WITH THE  
NEZ PERCE TRIBE AND THE U.S. DEPARTMENT OF ENERGY, OFFICE OF RIVER  
PROTECTION (ORP)**

This letter is to follow up on conversations ORP has had with you and your staff regarding the TC & WM Environmental Impact Statement (EIS). We would like to thank you for your interest in our offer to have a more focused meeting as part of the consultation process on the EIS. We would like to commence quarterly meetings and below are suggested dates for the remaining quarters this fiscal year. Please let us know which dates each quarter works for you.

August 2, 2007 or August 14, 2007  
September 19, 2007 or October 4, 2007

If you have any questions, please contact me, or your staff may contact Kim Ballinger, (509) 372-0810.

Sincerely,

Shirley J. Dlinger, Acting Manager  
Office of River Protection

cc: S. Lillgren, Nez Perce  
I. R. Triay, EM-1  
K. V. Clarke, RL

**NEZ PERCE TRIBE – September 5, 2007**

**From:** Rodriguez, Annabelle L  
**Sent:** Wednesday, September 05, 2007 5:15 PM  
**To:** 'camille.pleasants@colvilletribes.com'; 'TearaFarrow'; 'julie'; 'StuartHarris'; 'RicoCruz'; 'Gabriel Bohnee'; 'veras@nezperce.org'; 'Darla Jackson'; 'Mike'; 'Tony Smith'; 'Rex'; 'Jim, Russell'; 'Dana'; 'Greg Cleveland'; 'Leah Sue'; 'whr2hydro@verizon.net'; 'barbaraharper@ctuir.com'; 'hazmat@yakama.com'; 'lbuck@gcpud.org'  
**Cc:** Clarke, Kevin V; Garcia, Pete J Jr; Prendergast-Kennedy, Ellen L; Sijohn, Francis A; Rodriguez, Annabelle L  
**Subject:** Draft Tank Closure and Waste Management EIS (TC&WM EIS) MOA

All,

Attached is the Draft Tank Closure and Waste Management EIS (TC&WM EIS) MOA. The MOA refers to the February, 2006 Federal Register Notice. That Notice and a map can be found in the July 30, 2007 correspondence that DOE transmitted to Tribes/SHPO (cultural review and survey, 07-SED-0325, for this project).

As stated in my previous email, Project staff would like to meet on September 18 to begin discussin on the draft TC&WM EIS MOA. Location and time to follow. I will set up a telecon line if you would like to participate by phone.

ACHP has been invited to participate in the MOA. You will be receiving a copy of the letter within the week.

Thank you,  
Annabelle Rodriguez

**Attachment to Nez Perce Tribe, September 5, 2007 – Memorandum of Agreement**

Draft September 5, 2007 4:15 p.m.

**-DRAFT-**

**MEMORANDUM OF AGREEMENT  
FOR TANK CLOSURE AND WASTE MANAGEMENT  
ENVIRONMENTAL IMPACT STATEMENT,  
HANFORD SITE, RICHLAND, WASHINGTON  
AMONG THE U. S. DEPARTMENT OF ENERGY,  
THE WASHINGTON STATE HISTORIC PRESERVATION OFFICE,  
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION**

**CONSULTING PARTIES & CONCURRING SIGNATORIES: YAKAMA NATION,  
CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION,  
WANAPUM, AND THE NEZ PERCE TRIBE**

**WHEREAS**, the U. S. Department of Energy (DOE) has proposed an undertaking consisting of the proposed actions and alternatives described in the revised Notice of Intent (NOI) for the Tank Closure & Waste Management Environmental Impact Statement (TC&WM EIS) [71 Fed. Reg. 5655, February 2, 2006] [Attachment A]. Two primary project activity areas include the 200 East and 200 West Areas. The proposed actions would involve the use of the borrow source at Area C, located in the 600 Area of the Hanford Site (see attached map for description). In order to implement the action(s) DOE decides to pursue, based on the analyses presented in the TC&WM EIS (and as documented in a Record of Decision, or ROD, at the end of the EIS process), DOE would need to acquire additional quantities of fine-grained silt loam material from Area C; and

**WHEREAS**, the TC&WM EIS analyses will include discussion of potential impacts to cultural, aesthetic, and historic resources, and will identify tribal interests, concerns, and issues regarding the proposed use of the borrow source at Area C. The EIS will also identify possible mitigation measures that DOE could take to offset potential environmental impacts that have been identified. This information will be presented for consideration by other agencies, stakeholders, and Tribal nations during the public comment period on the Draft TC&WM EIS, currently scheduled for Spring 2008. In consideration of the input from Federal, state, and local agencies, consultations with Native American tribal governments, and public comments on the Draft EIS, DOE will revise and publish a Final EIS, followed by a ROD to document the decisions reached by DOE based on the EIS analyses. The ROD will also identify the mitigation actions that DOE would take to minimize or avoid the potential adverse impacts associated with implementing the selected actions; and

**WHEREAS**, the Record of Decision (ROD) for the *Hanford Comprehensive Land Use Plan Environmental Impact Statement* (JICP EIS) selected the preferred alternative for implementation, as presented in the final EIS. Borrow source Area C was designated as

**Predecisional Draft  
For Discussion Purposes Only**

Page 1 of 6

**Attachment to Nez Perce Tribe, September 5, 2007 – Memorandum of Agreement  
(continued)**

Draft September 5, 2007 4:15 p.m.

"Conservation (Mining)" as DOE's preferred quarry site for basalt rock and silty soil materials to be used for large waste-management area covers in the Central Plateau. The final HCP EIS preferred alternative indicates that a portion of the ALE Reserve (Borrow Area C) would be managed as Conservation (Mining) during the remediation of the Hanford Site, and would be DOE's preferred quarry site for basalt rock and silty soil materials to be used for large waste-management area covers in the Central Plateau. The final HCP EIS discussion indicates that this designation was being made as a trade-off, based on DOE's receipt of public comments on the Draft EIS and input from the cooperating agencies, including area Tribes. Greater value was placed by the public and the cooperating agencies on preservation of the wildlife corridor running through the McGee Ranch/Umtanum Ridge area, which DOE had previously identified as its preferred quarry site. In addition to the wildlife corridor function, the mature shrub-steppe vegetation structure in the McGee Ranch area was considered to have greater wildlife value than the cheat grass in the ALE Reserve (Borrow Area C) quarry site. As a result of this tradeoff, the McGee Ranch was included in the National Wildlife Refuge and designated as Preservation, and the ALE Reserve (Borrow Area C) designated as Conservation (Mining).

**WHEREAS**, DOE has conducted a cultural resources review (CRR) and inventory in support of the proposed actions being evaluated in the TC&WM EIS (#2007-600-018). Several CRRs are associated with the borrow source at Area C, and the cultural resources review of Area C is now considered to be complete. (Attachment B, Letter dated July 30, 2007 to Dr. Allyson Brooks, State Historic Preservation Officer, from David A. Brockman, Manager, DOE Richland Operations Office). The CRRs identify the cultural resources located within the area of potential project effect; and

**WHEREAS**, after further review, in July 2007 DOE identified that the proposed project activities would indirectly result in visual and auditory effects to Rattlesnake Mountain, Gable Butte, and Gable Mountain. Borrow Source Area C was found to have no potential to contain subsurface cultural resources, and low potential for other areas; and

**WHEREAS**, DOE has consulted with the Washington State Historic Preservation Officer (SHPO), Advisory Council on Historic Preservation (AHP), Confederated Tribes of the Umatilla Indian Reservation, Nez Perce, Wanapum, and the Yakama Nation, in accordance with Section 106 of the National Historic Preservation Act (NHPA), and pursuant to implementing regulations published in 36 CFR Part 800, to address the adverse effects on historic properties; and

**WHEREAS**, pursuant to 36 CFR 800.6(c)(3) DOE has invited the Confederated Tribes of the Umatilla Indian Reservation, Nez Perce Tribe, Wanapum, and the Yakama Nation to sign this MOA as concurring parties;

**Attachment to Nez Perce Tribe, September 5, 2007 – Memorandum of Agreement  
(continued)**

Draft September 5, 2007 4:15 p.m.

**NOW, THEREFORE**, DOE agrees to implement the following stipulations in satisfaction of its NHPA Section 106 obligations for the proposed undertaking:

**STIPULATIONS**

DOE will ensure that the following stipulations are carried out:

**I. MITIGATE ADVERSE EFFECTS TO CULTURAL INTEGRITY OF HABITAT AND  
TO TRADITIONAL PLANTS**

1. DOE will consider all tribal recommendations consistent with the BrMAP for those areas that will be disturbed and/or affected by the proposed undertaking.
2. Tribes will be invited to participate in ecological and/or biological surveys, and in revegetation efforts related to the Area C borrow source wherever possible.
3. DOE will seek early involvement, consultation, and input from Hanford Tribes and Hanford groups who have experience in Hanford restoration to achieve culturally relevant and successful reclamation and/or re-vegetation of the impacted area. DOE will also review other available reclamation and/or re-vegetation documents that have been prepared for use at Borrow Source Area C for guidance and relevance to the undertakings addressed by this Memorandum of Agreement (MOA) (e.g., the Reclamation Plan developed under the NHPA Section 106 MOA for the 216-U-8 waste site in the 200-West Area, as part of a CERCLA five-year treatability study concerning the effectiveness of surface barriers).
4. DOE will commit to a culturally relevant native plant re-vegetation strategy as a preference where possible. If appropriate and feasible (in accordance with the Biological Resources Management Plan (BrMAP) [identify section(s)] and other guidance documents as described in Stipulation 3, native plant species from local germ-plasm will be used in the reclamation and re-vegetation seed mixture.
5. In accordance with the BrMAP [identify section(s)], DOE will commit to long-term reclamation rather than interim soil stabilization (with the caveat that there may be some cases where interim soil stabilization may not be avoidable if duration of activities is longer term). Specific guidelines will be developed collaboratively and incorporated into this MOA as an appendix, as appropriate, to help achieve this goal.

**II. MINIMIZATION AND AVOIDANCE OF VISUAL, AIR QUALITY AND AUDIBLE  
IMPACTS**

6. To minimize visual impacts resulting from the borrow pit, the project will restore and

**Predecisional Draft  
For Discussion Purposes Only**

Page 3 of 6

**Attachment to Nez Perce Tribe, September 5, 2007 – Memorandum of Agreement  
(continued)**

Draft September 5, 2007 4:15 p.m.

recontour the area in a culturally relevant manner as per stipulations 1-5 above.

7. To avoid visual and air quality impacts that may result from dust caused by construction activities, DOE will implement dust control procedures and apply soil fixative and water the area routinely.
8. To minimize visual and audible effects of project activities, DOE will coordinate timing of construction to assure that these activities do not unnecessarily interfere with Tribal ceremonial activities and religious use of Rattlesnake Mountain (*Lalik*). The tribes will be notified prior to project construction activities.
9. On a quarterly DOE will provide information to all parties on the implementation of the stipulations in this MOA over the duration of the project, and then annually over the course of the five-year revegetation effort.
10. Placeholder which could reflect what is in the final TC&WM EIS chapter on mitigation, and to the ROD.

**III. ADMINISTRATIVE PROVISIONS**

Dispute Resolution

1. If the SHPO or ACHP raises an objection to, or has a dispute regarding fulfillment of the terms of this MOA, that party will file a written objection with DOE.
2. Upon receipt of a written objection or dispute, DOE will consult with the disputant to resolve the objection or dispute. DOE also will notify the other signatories and concurring parties of the objection or dispute.
3. If DOE cannot resolve the objection or dispute within 60 calendar days of receipt of the written objection, they will forward to the ACHP documentation of the objection or dispute, a written proposal for its resolution, and request the ACHP's comments.
4. Within 30 calendar days of receipt of the written submittal, the ACHP shall either:
  - a. Notify DOE that it will not consider the dispute or provide recommendations, in which case the agencies may proceed with the proposed action; or,
  - b. Concur with DOE's proposed response to the objection and or dispute, whereupon they may proceed in accordance with the agreed-upon response; or,

**Attachment to Nez Perce Tribe, September 5, 2007 – Memorandum of Agreement  
(continued)**

Draft September 5, 2007 4:15 p.m.

- c. Provide DOE with recommendations, which DOE will take into account in reaching a final decision regarding response to the objection and/or dispute.
5. DOE shall take into account ACHP recommendations or comments provided in accordance with this stipulation with reference only to the subject of the objection; the DOE's responsibility to carry out actions under this MOA that are not the subject(s) of the dispute or objection shall remain unchanged. While the dispute is being resolved, the MOA continues in effect without change or suspension.
6. If the ACHP or a SHPO is contacted by a signatory, concurring party, or by a member of the public to discuss a significant concern or objection about implementation of the terms of this MOA, the contacted entity will notify DOE of the issue.
7. DOE will keep consulting parties apprised of any concern or objection raised and how each is resolved.

Amendments

Any concurring party and/or signatory to this MOA may request in writing to DOE that the MOA be amended. DOE will consult with the signatory and concurring parties in accordance with the procedures of 36 CFR § 800.6(c) for developing MOAs.

Termination

This MOA may be terminated by mutual agreement by providing an advance 30-day written notice to the other parties, provided that the parties will continue to consult during this 30-day waiting period in an attempt to reach agreement on actions that could be taken to avoid termination.

Effective Date

This MOA will become effective on the date that it has been signed by all signatories. DOE will ensure that each consulting party is provided a copy of the fully executed MOA.

**IV. Signatories**

**Department of Energy**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Dave Brockman  
Manager, Richland Operations Office

**Attachment to Nez Perce Tribe, September 5, 2007 – Memorandum of Agreement  
(continued)**

Draft September 5, 2007 4:15 p.m.

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Shirley Olinger  
Acting Manager, Office of River Protection

**Washington State Department of Archaeology and Historic Preservation**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Allyson Brooks  
State Historic Preservation Officer

**Advisory Council on Historic Preservation**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Jim Fowler

**V. CONCURRING PARTIES:**

**Nez Perce Tribe**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
XXXXXXXXXX  
title

**Confederated Tribes of the Umatilla Indian Reservation**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
XXXXXXXXXX  
title

**Wanapum Tribe**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
XXXXXXXXXX  
title

**Yakama Nation**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
XXXXXXXXXX  
title

*Tank Closure and Waste Management Environmental Impact Statement for the  
Hanford Site, Richland, Washington*

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**NEZ PERCE TRIBE – November 7, 2007**



**U.S. Department of Energy**

**[REDACTED]**  
P.O. Box 450, MSIN H6-60  
Richland, Washington 99352

**NOV 07 2007**

07-ESQ-212

Mr. Gabriel Bohnee, Director  
Environmental Restoration/  
Waste Management Program  
Nez Perce Tribe  
P.O. Box 365  
Lapwai, Idaho 83540

Dear Mr. Bohnee:

**TANK CLOSURE AND WASTE MANAGEMENT (TC & WM) ENVIRONMENTAL  
IMPACT STATEMENT (EIS) CULTURAL INFORMATION**

This letter is to follow up on conversations the U.S. Department of Energy (DOE), Office of River Protection had with your staff when we met on November 1, 2007. At that meeting DOE indicated that if you wanted to provide some narrative to be included in the TC & WM EIS related to your unique cultural and historic perspective on the Hanford Site, and specifically Rattlesnake and Gable Mountains, we would provide you that opportunity. DOE invites the Nez Perce Tribe to submit its unique perspectives in such a write up, which can either be coordinated with the perspectives of other tribes, or provide just the Nez Perce's unique tribal perspective. This write up will be included in the TC & WM EIS draft and can be updated or expanded upon, as you wish, in the final EIS. The write up should be provided to Mary Beth Burandt by December 14, 2007, to assure its inclusion in the draft.

If you have any questions, please contact me, or your staff may contact Mary Beth Burandt, Office of the Environmental Safety and Quality, (509) 372-7772.

Sincerely,

*T. J. Olinger*  
f

Shirley J. Olinger, Acting Manager  
Office of River Protection

ESQ:MEB

cc: F. Marcinowski, EM-10  
M. A. Niclson, EM-13  
J. E. Loving, GC-20  
S. L. Dahl, Ecology  
J. J. Lyon, Ecology  
S. Lilligren, Nez Perce  
V. Sonneck, Nez Perce  
J. Stanfill, Nez Perce

**NEZ PERCE TRIBE – May 29, 2008**

**From:** Prendergast-Kennedy, Ellen L [Ellen.Prendergast@pnl.gov]  
**Sent:** Thursday, May 29, 2008 12:10 PM  
**To:** camille.pleasant@colvilletribes.com; HNRTC - Russell, Jim; Leah Sue; Greg Cleveland; whr2hydro@verizon.net; Dana Miller; Rex; Ibuck@gcpud.org; Lela Buck; Mike; veras@nezperce.org; Darla Jackson; HNRTC - Smith, Anthony; hazmat@yakama.com; jlongene; TearaFarrow; HNRTC - Harris, Stuart; tombailor@ctuir.com; HNRTC - Cruz, Rico; Whitlam, Rob (DAHP)  
**Cc:** Rodriguez, Annabelle L; Sijohn, Francis A; Prendergast-Kennedy, Ellen L; Leonard, Michael W; Mcfarland, Douglas P  
**Subject:** APE notification for INTERIM PRETREATMENT SYSTEM FACILITY TO SUPPORT TREATMENT OF HANFORD TANK WASTE AND THE WASTE TREATMENT PLANT. HCRC# 2008-200-017  
**Attachments:** APE.pdf

Good morning all,

Please find attached an APE notification initiating the cultural resources review for Interim Pretreatment System Facility to Support Treatment of Hanford Tank Waste and the Treatment Plant (HCRC#2008-200-017)

We are tentatively planning to conduct a field survey of the ~13 acre area in the 200 East Area where the proposed Interim Pretreatment System facilities may be sited on June 5, 2008 (HCRC# 2007-200-017)

The project engineer has requested FH (landlord) to retrieve the most recent radiological survey data available for the 13 acre area based on the concern regarding site surface contamination raised at the tribal cultural resources issues meeting on May 22, 2008. It is the expectation that the information will be available for you before the June 5 survey date. If the information cannot be made available by the June 5 survey date, the survey will need to be cancelled and rescheduled. A notification of schedule change will be sent no later than Wednesday morning on June 4, 2008.

I will be out of the office between May 30 and June 4, 2008, so all future communications regarding radiological information and survey schedule change will be communicated to you from Annabelle Rodriguez and/or Doug McFarland.

We will be leaving the Sigma Five building at 8:30 and can meet those travelling in at the WTP entrance to the 200 East Area.

**Ellen P. Kennedy, Anthropologist  
Project Manager  
Hanford Cultural Resources Project  
Pacific Northwest National Laboratory  
PO Box 999, MSIN K6-75  
Richland, Washington 99352  
phone (509) 371-7105 fax (509) 371-7083 mobile: (509) 430-6211**

**NOTE: NEW PHONE AND FAX NUMBER**

## **Attachment to Nez Perce Tribe, May 29, 2008 – Project Description**

From the desk of  
**ANNABELLE L. RODRIGUEZ**  
U.S. Department of Energy, Richland Operations Office  
Cultural and Historic Resources Program  
(509) 372-0277 Fax (509) 376-0306

*This letter is to notify your office of a Section 106 Cultural Resources Review recently received by the U.S. Department of Energy, Richland Operations Office. This review proposes a project determined to be an undertaking which might affect historic properties. This notification is in accordance with 36 CFR Part 800.4(a) to document the area of potential effect for this project. This correspondence is also being sent to you to seek consultation on these projects per 36 CFR 800. The Hanford Cultural Resources Project (HCRP), the Hanford Site cultural resources contractor, has compiled the attached information. Please contact me at (509) 372-0277 or Ellen Prendergast, HCRP Section 106 Coordinator (509) 376-4626 if you have any questions.*

*Thank you,  
Annabelle Rodriguez*

**May 29, 2008**

### **CULTURAL RESOURCES REVIEW FOR INTERIM PRETREATMENT SYSTEM FACILITY TO SUPPORT TREATMENT OF HANFORD TANK WASTE AND THE WASTE TREATMENT PLANT. HCRC# 2008-200-017**

#### **Background**

Construction of the the U. S. Department of Energy's Waste Treatment Plant (WTP) Pretreatment (PT) facility was delayed to allow for resolution of seismic and other technical issues and is projected to be operational in 2019. The WTP Low Activity Waste (LAW) Vitrification facility construction could be ready for startup approximately five years before the PT facility around 2014. Since the LAW facility relies on the PT facility to provide feed, the LAW startup would have to be delayed or an alternate feed source identified.

The Interim Pretreatment System (IPS) Facility is being proposed as an interim solution to the address the time gaps between completions of these two facilities. The IPS would provide pretreated LAW feed and allow the WTP LAW facility to begin operation in advance of the WTP Pretreatment facility. An earlier start to LAW treatment would also provide additional tank farm space management benefits and would allow for early processing and final treatment of LAW waste. Preliminary evaluations indicated that 5 years of early LAW treatment could free up 4.7 million gallons of double shell tank (DST) space and process up to 8% of the total LAW inventory (see RPP-29981).

#### **Project Description**

The proposed project is currently in the preconceptual planning stages. Two locations in the 200 East Area of the Hanford Site have been identified for the siting of the IPS facility (Figure 1). Construction and operations are planned to support treatment of tank wastes and the Waste Treatment Plant Vitrification Facility. The two potential sites are identified as IPS Candidate Site numbers 1 & 2 in Figure 2. Figure 2 also depicts the approximate

## **Attachment to Nez Perce Tribe, May 29, 2008 – Project Description (continued)**

location of the IPS Facility and additional footprint required for construction. The footprint area for IPS Candidate Site number 1 totals approximately 8 acres and IPS Candidate Site number 2 totals approximately 4.2 acres. Expected ground disturbing activities that may occur in the proposed footprints includes waste processing facilities, connections to water and waste treatment lines, facility ventilation, support buildings, parking area and contingency space for waste processing facility expansion (Figure 2). Waste processing facilities will include concrete vaults containing process vessels that will extend approximately 30 feet below grade; similarly, concrete building enclosed processing vessels may extend approximately 30 feet above grade also.

**Area of Potential Effect (APE):** The direct effects Area of Potential Effect (APE) is confined to the two proposed locations and associated footprint as well as additional areas of ground disturbance required to access existing waste treatment and water lines located north of the proposed facility locations identified in Figure 2 and 3.

### **Existing Information**

- The project APE has been surveyed for cultural resources by three different surveys located in close proximity to each other covering all of the project APE; HCRC#96-200-109, HCRC# 87-200-002 and HCRC#88-200-015. No cultural resources were located by these surveys.
- A review of 2006 aerial photographs of the project area indicates that most of the project area is undisturbed (Figure 3)
- The project was presented at the DOE Cultural and Historic Resources Program tribal cultural resources meeting on May 22, 2008. Tribes expressed an interest in having the area resurveyed for cultural resources because the area is undisturbed. A survey is tentatively scheduled for June 5, 2008.

### **Next Steps**

- Seek and gather input on impacts to historic properties
- Complete cultural resources review assessment

**Attachment to Nez Perce Tribe, May 29, 2008 – Project Description (continued)**

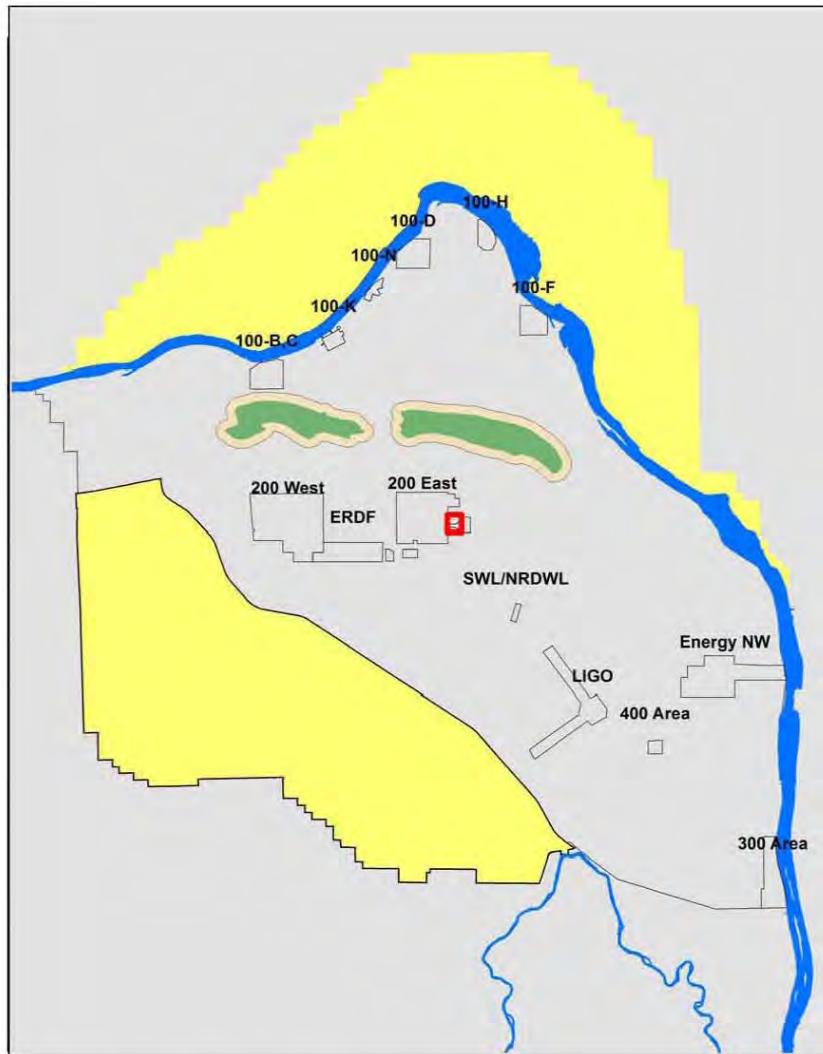


Figure 1. Overview of Hanford Site and relative location of project area, depicted in red, east of the 200 East Area.

Attachment to Nez Perce Tribe, May 29, 2008 – Project Description (continued)

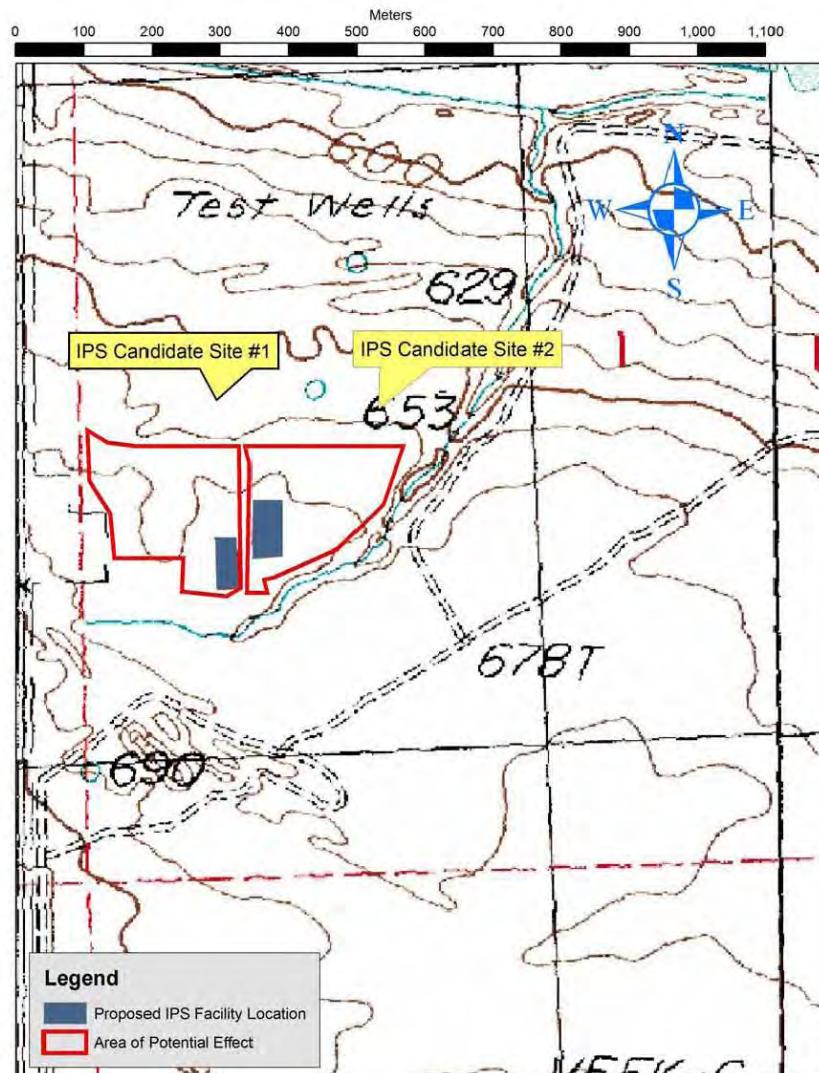


Figure 2. Area of potential effect overlaid on a USGS topographic map, Washington State Quadrangle, Gable Butte, 1986, 7.5' Series. Township 12 North, 26 East, Section 1.

Attachment to Nez Perce Tribe, May 29, 2008 – Project Description (continued)



Figure 3. Area of potential effect overlaid on a 2006 aerial photograph.

**References:**

RPP-29981, March 2007, *Evaluation of Starting the Waste Treatment and Immobilization Plant (WTP) Low Activity Waste (LAW) Facility First*, Rev. 1, CH2M HILL Hanford Group, Inc., Richland WA.

**NEZ PERCE TRIBE – June 4, 2008**



**U.S. Department of Energy  
Office of River Protection**  
P.O. Box 450, MSIN H6-60  
Richland, Washington 99352

JUN 04 2008

08-ESQ-115

Mr. Gabriel Bohnee, Director  
Environmental Restoration/  
Waste Management Program  
Nez Perce Tribe  
P.O. Box 365  
Lapwai, Idaho 83540

Dear Mr. Bohnee:

**ENVIRONMENTAL IMPACT STATEMENT GROUNDWATER MODELING PROGRESS**

I am writing to let you know that we have finished the material property evaluation of the vadose zone. This evaluation process was briefed at the Hanford Advisory Board meeting on February 7, 2008, and at the cultural resource committee on April 17, 2008. You had some members of your staff attend these meetings, and an offer was made to provide a more detailed update. Also, to further our communications, we offer to resume the quarterly informational briefings with your technical staff and are prepared to conduct the first on July 8, 2008.

Please contact Mary Beth Burandt, Environmental Compliance Division, (509) 372-7772, to set up a specific time and date for this critical informational briefing.

Sincerely,

A handwritten signature in black ink, appearing to read "Shirley J. Olinger".

Shirley J. Olinger, Manager  
Office of River Protection

ESQ:MEB

cc: F. A. Sijohn, RL

*Tank Closure and Waste Management Environmental Impact Statement for the  
Hanford Site, Richland, Washington*

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**NEZ PERCE TRIBE – February 3, 2010**



**U.S. Department of Energy**  
**Office of River Protection**  
P.O. Box 450, MSIN H6-60  
Richland, Washington 99352

FEB 03 2010

10-ORP-004

Mr. Samuel N. Penney, Chairman  
Nez Perce Tribal Executive Committee  
Nez Perce Tribe  
P.O. Box 305  
Lapwai, Idaho 83540

Dear Chairman Penney:

**DRAFT TANK CLOSURE & WASTE MANAGEMENT ENVIRONMENTAL IMPACT  
STATEMENT (TC & WM EIS) CONSULTATION**

The purpose of this letter is to communicate the U.S. Department of Energy (DOE), Office of River Protection's (ORP) interest in consulting with the Nez Perce Tribe on the Draft TC & WM EIS. The Draft TC & WM EIS analyzes the following three key areas: (1) retrieval and management of waste from 177 underground storage tanks at Hanford and closure of the single-shell tanks; (2) decommissioning of the Fast Flux Test Facility, a nuclear test reactor, and its auxiliary facilities; and (3) ongoing and expanded solid waste management operations on site, including the disposal of Hanford's waste and limited volumes of waste from other DOE sites in an Integrated Disposal Facility(ies). The Draft TC & WM EIS also analyzes No Action Alternatives for each of the three types of proposed actions.

We would like your counsel in identifying your preferences on how best to consult with the Nez Perce for the Draft TC & WM EIS. We have already provided your staff with copies of the Draft TC & WM EIS as well as summaries when it came out in October, 2009. Since the beginning of the Draft TC & WM EIS process in 2006, the Document Manager, Mary Beth Burandt has spoken with your staff on many occasions about technical issues and concerns. Discussions related to the National Historic Preservation Act had been on going, and at the request of your staff, those discussions were delayed until the release of the Draft TC & WM EIS for review. We believe now is the appropriate time to resume those discussions. In addition, the previous invitation to provide narrative to be included in the final Draft TC & WM EIS related to your unique cultural and historical perspective is still available.

We want to offer to you whatever level of consultation that you desire, with the hope that your comments can be formalized by the March 19, 2010 comment deadline. Consultation activities could include staff-to-staff technical briefings, government-to-government consultations between DOE senior officials and elected Tribal leaders, formal written comments on the Draft TC & WM EIS, or other activities the Nez Perce would like to propose consistent with established policies and protocols.

**NEZ PERCE TRIBE – February 3, 2010 (*continued*)**

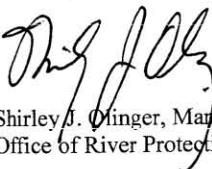
FEB 03 2010

Mr. Samuel N. Penney  
10-ORP-004

-2-

We welcome the Nez Perce Tribe's participation in the Draft TC & WM EIS and look forward to establishing a mutually agreed-upon path forward for consultation. If you have any questions, please contact Jill Conrad, DOE Tribal Program Manager, (509) 376-0288.

Sincerely,



Shirley J. Olinger, Manager  
Office of River Protection

ORP:TEO

cc: D. A. Brockman, RL  
J. L. Conrad, RL  
M. S. McCormick, RL  
G. Bohnee, Nez Perce

### C.3.1.3    **Confederated Tribes of the Umatilla Indian Reservation Correspondence**

**To:** Mr. Richard Gay, Confederated Tribes of the Umatilla Indian Reservation  
**From:** Mr. James E. Rasmussen, U.S. Department of Energy  
**Date:** December 9, 2002  
**Subject:** "Tank Closure Environmental Impact Statement (EIS)"

**To:** Mr. Jeff Van Pelt and Ms. Julie Longenecker, Confederated Tribes of the Umatilla Indian Reservation  
**From:** Ms. Annabelle Rodriguez, U.S. Department of Energy  
**Date:** August 12, 2003  
**Subject:** Notification of a Section 106 Cultural Resources Review (see page C-173)

**To:** Mr. Jeff Van Pelt, Confederated Tribes of the Umatilla Indian Reservation  
**From:** Mr. Joel Hebdon, U.S. Department of Energy  
**Date:** September 3, 2003  
**Subject:** Cultural Resources Review (CRR) of "Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks (Tank Closure) Environmental Impact Statement" (HCRC# 2003-200-044)

**To:** Mr. Stuart Harris, Confederated Tribes of the Umatilla Indian Reservation  
**From:** Mr. Roy J. Schepens, U.S. Department of Energy  
**Date:** March 9, 2006  
**Subject:** *Tank Closure and Waste Management Environmental Impact Statement (EIS)* Meetings with the Confederated Tribes of the Umatilla Indian Reservation Tribe and the U.S. Department of Energy, Office of River Protection (ORP)

**To:** Mr. Stuart Harris, Confederated Tribes of the Umatilla Indian Reservation  
**From:** Mr. Roy J. Schepens, U.S. Department of Energy  
**Date:** January 16, 2007  
**Subject:** Quarterly Meetings with the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and the U.S. Department of Energy, Office of River Protection (ORP)

**To:** Confederated Tribes of the Umatilla Indian Reservation Representatives  
**From:** Ms. Ellen Prendergast-Kennedy, Pacific Northwest National Laboratory  
**Date:** March 27, 2007  
**Subject:** Invitation to Participate in Cultural Resources Survey for Portions of the Area C Borrow Pit Area and the 600 Area for the *Tank Closure and Solid Waste EIS/NHPA 106 Compliance* (see page C-196)

**To:** Ms. Teara Farrow, Confederated Tribes of the Umatilla Indian Reservation  
**From:** Mr. Doug S. Shoop, U.S. Department of Energy  
**Date:** April 6, 2007  
**Subject:** Transmittal of Area of Potential Effect (APE) for *Tank Closure and Waste Management Environmental Impact Statement (TC & WM EIS) for the Hanford Site, Richland, Washington*

**To:** Mr. Stuart Harris, Confederated Tribes of the Umatilla Indian Reservation  
**From:** Ms. Shirley J. Olinger, U.S. Department of Energy  
**Date:** July 20, 2007  
**Subject:** *Tank Closure and Waste Management (TC & WM) Meetings with the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and the U.S. Department of Energy, Office of River Protection (ORP)*

**To:** Confederated Tribes of the Umatilla Indian Reservation Representatives  
**From:** Ms. Annabelle Rodriguez, U.S. Department of Energy  
**Date:** September 5, 2007  
**Subject:** *Draft Tank Closure and Waste Management Environmental Impact Statement (TC & WM EIS) Memorandum of Agreement*

**To:** Mr. Stuart Harris, Confederated Tribes of the Umatilla Indian Reservation  
**From:** Ms. Shirley J. Olinger, U.S. Department of Energy  
**Date:** November 7, 2007  
**Subject:** *Tank Closure and Waste Management (TC & WM) Environmental Impact Statement (EIS) Cultural Information*

**To:** Ms. Teara Farrow, Confederated Tribes of the Umatilla Indian Reservation  
**From:** Mr. Frank Marcinowski, U.S. Department of Energy  
**Date:** December 20, 2007  
**Subject:** Response to November 26, 2007, Letter Concerning the Department of Energy's Undertakings at Borrow Area C on the Hanford Site

**To:** Confederated Tribes of the Umatilla Indian Reservation Representatives  
**From:** Ms. Ellen Prendergast-Kennedy, Pacific Northwest National Laboratory  
**Date:** May 29, 2008  
**Subject:** Notification of a Section 106 Cultural Resources Review

**To:** Mr. Stuart Harris, Confederated Tribes of the Umatilla Indian Reservation  
**From:** Ms. Shirley J. Olinger, U.S. Department of Energy  
**Date:** June 4, 2008  
**Subject:** Environmental Impact Statement Groundwater Modeling Progress

**To:** Mr. Elwood Patawa, Confederated Tribes of the Umatilla Indian Reservation  
**From:** Ms. Shirley J. Olinger, U.S. Department of Energy  
**Date:** February 3, 2010  
**Subject:** *Draft Tank Closure and Waste Management Environmental Impact Statement (TC & WM EIS) Consultation*

**CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION – December 9, 2002**



**U.S. Department of Energy**

**Office of River Protection**

P.O. Box 450  
Richland, Washington 99352

02-ED-018

**DEC 09 2002**

Mr. Richard Gay  
Acting Environmental, Science  
and Technology Program Manager  
Confederated Tribes of the  
Umatilla Indian Reservation  
P.O. Box 638  
Pendleton, Oregon 97801

Dear Mr. Gay:

**TANK CLOSURE ENVIRONMENTAL IMPACT STATEMENT (EIS)**

The U.S. Department of Energy, Office of River Protection (ORP), intends to start work within the next two years that will culminate in the closure of all the high-level waste storage tanks at Hanford by 2028. This will be a huge endeavor with potentially significant impacts on the environment and people of this area.

ORP is required to prepare an EIS before starting this work. An EIS will give us the information we need from the Tribal governments, regulators, elected officials, Hanford stakeholders, and the public to make effective decisions about tank closure.

ORP is in the early stages of preparing this EIS. Presently we are performing pre-scoping work, and this is the best time to listen to the views of Tribal governments, stakeholders, and regulators about how the EIS should be designed and what it should cover. ORP wants to hear from you before we issue a Notice of Intent and conduct public scoping meetings early next year.

ORP representatives would like to meet with you and/or members of your staff to discuss our current planning for the EIS and, mainly, to listen to you talk about issues and concerns you have about tank closure. I acknowledge that you and your staff are busy this time of year. We propose to take only an hour of your time. We very much want to talk with you about this important project.

If you have any questions, please contact me, or Mary Beth Burandt, of my staff, (509) 373-9160.

Sincerely,

James E. Rasmussen  
James E. Rasmussen, Director  
Environmental Division

ED:GMN

cc: J. L. Hanson, INNOV  
K. V. Clarke, RL  
P. F. X. Dunigan, Jr., RL

**CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION – September 3, 2003**



**Department of Energy**  
Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

03-RCA-0377

**SEP 3 2003**

Mr. Jeff Van Pelt  
Cultural Resources Protection Program  
Confederated Tribes of the  
Umatilla Indian Reservation  
P.O. Box 638  
Pendleton, Oregon 97801

Dear Mr. Van Pelt:

CULTURAL RESOURCES REVIEW (CRR) OF RETRIEVAL, TREATMENT, AND  
DISPOSAL OF TANK WASTE AND CLOSURE OF SINGLE-SHELL TANKS (TANK  
CLOSURE) ENVIRONMENTAL IMPACT STATEMENT (HCRC# 2003-200-044)

Enclosed is a CRR completed by the U.S. Department of Energy, Richland Operations Office's (RL) Hanford Cultural Resources Laboratory (HCRL) on August 28, 2003, for the subject project located on the Hanford Site, Richland, Washington. The results of the records and literature review conducted by HCRL staff are described in the enclosed CRR. RL concurs with the findings as stated in the enclosed CRR. Pursuant to 36CFR 800.2 (4), we are providing documentation to support these findings and to involve your office as a consulting party in the NHPA Section 106 Review process. If you have any questions, please contact Annabelle L. Rodriguez, of my staff, on (509) 372-0277.

Sincerely,

Joel Hebdon, Director  
Regulatory Compliance and Analysis Division

RCA:ALR

Enclosure\*

cc w/o encl:  
E. L. Prendergast, PNNL

cc w/encl:  
J. Longenecker, CTUIR (Richland office)

\* Enclosure is not reproduced here. See September 3, 2003, letter to the Confederated Tribes and Bands of the Yakama Nation on page C-179, which includes the same enclosure.

**CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION – March 9, 2006**



**U.S. Department of Energy**  
**OFFICE OF RIVER PROTECTION**  
P.O. Box 450, MSIN H6-60  
Richland, Washington 99352

**MAR 09 2006**

06-ORP-013

Mr. Stuart Harris, Director  
Department of Science and Engineering  
Confederated Tribes of the Umatilla  
Indian Reservation  
P.O. Box 638  
Pendleton, Oregon 97801

Dear Mr. Harris:

**TANK CLOSURE AND WASTE MANAGEMENT ENVIRONMENTAL IMPACT  
STATEMENT (EIS) MEETINGS WITH THE CONFEDERATED TRIBES OF THE  
UMATILLA INDIAN RESERVATION TRIBE AND THE U.S. DEPARTMENT OF  
ENERGY, OFFICE OF RIVER PROTECTION (ORP)**

This letter is to follow up on conversations the ORP staff has had with Rico Cruz of your staff, regarding the Tank Closure and Waste Management EIS. ORP would like to thank you for your interest in setting up a more focused meeting to discuss this issue. Per the request of your staff, ORP has scheduled a meeting on March 31, 2006, either in person or via teleconference. This meeting will take place after the Scoping meetings and before the comment period ends on April 10, 2006.

We have enclosed a copy of the Scoping meeting schedule and contact information for your use. If you have any questions or comments, you may contact me, or your staff may contact, Mary Beth Burandt, (509) 373-9160.

Sincerely,

f  
Roy J. Schepens, Manager  
Office of River Protection

ORP:TEO

cc w/o enclosure: \*  
K. S. Ballinger, Nuvotec  
K. V. Clarke, RL

\* Enclosure is not reproduced here. See March 7, 2006, letter to the Confederated Tribes and Bands of the Yakama Nation on page C-191, which includes the same enclosure.

**CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION – January 16, 2007**



**U.S. Department of Energy**  
**OFFICE OF RIVER PROTECTION**  
P.O. Box 450, MSIN H6-60  
Richland, Washington 99352

**JAN 16 2007**

07-ORP-003

Mr. Stuart Harris, Director  
Department of Science and Engineering  
Confederated Tribes of the Umatilla  
Indian Reservation  
P.O. Box 638  
Pendleton, Oregon 97801

Dear Mr. Harris:

QUARTERLY MEETINGS WITH THE CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION (CTUIR) AND THE U.S. DEPARTMENT OF ENERGY, OFFICE OF RIVER PROTECTION (ORP)

ORP would like to meet with members of the CTUIR and its technical staff on a quarterly basis. We believe a quarterly meeting with the CTUIR will better facilitate an ongoing dialogue on issues of interest to both of our organizations and support our mutual cleanup goals.

We look forward to scheduling meetings with you and would like to suggest the following timeframes for the quarterly meetings:

February (week of the 12<sup>th</sup>)  
May (week of the 14<sup>th</sup>)  
August (week of the 13<sup>th</sup>)  
November (week of the 12<sup>th</sup>)

Please let us know if dates within the suggested timeframes work with you and your staff's schedules. ORP staff will work with you and your staff to put together an agenda prior to each meeting.

If you have any questions or comments, please contact me, or your staff may contact Erik Olds, (509) 372-8656.

Sincerely,

Roy J. Schepens, Manager  
Office of River Protection

ORP:TEO

cc: K. S. Ballinger, INNOV  
K. V. Clarke, RL

**CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION – April 6, 2007**



**Department of Energy**  
Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

07-SED-0220

APR 6 2007

Ms. Teara Farrow, Manager  
Cultural Resources Protection Program  
Confederated Tribes of the  
Umatilla Indian Reservation  
P.O. Box 638  
Pendleton, Oregon 97801

Dear Ms. Farrow

**TRANSMITTAL OF AREA OF POTENTIAL EFFECT (APE) FOR TANK CLOSURE AND  
WASTE MANAGEMENT ENVIRONMENTAL IMPACT STATEMENT (TC & WM EIS)  
FOR THE HANFORD SITE, RICHLAND, WASHINGTON**

The purpose of this letter is to initiate the National Historic Preservation Act (NHPA) Section 106 process and to provide your office with the APE for the proposed activities under evaluation in the TC & WM EIS "the project." This notification is in accordance with 36 CFR Part 800.4(a). The Notice of Intent (NOI) to prepare the Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington which describes the project, was published February 2, 2006 in the Federal Register (Enclosure1). The project is determined to be an undertaking that may affect historic properties. In accordance with 36 CFR 800.8, the U.S. Department of Energy, Richland Operations Office (RL) plans to coordinate its NHPA Section 106 review with the ongoing EIS process which will consider all aspects of the cultural environment.

The NHPA Section 106 process for "Borrow Area C" was started in coordination with the Hanford Site Solid Waste EIS (HSW EIS). The RL received feedback at that time indicating that other areas should be considered in the APE, including Rattlesnake Mountain and its viewshed. RL subsequently decided to consolidate several proposed actions into the scope of the TC & WM EIS as described in the NOI. The APE is based on the TC & WM NOI, and includes areas with auditory or visual effects (Enclosure 2, maps and figures).

The regulations for protection of historic properties, at 36 CFR 800.4(b)(2), allow for a phased approach for the identification and evaluation of historic properties. The alternatives under consideration consist of multiple large land areas and RL may use a phased approach to identify and evaluate historic properties. For example, a February 2006 cultural resource review (HCRC# 2006-600-008) was prepared for a portion of "Borrow Area C." This project is proceeding under a Comprehensive Environmental Response, Compensation, and Liability Act review which incorporates National Environmental Policy Act values. Based on comments received, RL plans to prepare a Memorandum of Agreement for and will provide a draft to your office and the State Historic Preservation Officer for review.

**CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION – April 6, 2007  
(continued)**

Ms. Teara Farrow  
07-SED-0220

-2-

APR 6 2007

Rattlesnake Mountain, Gable Butte, Gable Mountain, and Goose Egg Hill are known to be revered by area tribes for traditional, cultural and spiritual reasons and have been treated by RL as traditional cultural properties. Surveys, are being planned for the first and second weeks of April 2007. Tribal cultural representatives from your staff have been invited to participate in the surveys.

If you have any questions, please contact Pete J. Garcia, Jr., Director, Safety and Engineering Division, on (509) 372-1909.

Sincerely,

*Doug S. Shoop*  
f/s  
Doug S. Shoop, Assistant Manager  
for Safety and Engineering

SED:ALR

Enclosures\*

1. Federal Register, Vol 71, No. 22
2. Maps and Viewshed Photos

cc w/encls:

S. Harris, CTUIR  
J. Longenecker (Richland Office)

cc w/o encls:

E. P. Kennedy, PNNL

\* Enclosures are not reproduced here. See April 6, 2007, letter to the Confederated Tribes and Bands of the Yakama Nation on page C-197, which includes the same enclosures.

*Tank Closure and Waste Management Environmental Impact Statement for the  
Hanford Site, Richland, Washington*

**CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION – July 20, 2007**



**U.S. Department of Energy  
Office of River Protection**  
P.O. Box 450, MSIN H6-60  
Richland, Washington 99352

07-ORP-017

JUL 20 2007

Mr. Stuart Harris, Director  
Department of Science and Engineering  
Confederated Tribes of the Umatilla  
Indian Reservation  
P.O. Box 638  
Pendleton, Oregon 97801

Dear Mr. Harris:

**TANK CLOSURE AND WASTE MANAGEMENT (TC & WM) MEETINGS WITH  
THE CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION  
(CTUIR) AND THE U.S. DEPARTMENT OF ENERGY, OFFICE OF RIVER PROTECTION  
(ORP)**

This letter is to follow up on conversations ORP had with you and your staff regarding setting up quarterly meetings on the TC & WM Environmental Impact Statement (EIS). ORP would like to thank you for your interest in having a more focused meeting as part of the consultation process on the EIS. We would like to commence quarterly meetings and below are suggested dates for the remaining quarters this fiscal year. Please let us know which dates each quarter works for you.

August 1, 2007 or August 17, 2007  
September 20, 2007 or October 3, 2007

In addition, ORP is looking forward to meeting with the Board of Trustees on August 17, 2007, regarding the CTUIR communications plan. ORP believes these meetings will ensure successful future communications with CTUIR.

If you have any questions, please contact me, or your staff may contact Kim Ballinger, (509) 372-0810.

Sincerely,

Shirley J. Ballinger, Acting Manager  
Office of River Protection

cc: T. Bailor, CTUIR  
I. R. Triay, EM-1  
K. V. Clarke, RL

**CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION – September 5, 2007**

**From:** Rodriguez, Annabelle L  
**Sent:** Wednesday, September 05, 2007 5:15 PM  
**To:** 'camille.pleasants@colvilletribes.com'; 'TearaFarrow'; 'julie'; 'StuartHarris'; 'RicoCruz'; 'GabrielBohnee'; 'veras@nezperce.org'; 'Darla Jackson'; 'Mike'; 'Tony Smith'; 'Rex'; 'Jim, Russell'; 'Dana'; 'GregCleveland'; 'Leah Sue'; 'whr2hydro@verizon.net'; 'barbaraharper@ctuir.com'; 'hazmat@yakama.com'; 'lbuck@gcpud.org'  
**Cc:** Clarke, Kevin V; Garcia, Pete J Jr; Prendergast-Kennedy, Ellen L; Sijohn, Francis A; Rodriguez, Annabelle L  
**Subject:** Draft Tank Closure and Waste Management EIS (TC&WM EIS) MOA

All,

Attached is the Draft Tank Closure and Waste Management EIS (TC&WM EIS) MOA. The MOA refers to the February, 2006 Federal Register Notice. That Notice and a map can be found in the July 30, 2007 correspondence that DOE transmitted to Tribes/SHPO (cultural review and survey, 07-SED-0325, for this project).

As stated in my previous email, Project staff would like to meet on September 18 to begin discussin on the draft TC&WM EIS MOA. Location and time to follow. I will set up a telecon line if you would like to participate by phone.

ACHP has been invited to participate in the MOA. You will be receiving a copy of the letter within the week.

Thank you,  
Annabelle Rodriguez

**Attachment to Confederated Tribes of the Umatilla Indian Reservation, September 5, 2007 –  
Memorandum of Agreement**

Draft September 5, 2007 4:15 p.m.

**--DRAFT--**

**MEMORANDUM OF AGREEMENT  
FOR TANK CLOSURE AND WASTE MANAGEMENT  
ENVIRONMENTAL IMPACT STATEMENT,  
HANFORD SITE, RICHLAND, WASHINGTON  
AMONG THE U. S. DEPARTMENT OF ENERGY,  
THE WASHINGTON STATE HISTORIC PRESERVATION OFFICE,  
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION**

**CONSULTING PARTIES & CONCURRING SIGNATORIES: YAKAMA NATION,  
CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION,  
WANAPUM, AND THE NEZ PERCE TRIBE**

**WHEREAS**, the U. S. Department of Energy (DOE) has proposed an undertaking consisting of the proposed actions and alternatives described in the revised Notice of Intent (NOI) for the Tank Closure & Waste Management Environmental Impact Statement (TC&WM EIS) [71 Fed. Reg. 5655, February 2, 2006] [Attachment A]. Two primary project activity areas include the 200 East and 200 West Areas. The proposed actions would involve the use of the borrow source at Area C, located in the 600 Area of the Hanford Site (see attached map for description). In order to implement the action(s) DOE decides to pursue, based on the analyses presented in the TC&WM EIS (and as documented in a Record of Decision, or ROD, at the end of the EIS process), DOE would need to acquire additional quantities of fine-grained silt loam material from Area C; and

**WHEREAS**, the TC&WM EIS analyses will include discussion of potential impacts to cultural, aesthetic, and historic resources, and will identify tribal interests, concerns, and issues regarding the proposed use of the borrow source at Area C. The EIS will also identify possible mitigation measures that DOE could take to offset potential environmental impacts that have been identified. This information will be presented for consideration by other agencies, stakeholders, and Tribal nations during the public comment period on the Draft TC&WM EIS, currently scheduled for Spring 2008. In consideration of the input from Federal, state, and local agencies, consultations with Native American tribal governments, and public comments on the Draft EIS, DOE will revise and publish a Final EIS, followed by a ROD to document the decisions reached by DOE based on the EIS analyses. The ROD will also identify the mitigation actions that DOE would take to minimize or avoid the potential adverse impacts associated with implementing the selected actions; and

**WHEREAS**, the Record of Decision (ROD) for the *Hanford Comprehensive Land Use Plan Environmental Impact Statement* (HCP EIS) selected the preferred alternative for implementation, as presented in the final EIS. Borrow source Area C was designated as

**Predecisional Draft  
For Discussion Purposes Only**

Page 1 of 6

**Attachment to Confederated Tribes of the Umatilla Indian Reservation, September 5, 2007 – Memorandum of Agreement (*continued*)**

Draft September 5, 2007 4:15 p.m.

"Conservation (Mining)" as DOE's preferred quarry site for basalt rock and silty soil materials to be used for large waste-management area covers in the Central Plateau. The final HCP EIS preferred alternative indicates that a portion of the ALE Reserve (Borrow Area C) would be managed as Conservation (Mining) during the remediation of the Hanford Site, and would be DOE's preferred quarry site for basalt rock and silty soil materials to be used for large waste-management area covers in the Central Plateau. The final HCP EIS discussion indicates that this designation was being made as a trade-off, based on DOE's receipt of public comments on the Draft EIS and input from the cooperating agencies, including area Tribes. Greater value was placed by the public and the cooperating agencies on preservation of the wildlife corridor running through the McGee Ranch/Umtanum Ridge area, which DOE had previously identified as its preferred quarry site. In addition to the wildlife corridor function, the mature shrub-steppe vegetation structure in the McGee Ranch area was considered to have greater wildlife value than the cheat grass in the ALE Reserve (Borrow Area C) quarry site. As a result of this tradeoff, the McGee Ranch was included in the National Wildlife Refuge and designated as Preservation, and the ALE Reserve (Borrow Area C) designated as Conservation (Mining).

**WHEREAS**, DOE has conducted a cultural resources review (CRR) and inventory in support of the proposed actions being evaluated in the TC&WM EIS (#2007-600-018). Several CRRs are associated with the borrow source at Area C, and the cultural resources review of Area C is now considered to be complete. (Attachment B, Letter dated July 30, 2007 to Dr. Allyson Brooks, State Historic Preservation Officer, from David A. Brockman, Manager, DOE Richland Operations Office). The CRRs identify the cultural resources located within the area of potential project effect; and

**WHEREAS**, after further review, in July 2007 DOE identified that the proposed project activities would indirectly result in visual and auditory effects to Rattlesnake Mountain, Gable Butte, and Gable Mountain. Borrow Source Area C was found to have no potential to contain subsurface cultural resources, and low potential for other areas; and

**WHEREAS**, DOE has consulted with the Washington State Historic Preservation Officer (SHPO), Advisory Council on Historic Preservation (AChP), Confederated Tribes of the Umatilla Indian Reservation, Nez Perce, Wanapum, and the Yakama Nation, in accordance with Section 106 of the National Historic Preservation Act (NHPA), and pursuant to implementing regulations published in 36 CFR Part 800, to address the adverse effects on historic properties; and

**WHEREAS**, pursuant to 36 CFR 800.6(c)(3) DOE has invited the Confederated Tribes of the Umatilla Indian Reservation, Nez Perce Tribe, Wanapum, and the Yakama Nation to sign this MOA as concurring parties;

**Attachment to Confederated Tribes of the Umatilla Indian Reservation, September 5, 2007 –  
Memorandum of Agreement (*continued*)**

Draft September 5, 2007 4:15 p.m.

**NOW, THEREFORE**, DOE agrees to implement the following stipulations in satisfaction of its NHPA Section 106 obligations for the proposed undertaking:

**STIPULATIONS**

DOE will ensure that the following stipulations are carried out:

**I. MITIGATE ADVERSE EFFECTS TO CULTURAL INTEGRITY OF HABITAT AND  
TO TRADITIONAL PLANTS**

1. DOE will consider all tribal recommendations consistent with the BrMAP for those areas that will be disturbed and/or affected by the proposed undertaking.
2. Tribes will be invited to participate in ecological and/or biological surveys, and in revegetation efforts related to the Area C borrow source wherever possible.
3. DOE will seek early involvement, consultation, and input from Hanford Tribes and Hanford groups who have experience in Hanford restoration to achieve culturally relevant and successful reclamation and/or re-vegetation of the impacted area. DOE will also review other available reclamation and/or re-vegetation documents that have been prepared for use at Borrow Source Area C for guidance and relevance to the undertakings addressed by this Memorandum of Agreement (MOA) (e.g., the Reclamation Plan developed under the NHPA Section 106 MOA for the 216-U-8 waste site in the 200-West Area, as part of a CERCLA five-year treatability study concerning the effectiveness of surface barriers).
4. DOE will commit to a culturally relevant native plant re-vegetation strategy as a preference where possible. If appropriate and feasible (in accordance with the Biological Resources Management Plan (BrMAP) [identify section(s)] and other guidance documents as described in Stipulation 3, native plant species from local germ-plasm will be used in the reclamation and re-vegetation seed mixture.
5. In accordance with the BrMAP [identify section(s)], DOE will commit to long-term reclamation rather than interim soil stabilization (with the caveat that there may be some cases where interim soil stabilization may not be avoidable if duration of activities is longer term). Specific guidelines will be developed collaboratively and incorporated into this MOA as an appendix, as appropriate, to help achieve this goal.

**II. MINIMIZATION AND AVOIDANCE OF VISUAL, AIR QUALITY AND AUDIBLE  
IMPACTS**

6. To minimize visual impacts resulting from the borrow pit, the project will restore and

**Predecisional Draft  
For Discussion Purposes Only**

Page 3 of 6

**Attachment to Confederated Tribes of the Umatilla Indian Reservation, September 5, 2007 – Memorandum of Agreement (*continued*)**

Draft September 5, 2007 4:15 p.m.

recontour the area in a culturally relevant manner as per stipulations 1-5 above.

7. To avoid visual and air quality impacts that may result from dust caused by construction activities, DOE will implement dust control procedures and apply soil fixative and water the area routinely.
8. To minimize visual and audible effects of project activities, DOE will coordinate timing of construction to assure that these activities do not unnecessarily interfere with Tribal ceremonial activities and religious use of Rattlesnake Mountain (*Lalik*). The tribes will be notified prior to project construction activities.
9. On a quarterly DOE will provide information to all parties on the implementation of the stipulations in this MOA over the duration of the project, and then annually over the course of the five-year revegetation effort.
10. Placeholder which could reflect what is in the final TC&WM EIS chapter on mitigation, and to the ROD.

**III. ADMINISTRATIVE PROVISIONS**

**Dispute Resolution**

1. If the SHPO or ACHP raises an objection to, or has a dispute regarding fulfillment of the terms of this MOA, that party will file a written objection with DOE.
2. Upon receipt of a written objection or dispute, DOE will consult with the disputant to resolve the objection or dispute. DOE also will notify the other signatories and concurring parties of the objection or dispute.
3. If DOE cannot resolve the objection or dispute within 60 calendar days of receipt of the written objection, they will forward to the ACHP documentation of the objection or dispute, a written proposal for its resolution, and request the ACHP's comments.
4. Within 30 calendar days of receipt of the written submittal, the ACHP shall either:
  - a. Notify DOE that it will not consider the dispute or provide recommendations, in which case the agencies may proceed with the proposed action; or,
  - b. Concur with DOE's proposed response to the objection and or dispute, whereupon they may proceed in accordance with the agreed-upon response; or,

**Attachment to Confederated Tribes of the Umatilla Indian Reservation, September 5, 2007 –  
Memorandum of Agreement (*continued*)**

Draft September 5, 2007 4:15 p.m.

- c. Provide DOE with recommendations, which DOE will take into account in reaching a final decision regarding response to the objection and/or dispute.
5. DOE shall take into account ACHP recommendations or comments provided in accordance with this stipulation with reference only to the subject of the objection; the DOE's responsibility to carry out actions under this MOA that are not the subject(s) of the dispute or objection shall remain unchanged. While the dispute is being resolved, the MOA continues in effect without change or suspension.
6. If the ACHP or a SHPO is contacted by a signatory, concurring party, or by a member of the public to discuss a significant concern or objection about implementation of the terms of this MOA, the contacted entity will notify DOE of the issue.
7. DOE will keep consulting parties apprised of any concern or objection raised and how each is resolved.

Amendments

Any concurring party and/or signatory to this MOA may request in writing to DOE that the MOA be amended. DOE will consult with the signatory and concurring parties in accordance with the procedures of 36 CFR § 800.6(c) for developing MOAs.

Termination

This MOA may be terminated by mutual agreement by providing an advance 30-day written notice to the other parties, provided that the parties will continue to consult during this 30-day waiting period in an attempt to reach agreement on actions that could be taken to avoid termination.

Effective Date

This MOA will become effective on the date that it has been signed by all signatories. DOE will ensure that each consulting party is provided a copy of the fully executed MOA.

**IV. Signatories**

**Department of Energy**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Dave Brockman  
Manager, Richland Operations Office

**Attachment to Confederated Tribes of the Umatilla Indian Reservation, September 5, 2007 –  
Memorandum of Agreement (*continued*)**

Draft September 5, 2007 4:15 p.m.

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Shirley Olinger  
Acting Manager, Office of River Protection

**Washington State Department of Archaeology and Historic Preservation**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Allyson Brooks  
State Historic Preservation Officer

**Advisory Council on Historic Preservation**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Jim Fowler

**V. CONCURRING PARTIES:**

**Nez Perce Tribe**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
XXXXXXXXXX  
title

**Confederated Tribes of the Umatilla Indian Reservation**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
XXXXXXXXXX  
title

**Wanapum Tribe**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
XXXXXXXXXX  
title

**Yakama Nation**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
XXXXXXXXXX  
title

*Tank Closure and Waste Management Environmental Impact Statement for the  
Hanford Site, Richland, Washington*

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**CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION – November 7, 2007**



U.S. Department of Energy  
~~OFFICE OF RIVER PROTECTION~~  
P.O. Box 450, MSIN H6-60  
Richland, Washington 99352

NOV 07 2007

07-ESQ-211

Mr. Stuart Harris, Director  
Department of Science and Engineering  
Confederated Tribes of the Umatilla  
Indian Reservation  
P.O. Box 638  
Pendleton, Oregon 97801

Dear Mr. Harris:

**TANK CLOSURE AND WASTE MANAGEMENT (TC & WM) ENVIRONMENTAL  
IMPACT STATEMENT (EIS) CULTURAL INFORMATION**

This letter is to follow up on conversations the U.S. Department of Energy (DOE), Office of River Protection had with your staff when we met on October 24, 2007. At that meeting DOE indicated that if you wanted to provide some narrative to be included in the TC & WM EIS related to your unique cultural and historic perspective on the Hanford Site, and specifically Rattlesnake and Gable Mountains, we would provide you that opportunity. DOE invites the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) to submit its unique perspectives in such a write up, which can either be coordinated with the perspectives of other tribes, or provide just the CTUIR's unique tribal perspective. This write up will be included in the TC & WM EIS draft and can be updated or expanded upon, as you wish, in the final EIS. The write up should be provided to Mary Beth Burandt by December 14, 2007, to assure its inclusion in the draft.

If you have any questions, please contact me, or your staff may contact Mary Beth Burandt, Office of the Environmental Safety and Quality, (509) 372-7772.

Sincerely,

*fcr* Shirley J. Olinger, Acting Manager  
Office of River Protection

ESQ:MEB

cc: F. Marcinowski, EM-10  
M. A. Nielson, EM-13  
J. E. Loving, GC-20  
T. Bailor, CTUIR  
R. Cruz, CTUIR  
T. Farrow, CTUIR  
S. L. Dahl, Ecology  
J. J. Lyon, Ecology

**CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION – December 20, 2007**



**Department of Energy**  
Washington, DC 20585

*DEC 20 2007*

Ms. Teara Farrow, Manager  
Cultural Resources Protection Program  
Confederated Tribes of the Umatilla  
Indian Reservation  
P.O. Box 638  
Pendleton, Oregon 97801

Dear Ms. Farrow:

Dr. Inés Triay has asked that I respond to your November 26, 2007, letter concerning the Department of Energy's (DOE) undertakings at Borrow Area C on the Hanford Site and requesting the list of experts who are preparing the *Hanford Tank Closure and Waste Management Environmental Impact Statement* (TC & WM EIS). DOE's process for preparing EISs under the National Environmental Policy Act (NEPA) follows the Council on Environmental Quality regulations at 40 CFR Parts 1500 – 1508, and DOE'S NEPA Implementing Procedures at 10 CFR Part 1021, which states DOE's policy to follow the letter and spirit of the Act. The regulations (40 CFR 1502.17) require the inclusion of all EIS preparers and their qualifications in a draft and final EIS.

Because we follow an established process that makes the information contained in the EIS available to all interested parties simultaneously, it would be premature to provide a list of preparers to your program at this time. That information will be available in the draft EIS expected to be issued for public comment next year.

Nevertheless, we want to address your concerns while the EIS is in progress to the extent possible. Please recall that at the September 18, 2007, meeting with the tribes' cultural resources representatives, DOE specifically discussed cultural concerns regarding mitigation activities at Borrow Area C. DOE indicated that the cultural resources surveys in which the Confederated Tribes of the Umatilla Indian Reservation and other tribal representatives participated, and which were provided to all interested tribes in July 2007, will be used in the TC & WM EIS. As DOE indicated during the meeting, Charlotte Johnson, EIS Project Manager, is the contractor's point of contact.

The public comment period for the draft TC & WM EIS will provide you with an opportunity to comment on the adequacy of the cultural resources analyses. During the most recent series of quarterly meetings with tribal representatives, DOE offered the tribes a near-term opportunity to provide narrative about your cultural and historic perspective of the Hanford site, particularly Rattlesnake and Gable Mountains, for inclusion in the draft and final EIS.



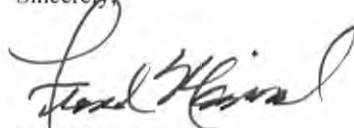
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**CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION – December 20, 2007**  
**(continued)**

2

I hope the information provided above will help address your concerns regarding the cultural resources section of the EIS. If you have questions, please contact me at (202) 586-0370 or for matters specific to the TC & WM EIS, please contact the EIS Document Manager, Ms. Mary Beth Burandt, at (509) 372-7772.

Sincerely,



Frank Marcinowski  
Deputy Assistant Secretary  
for Regulatory Compliance  
Office of Environmental Management

cc: Stuart Harris, CTUIR-DOSE  
Mary Beth Burandt, EIS Document Manager, ORP  
Kevin Clarke, DOE-RL  
Dr. Inés Triay, EM-2

**CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION – May 29, 2008**

**From:** Prendergast-Kennedy, Ellen L [Ellen.Prendergast@pnl.gov]  
**Sent:** Thursday, May 29, 2008 12:10 PM  
**To:** camille.pleasants@colvilletribes.com; HNRTC - Russell, Jim; Leah Sue; Greg Cleveland; whr2hydro@verizon.net; Dana Miller; Rex; Ibuck@gcpud.org; Lela Buck; Mike; veras@nezperce.org; Darla Jackson; HNRTC - Smith, Anthony; hazmat@yakama.com; jlongene; TearaFarrow; HNRTC - Harris, Stuart; tombailor@ctuir.com; HNRTC - Cruz, Rico; Whitlam, Rob (DAHP)  
**Cc:** Rodriguez, Annabelle L; Sijohn, Francis A; Prendergast-Kennedy, Ellen L; Leonard, Michael W; Mcfarland, Douglas P  
**Subject:** APE notification for INTERIM PRETREATMENT SYSTEM FACILITY TO SUPPORT TREATMENT OF HANFORD TANK WASTE AND THE WASTE TREATMENT PLANT. HCRC# 2008-200-017  
**Attachments:** APE.pdf

Good morning all,

Please find attached an APE notification initiating the cultural resources review for Interim Pretreatment System Facility to Support Treatment of Hanford Tank Waste and the Treatment Plant (HCRC#2008-200-017)

We are tentatively planning to conduct a field survey of the ~13 acre area in the 200 East Area where the proposed Interim Pretreatment System facilities may be sited on June 5, 2008 (HCRC# 2007-200-017)

The project engineer has requested FH (landlord) to retrieve the most recent radiological survey data available for the 13 acre area based on the concern regarding site surface contamination raised at the tribal cultural resources issues meeting on May 22, 2008. It is the expectation that the information will be available for you before the June 5 survey date. If the information cannot be made available by the June 5 survey date, the survey will need to be cancelled and rescheduled. A notification of schedule change will be sent no later than Wednesday morning on June 4, 2008.

I will be out of the office between May 30 and June 4, 2008, so all future communications regarding radiological information and survey schedule change will be communicated to you from Annabelle Rodriguez and/or Doug McFarland.

We will be leaving the Sigma Five building at 8:30 and can meet those travelling in at the WTP entrance to the 200 East Area.

**Ellen P. Kennedy, Anthropologist  
Project Manager  
Hanford Cultural Resources Project  
Pacific Northwest National Laboratory  
PO Box 999, MSIN K6-75  
Richland, Washington 99352  
phone (509) 371-7105 fax (509) 371-7083 mobile: (509) 430-6211**

**NOTE: NEW PHONE AND FAX NUMBER**

**Attachment to Confederated Tribes of the Umatilla Indian Reservation, May 29, 2008 –  
Project Description**

From the desk of  
**ANNABELLE L. RODRIGUEZ**  
U.S. Department of Energy, Richland Operations Office  
Cultural and Historic Resources Program  
(509) 372-0277 Fax (509) 376-0306

*This letter is to notify your office of a Section 106 Cultural Resources Review recently received by the U.S. Department of Energy, Richland Operations Office. This review proposes a project determined to be an undertaking which might affect historic properties. This notification is in accordance with 36 CFR Part 800.4(a) to document the area of potential effect for this project. This correspondence is also being sent to you to seek consultation on these projects per 36 CFR 800. The Hanford Cultural Resources Project (HCRP), the Hanford Site cultural resources contractor, has compiled the attached information. Please contact me at (509) 372-0277 or Ellen Prendergast, HCRP Section 106 Coordinator (509) 376-4626 if you have any questions.*

*Thank you,  
Annabelle Rodriguez*

May 29, 2008

**CULTURAL RESOURCES REVIEW FOR INTERIM PRETREATMENT SYSTEM  
FACILITY TO SUPPORT TREATMENT OF HANFORD TANK WASTE AND THE  
WASTE TREATMENT PLANT. HCRC# 2008-200-017**

**Background**

Construction of the the U. S. Department of Energy's Waste Treatment Plant (WTP) Pretreatment (PT) facility was delayed to allow for resolution of seismic and other technical issues and is projected to be operational in 2019. The WTP Low Activity Waste (LAW) Vitrification facility construction could be ready for startup approximately five years before the PT facility around 2014. Since the LAW facility relies on the PT facility to provide feed, the LAW startup would have to be delayed or an alternate feed source identified.

The Interim Pretreatment System (IPS) Facility is being proposed as an interim solution to the address the time gaps between completions of these two facilities. The IPS would provide pretreated LAW feed and allow the WTP LAW facility to begin operation in advance of the WTP Pretreatment facility. An earlier start to LAW treatment would also provide additional tank farm space management benefits and would allow for early processing and final treatment of LAW waste. Preliminary evaluations indicated that 5 years of early LAW treatment could free up 4.7 million gallons of double shell tank (DST) space and process up to 8% of the total LAW inventory (see RPP-29981).

**Project Description**

The proposed project is currently in the preconceptual planning stages. Two locations in the 200 East Area of the Hanford Site have been identified for the siting of the IPS facility (Figure 1). Construction and operations are planned to support treatment of tank wastes and the Waste Treatment Plant Vitrification Facility. The two potential sites are identified as IPS Candidate Site numbers 1 & 2 in Figure 2. Figure 2 also depicts the approximate

**Attachment to Confederated Tribes of the Umatilla Indian Reservation, May 29, 2008 – Project Description (*continued*)**

location of the IPS Facility and additional footprint required for construction. The footprint area for IPS Candidate Site number 1 totals approximately 8 acres and IPS Candidate Site number 2 totals approximately 4.2 acres. Expected ground disturbing activities that may occur in the proposed footprints includes waste processing facilities, connections to water and waste treatment lines, facility ventilation, support buildings, parking area and contingency space for waste processing facility expansion (Figure 2). Waste processing facilities will include concrete vaults containing process vessels that will extend approximately 30 feet below grade; similarly, concrete building enclosed processing vessels may extend approximately 30 feet above grade also.

**Area of Potential Effect (APE):** The direct effects Area of Potential Effect (APE) is confined to the two proposed locations and associated footprint as well as additional areas of ground disturbance required to access existing waste treatment and water lines located north of the proposed facility locations identified in Figure 2 and 3.

**Existing Information**

- The project APE has been surveyed for cultural resources by three different surveys located in close proximity to each other covering all of the project APE; HCRC#96-200-109, HCRC# 87-200-002 and HCRC#88-200-015. No cultural resources were located by these surveys.
- A review of 2006 aerial photographs of the project area indicates that most of the project area is undisturbed (Figure 3)
- The project was presented at the DOE Cultural and Historic Resources Program tribal cultural resources meeting on May 22, 2008. Tribes expressed an interest in having the area resurveyed for cultural resources because the area is undisturbed. A survey is tentatively scheduled for June 5, 2008.

**Next Steps**

- Seek and gather input on impacts to historic properties
- Complete cultural resources review assessment

**Attachment to Confederated Tribes of the Umatilla Indian Reservation, May 29, 2008 –  
Project Description (*continued*)**

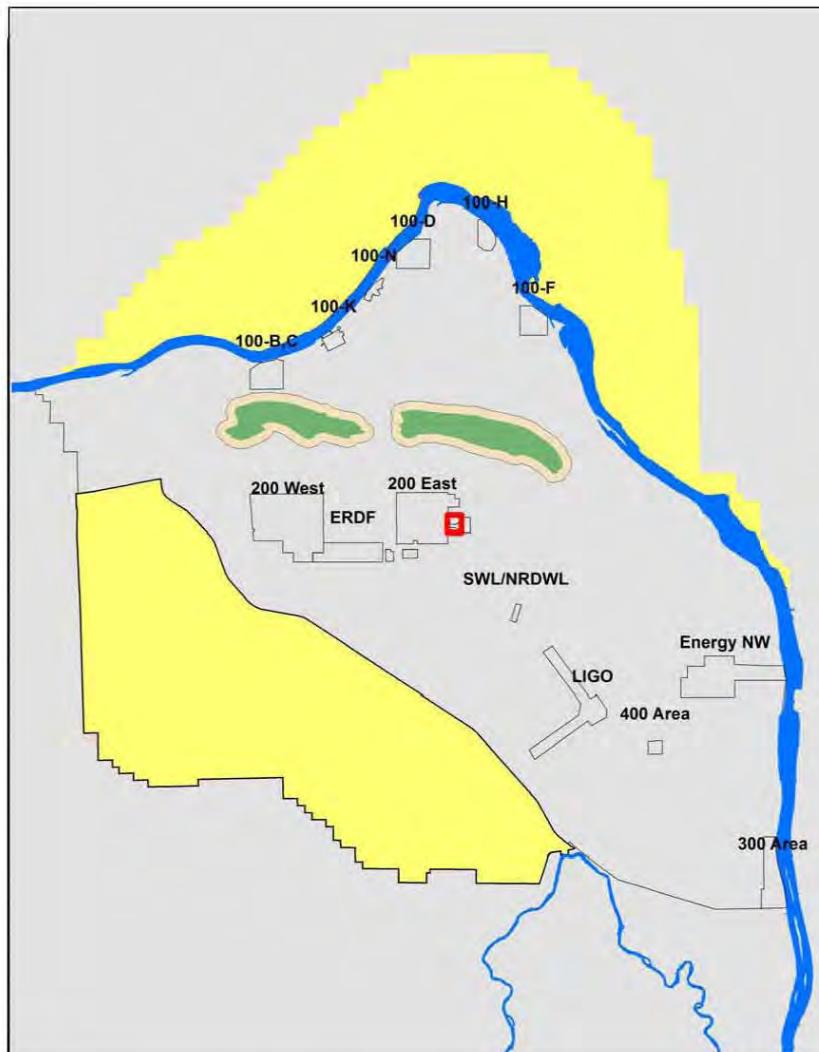


Figure 1. Overview of Hanford Site and relative location of project area, depicted in red, east of the 200 East Area.

**Attachment to Confederated Tribes of the Umatilla Indian Reservation, May 29, 2008 – Project Description (*continued*)**

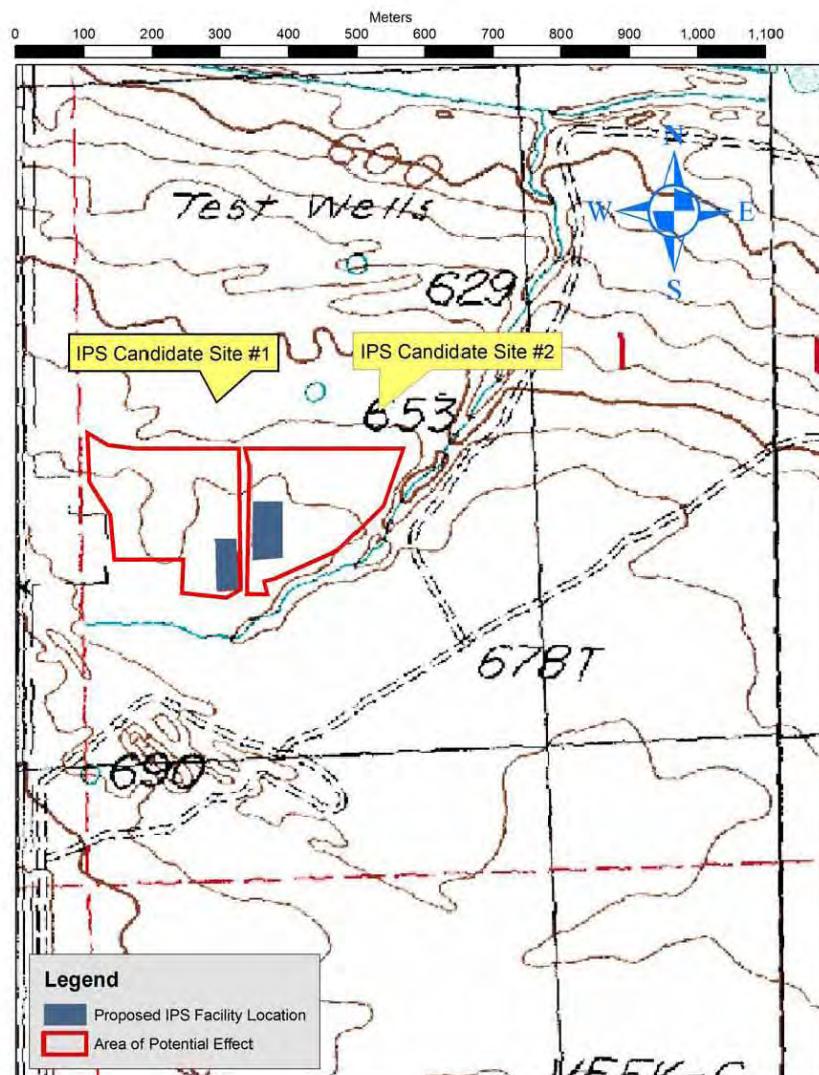


Figure 2. Area of potential effect overlaid on a USGS topographic map, Washington State Quadrangle, Gable Butte, 1986, 7.5' Series. Township 12 North, 26 East, Section 1.

**Attachment to Confederated Tribes of the Umatilla Indian Reservation, May 29, 2008 –  
Project Description (*continued*)**



Figure 3. Area of potential effect overlaid on a 2006 aerial photograph.

**References:**

RPP-29981, March 2007, *Evaluation of Starting the Waste Treatment and Immobilization Plant (WTP) Low Activity Waste (LAW) Facility First*, Rev. 1, CH2M HILL Hanford Group, Inc., Richland WA.

**CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION – June 4, 2008**



**U.S. Department of Energy**  
**Office of River Protection**  
P.O. Box 450, MSIN H6-60  
Richland, Washington 99352

JUN 04 2008

08-ESQ-114

Mr. Stuart Harris, Director  
Department of Science and Engineering  
Confederated Tribes  
of the Umatilla Indian Reservation  
P.O. Box 638 / 73239 Confederated Way  
Pendleton, Oregon 97801

Dear Mr. Harris:

**ENVIRONMENTAL IMPACT STATEMENT GROUNDWATER MODELING PROGRESS**

I am writing to let you know that we have finished the material property evaluation of the vadose zone. This evaluation process was briefed at the Hanford Advisory Board meeting on February 7, 2008, and at the cultural resource committee on April 17, 2008. You had some members of your staff attend these meetings, and an offer was made to provide a more detailed update. Also, to further our communications, we offer to resume the quarterly informational briefings with your technical staff and are prepared to conduct the first on July 10, 2008.

Please contact Mary Beth Burandt, Environmental Compliance Division, (509) 372-7772, to set up a specific time and date for this critical informational briefing.

Sincerely,

A handwritten signature in black ink, appearing to read "Shirley J. Olinger".

Shirley J. Olinger, Manager  
Office of River Protection

ESQ:MEB

cc: T. Farrow, CTUIR  
F. A. Sijohn, RL

**CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION – February 3, 2010**



**U.S. Department of Energy**  
**Office of River Protection**  
P.O. Box 450, MSIN H6-60  
Richland, Washington 99352

FEB 03 2010

10-ORP-005

Mr. Elwood Patawa, Chairman  
Board of Trustees  
Confederated Tribes of the  
Umatilla Indian Reservation  
46411 Timine Way  
Pendleton, Oregon 97801

Dear Chairman Patawa:

**DRAFT TANK CLOSURE & WASTE MANAGEMENT ENVIRONMENTAL IMPACT  
STATEMENT (TC & WM EIS) CONSULTATION**

The purpose of this letter is to communicate the U.S. Department of Energy (DOE), Office of River Protection's (ORP) interest in consulting with the Umatilla Tribe on the Draft TC & WM EIS. The Draft TC & WM EIS analyzes the following three key areas: (1) retrieval and management of waste from 177 underground storage tanks at Hanford and closure of the single-shell tanks; (2) decommissioning of the Fast Flux Test Facility, a nuclear test reactor, and its auxiliary facilities; and (3) ongoing and expanded solid waste management operations on site, including the disposal of Hanford's waste and limited volumes of waste from other DOE sites in an Integrated Disposal Facility(ies). The Draft TC & WM EIS also analyzes No Action Alternatives for each of the three types of proposed actions.

We would like your counsel in identifying your preferences on how best to consult with the Umatilla for the Draft TC & WM EIS. We have already provided your staff with copies of the Draft TC & WM EIS as well as summaries when it came out in October, 2009. Since the beginning of the Draft TC & WM EIS process in 2006, the Document Manager, Mary Beth Burandt has spoken with your staff on many occasions about technical issues and concerns. Discussions related to the National Historic Preservation Act had been on going, and at the request of your staff, those discussions were delayed until the release of the Draft TC & WM EIS for review. We believe now is the appropriate time to resume those discussions. In addition, the previous invitation to provide narrative to be included in the final Draft TC & WM EIS related to your unique cultural and historical perspective is still available.

We want to offer to you whatever level of consultation that you desire, with the hope that your comments can be formalized by the March 19, 2010 comment deadline. Consultation activities could include staff-to-staff technical briefings, government-to-government consultations between DOE senior officials and elected Tribal leaders, formal written comments on the Draft TC & WM EIS, or other activities the Umatilla would like to propose consistent with established policies and protocols.

**CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION – February 3, 2010**  
**(continued)**

FEB 03 2010

Mr. Elwood Patawa  
10-ORP-005

-2-

We welcome the Umatilla Tribe's participation in the Draft TC & WM EIS and look forward to establishing a mutually agreed-upon path forward for consultation. If you have any questions, please contact Jill Conrad, DOE Tribal Program Manager, (509) 376-0288.

Sincerely,



Shirley J. Olinger, Manager  
Office of River Protection

ORP:TEO

cc: D. A. Brockman, RL  
J. L. Conrad, RL  
M. S. McCormick, RL  
S. Harris, Umatilla

**C.3.1.4      Confederated Tribes of the Colville Reservation Correspondence**

**To:** Ms. Camille Pleasants, Confederated Tribes of the Colville Reservation  
**From:** Ms. Annabelle Rodriguez, U.S. Department of Energy  
**Date:** August 12, 2003  
**Subject:** Notification of a Section 106 Cultural Resources Review (see page C-173)

**To:** Ms. Camille Pleasants, Confederated Tribes of the Colville Reservation  
**From:** Mr. Joel Hebdon, U.S. Department of Energy  
**Date:** September 3, 2003  
**Subject:** Cultural Resources Review (CRR) of "Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks (Tank Closure) Environmental Impact Statement" (HCRC# 2003-200-044)

**To:** Ms. Camille Pleasants, Confederated Tribes of the Colville Reservation  
**From:** Ms. Ellen Prendergast-Kennedy, Pacific Northwest National Laboratory  
**Date:** March 27, 2007  
**Subject:** Invitation to Participate in Cultural Resources Survey for Portions of the Area C Borrow Pit Area and the 600 Area for the *Tank Closure and Solid Waste EIS/NHPA 106 Compliance* (see page C-196)

**To:** Ms. Camille Pleasants, Confederated Tribes of the Colville Reservation  
**From:** Mr. Doug S. Shoop, U.S. Department of Energy  
**Date:** April 6, 2007  
**Subject:** Transmittal of Area of Potential Effect (APE) for *Tank Closure and Waste Management Environmental Impact Statement (TC & WM EIS) for the Hanford Site, Richland, Washington*

**To:** Ms. Camille Pleasants, Confederated Tribes of the Colville Reservation  
**From:** Ms. Annabelle Rodriguez, U.S. Department of Energy  
**Date:** September 5, 2007  
**Subject:** *Draft Tank Closure and Waste Management Environmental Impact Statement (TC & WM EIS) Memorandum of Agreement*

**To:** Ms. Camille Pleasants, Confederated Tribes of the Colville Reservation  
**From:** Ms. Ellen Prendergast-Kennedy, Pacific Northwest National Laboratory  
**Date:** May 29, 2008  
**Subject:** Notification of a Section 106 Cultural Resources Review

**CONFEDERATED TRIBES OF THE COLVILLE RESERVATION – September 3, 2003**



**Department of Energy**  
Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

03-RCA-0377

**SEP 3 2003**

Ms. Camille Pleasants  
Interim Tribal Historic Preservation Officer  
Confederated Tribes of  
the Colville Reservation  
P.O. Box 150  
Nespelem, Washington 99155

Dear Ms. Pleasants:

CULTURAL RESOURCES REVIEW (CRR) OF RETRIEVAL, TREATMENT, AND  
DISPOSAL OF TANK WASTE AND CLOSURE OF SINGLE-SHELL TANKS (TANK  
CLOSURE) ENVIRONMENTAL IMPACT STATEMENT (HCRC# 2003-200-044)

Enclosed is a CRR completed by the U.S. Department of Energy, Richland Operations Office's (RL) Hanford Cultural Resources Laboratory (HCRL) on August 28, 2003, for the subject project located on the Hanford Site, Richland, Washington. The results of the records and literature review conducted by HCRL staff are described in the enclosed CRR. RL concurs with the findings as stated in the enclosed CRR. Pursuant to 36CFR 800.2 (4), we are providing documentation to support these findings and to involve your office as a consulting party in the NHPA Section 106 Review process. If you have any questions, please contact Annabelle L. Rodriguez, of my staff, on (509) 372-0277.

Sincerely,

Joel Hebdon, Director  
Regulatory Compliance and Analysis Division

RCA:ALR

Enclosure \*

cc w/o encl:  
E. L. Prendergast, PNNL

\* Enclosure is not reproduced here. See September 3, 2003, letter to the Confederated Tribes and Bands of the Yakama Nation on page C-179, which includes the same enclosure.

*Tank Closure and Waste Management Environmental Impact Statement for the  
Hanford Site, Richland, Washington*

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**CONFEDERATED TRIBES OF THE COLVILLE RESERVATION – April 6, 2007**



**Department of Energy**  
Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

07-SED-0219

APR 6 2007

Ms. Camille Pleasants  
Tribal Historic Preservation Officer  
Confederated Tribes of  
the Colville Reservation  
P.O. Box 150  
Nespelem, Washington 99155

Dear Ms. Pleasants:

**TRANSMITTAL OF AREA OF POTENTIAL EFFECT (APE) FOR TANK CLOSURE AND  
WASTE MANAGEMENT ENVIRONMENTAL IMPACT STATEMENT (TC & WM EIS)  
FOR THE HANFORD SITE, RICHLAND, WASHINGTON**

The purpose of this letter is to initiate the National Historic Preservation Act (NHPA) Section 106 process and to provide your office with the APE for the proposed activities under evaluation in the TC & WM EIS "the project." This notification is in accordance with 36 CFR Part 800.4(a). The Notice of Intent (NOI) to prepare the Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington which describes the project, was published February 2, 2006 in the Federal Register (Enclosure 1). The project is determined to be an undertaking that may affect historic properties. In accordance with 36 CFR 800.8, the U.S. Department of Energy, Richland Operations Office (RL) plans to coordinate its NHPA Section 106 review with the ongoing EIS process which will consider all aspects of the cultural environment.

The NHPA Section 106 process for "Borrow Area C" was started in coordination with the Hanford Site Solid Waste EIS (HSW EIS). The RL received feedback at that time indicating that other areas should be considered in the APE, including Rattlesnake Mountain and its viewshed. RL subsequently decided to consolidate several proposed actions into the scope of the TC & WM EIS as described in the NOI. The APE is based on the TC & WM NOI, and includes areas with auditory or visual effects (Enclosure 2, maps and figures).

The regulations for protection of historic properties, at 36 CFR 800.4(b)(2), allow for a phased approach for the identification and evaluation of historic properties. The alternatives under consideration consist of multiple large land areas and RL may use a phased approach to identify and evaluate historic properties. For example, a February 2006 cultural resource review (HCRC# 2006-600-008) was prepared for a portion of "Borrow Area C." This project is proceeding under a Comprehensive Environmental Response, Compensation, and Liability Act review which incorporates National Environmental Policy Act values. Based on comments received, RL plans to prepare a Memorandum of Agreement for and will provide a draft to your office and the State Historic Preservation Officer for review.

**CONFEDERATED TRIBES OF THE COLVILLE RESERVATION – April 6, 2007 (continued)**

Ms. Camille Pleasants  
07-SED-0219

-2-

APR 6 2007

Rattlesnake Mountain, Gable Butte, Gable Mountain, and Goose Egg Hill are known to be revered by area tribes for traditional, cultural and spiritual reasons and have been treated by RL as traditional cultural properties. Surveys, are being planned for the first and second weeks of April 2007. Tribal cultural representatives from your staff have been invited to participate in the surveys.

If you have any questions, please contact Pete J. Garcia, Jr., Director, Safety and Engineering Division, on (509) 372-1909.

Sincerely,

*D.S. Shoop*  
Doug S. Shoop, Assistant Manager  
for Safety and Engineering

SED:ALR

Enclosures\*

1. Federal Register, Vol 71, No. 22
2. Maps and Viewshed Photos

cc w/o encls:

E. P. Kennedy, PNNL

\* Enclosures are not reproduced here. See April 6, 2007, letter to the Confederated Tribes and Bands of the Yakama Nation on page C-197, which includes the same enclosures.

**CONFEDERATED TRIBES OF THE COLVILLE RESERVATION – September 5, 2007**

**From:** Rodriguez, Annabelle L

**Sent:** Wednesday, September 05, 2007 5:15 PM

**To:** 'camille.pleasants@colvilletribes.com'; 'TearaFarrow'; 'julie'; 'StuartHarris'; 'RicoCruz'; 'GabrielBohnee'; 'veras@nezperce.org'; 'Darla Jackson'; 'Mike'; 'Tony Smith'; 'Rex'; 'Jim, Russell'; 'Dana'; 'Greg Cleveland'; 'Leah Sue'; 'whr2hydro@verizon.net'; 'barbaraharper@ctuir.com'; 'hazmat@yakama.com'; 'lbuck@gcpud.org'

**Cc:** Clarke, Kevin V; Garcia, Pete J Jr; Prendergast-Kennedy, Ellen L; Sijohn, Francis A; Rodriguez, Annabelle L

**Subject:** Draft Tank Closure and Waste Management EIS (TC&WM EIS) MOA

All,

Attached is the Draft Tank Closure and Waste Management EIS (TC&WM EIS) MOA. The MOA refers to the February, 2006 Federal Register Notice. That Notice and a map can be found in the July 30, 2007 correspondence that DOE transmitted to Tribes/SHPO (cultural review and survey, 07-SED-0325, for this project).

As stated in my previous email, Project staff would like to meet on September 18 to begin discussin on the draft TC&WM EIS MOA. Location and time to follow. I will set up a telecon line if you would like to participate by phone.

ACHP has been invited to participate in the MOA. You will be receiving a copy of the letter within the week.

Thank you,  
Annabelle Rodriguez

**Attachment to Confederated Tribes of the Colville Reservation, September 5, 2007 –  
Memorandum of Agreement**

Draft September 5, 2007 4:15 p.m.

**--DRAFT--**

**MEMORANDUM OF AGREEMENT  
FOR TANK CLOSURE AND WASTE MANAGEMENT  
ENVIRONMENTAL IMPACT STATEMENT,  
HANFORD SITE, RICHLAND, WASHINGTON  
AMONG THE U. S. DEPARTMENT OF ENERGY,  
THE WASHINGTON STATE HISTORIC PRESERVATION OFFICE,  
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION**

**CONSULTING PARTIES & CONCURRING SIGNATORIES: YAKAMA NATION,  
CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION,  
WANAPUM, AND THE NEZ PERCE TRIBE**

**WHEREAS**, the U. S. Department of Energy (DOE) has proposed an undertaking consisting of the proposed actions and alternatives described in the revised Notice of Intent (NOI) for the Tank Closure & Waste Management Environmental Impact Statement (TC&WM EIS) [71 Fed. Reg. 5655, February 2, 2006] [Attachment A]. Two primary project activity areas include the 200 East and 200 West Areas. The proposed actions would involve the use of the borrow source at Area C, located in the 600 Area of the Hanford Site (see attached map for description). In order to implement the action(s) DOE decides to pursue, based on the analyses presented in the TC&WM EIS (and as documented in a Record of Decision, or ROD, at the end of the EIS process), DOE would need to acquire additional quantities of fine-grained silt loam material from Area C; and

**WHEREAS**, the TC&WM EIS analyses will include discussion of potential impacts to cultural, aesthetic, and historic resources, and will identify tribal interests, concerns, and issues regarding the proposed use of the borrow source at Area C. The EIS will also identify possible mitigation measures that DOE could take to offset potential environmental impacts that have been identified. This information will be presented for consideration by other agencies, stakeholders, and Tribal nations during the public comment period on the Draft TC&WM EIS, currently scheduled for Spring 2008. In consideration of the input from Federal, state, and local agencies, consultations with Native American tribal governments, and public comments on the Draft EIS, DOE will revise and publish a Final EIS, followed by a ROD to document the decisions reached by DOE based on the EIS analyses. The ROD will also identify the mitigation actions that DOE would take to minimize or avoid the potential adverse impacts associated with implementing the selected actions; and

**WHEREAS**, the Record of Decision (ROD) for the *Hanford Comprehensive Land Use Plan Environmental Impact Statement* (HCP EIS) selected the preferred alternative for implementation, as presented in the final EIS. Borrow source Area C was designated as

**Predecisional Draft  
For Discussion Purposes Only**

**Page 1 of 6**

**Attachment to Confederated Tribes of the Colville Reservation, September 5, 2007 –  
Memorandum of Agreement (*continued*)**

Draft September 5, 2007 4:15 p.m.

"Conservation (Mining)" as DOE's preferred quarry site for basalt rock and silty soil materials to be used for large waste-management area covers in the Central Plateau. The final HCP EIS preferred alternative indicates that a portion of the ALE Reserve (Borrow Area C) would be managed as Conservation (Mining) during the remediation of the Hanford Site, and would be DOE's preferred quarry site for basalt rock and silty soil materials to be used for large waste-management area covers in the Central Plateau. The final HCP EIS discussion indicates that this designation was being made as a trade-off, based on DOE's receipt of public comments on the Draft EIS and input from the cooperating agencies, including area Tribes. Greater value was placed by the public and the cooperating agencies on preservation of the wildlife corridor running through the McGee Ranch/Umtanum Ridge area, which DOE had previously identified as its preferred quarry site. In addition to the wildlife corridor function, the mature shrub-steppe vegetation structure in the McGee Ranch area was considered to have greater wildlife value than the cheat grass in the ALE Reserve (Borrow Area C) quarry site. As a result of this tradeoff, the McGee Ranch was included in the National Wildlife Refuge and designated as Preservation, and the ALE Reserve (Borrow Area C) designated as Conservation (Mining).

**WHEREAS**, DOE has conducted a cultural resources review (CRR) and inventory in support of the proposed actions being evaluated in the TC&WM EIS (#2007-600-018). Several CRRs are associated with the borrow source at Area C, and the cultural resources review of Area C is now considered to be complete. (Attachment B, Letter dated July 30, 2007 to Dr. Allyson Brooks, State Historic Preservation Officer, from David A. Brockman, Manager, DOE Richland Operations Office). The CRRs identify the cultural resources located within the area of potential project effect; and

**WHEREAS**, after further review, in July 2007 DOE identified that the proposed project activities would indirectly result in visual and auditory effects to Rattlesnake Mountain, Gable Butte, and Gable Mountain. Borrow Source Area C was found to have no potential to contain subsurface cultural resources, and low potential for other areas; and

**WHEREAS**, DOE has consulted with the Washington State Historic Preservation Officer (SHPO), Advisory Council on Historic Preservation (AChP), Confederated Tribes of the Umatilla Indian Reservation, Nez Perce, Wanapum, and the Yakama Nation, in accordance with Section 106 of the National Historic Preservation Act (NHPA), and pursuant to implementing regulations published in 36 CFR Part 800, to address the adverse effects on historic properties; and

**WHEREAS**, pursuant to 36 CFR 800.6(c)(3) DOE has invited the Confederated Tribes of the Umatilla Indian Reservation, Nez Perce Tribe, Wanapum, and the Yakama Nation to sign this MOA as concurring parties;

**Attachment to Confederated Tribes of the Colville Reservation, September 5, 2007 –  
Memorandum of Agreement (*continued*)**

Draft September 5, 2007 4:15 p.m.

**NOW, THEREFORE**, DOE agrees to implement the following stipulations in satisfaction of its NHPA Section 106 obligations for the proposed undertaking:

**STIPULATIONS**

DOE will ensure that the following stipulations are carried out:

**I. MITIGATE ADVERSE EFFECTS TO CULTURAL INTEGRITY OF HABITAT AND  
TO TRADITIONAL PLANTS**

1. DOE will consider all tribal recommendations consistent with the BrMAP for those areas that will be disturbed and/or affected by the proposed undertaking.
2. Tribes will be invited to participate in ecological and/or biological surveys, and in revegetation efforts related to the Area C borrow source wherever possible.
3. DOE will seek early involvement, consultation, and input from Hanford Tribes and Hanford groups who have experience in Hanford restoration to achieve culturally relevant and successful reclamation and/or re-vegetation of the impacted area. DOE will also review other available reclamation and/or re-vegetation documents that have been prepared for use at Borrow Source Area C for guidance and relevance to the undertakings addressed by this Memorandum of Agreement (MOA) (e.g., the Reclamation Plan developed under the NHPA Section 106 MOA for the 216-U-8 waste site in the 200-West Area, as part of a CERCLA five-year treatability study concerning the effectiveness of surface barriers).
4. DOE will commit to a culturally relevant native plant re-vegetation strategy as a preference where possible. If appropriate and feasible (in accordance with the Biological Resources Management Plan (BrMAP) [identify section(s)] and other guidance documents as described in Stipulation 3, native plant species from local germ-plasm will be used in the reclamation and re-vegetation seed mixture.
5. In accordance with the BrMAP [identify section(s)], DOE will commit to long-term reclamation rather than interim soil stabilization (with the caveat that there may be some cases where interim soil stabilization may not be avoidable if duration of activities is longer term). Specific guidelines will be developed collaboratively and incorporated into this MOA as an appendix, as appropriate, to help achieve this goal.

**II. MINIMIZATION AND AVOIDANCE OF VISUAL, AIR QUALITY AND AUDIBLE  
IMPACTS**

6. To minimize visual impacts resulting from the borrow pit, the project will restore and

**Predecisional Draft  
For Discussion Purposes Only**

Page 3 of 6

**Attachment to Confederated Tribes of the Colville Reservation, September 5, 2007 –  
Memorandum of Agreement (*continued*)**

Draft September 5, 2007 4:15 p.m.

recontour the area in a culturally relevant manner as per stipulations 1-5 above.

7. To avoid visual and air quality impacts that may result from dust caused by construction activities, DOE will implement dust control procedures and apply soil fixative and water the area routinely.
8. To minimize visual and audible effects of project activities, DOE will coordinate timing of construction to assure that these activities do not unnecessarily interfere with Tribal ceremonial activities and religious use of Rattlesnake Mountain (*Lalik*). The tribes will be notified prior to project construction activities.
9. On a quarterly DOE will provide information to all parties on the implementation of the stipulations in this MOA over the duration of the project, and then annually over the course of the five-year revegetation effort.
10. Placeholder which could reflect what is in the final TC&WM EIS chapter on mitigation, and to the ROD.

**III. ADMINISTRATIVE PROVISIONS**

Dispute Resolution

1. If the SHPO or ACHP raises an objection to, or has a dispute regarding fulfillment of the terms of this MOA, that party will file a written objection with DOE.
2. Upon receipt of a written objection or dispute, DOE will consult with the disputant to resolve the objection or dispute. DOE also will notify the other signatories and concurring parties of the objection or dispute.
3. If DOE cannot resolve the objection or dispute within 60 calendar days of receipt of the written objection, they will forward to the ACHP documentation of the objection or dispute, a written proposal for its resolution, and request the ACHP's comments.
4. Within 30 calendar days of receipt of the written submittal, the ACHP shall either:
  - a. Notify DOE that it will not consider the dispute or provide recommendations, in which case the agencies may proceed with the proposed action; or,
  - b. Concur with DOE's proposed response to the objection and or dispute, whereupon they may proceed in accordance with the agreed-upon response; or,

**Attachment to Confederated Tribes of the Colville Reservation, September 5, 2007 –  
Memorandum of Agreement (*continued*)**

Draft September 5, 2007 4:15 p.m.

- c. Provide DOE with recommendations, which DOE will take into account in reaching a final decision regarding response to the objection and/or dispute.
5. DOE shall take into account ACHP recommendations or comments provided in accordance with this stipulation with reference only to the subject of the objection; the DOE's responsibility to carry out actions under this MOA that are not the subject(s) of the dispute or objection shall remain unchanged. While the dispute is being resolved, the MOA continues in effect without change or suspension.
6. If the ACHP or a SHPO is contacted by a signatory, concurring party, or by a member of the public to discuss a significant concern or objection about implementation of the terms of this MOA, the contacted entity will notify DOE of the issue.
7. DOE will keep consulting parties apprised of any concern or objection raised and how each is resolved.

Amendments

Any concurring party and/or signatory to this MOA may request in writing to DOE that the MOA be amended. DOE will consult with the signatory and concurring parties in accordance with the procedures of 36 CFR § 800.6(c) for developing MOAs.

Termination

This MOA may be terminated by mutual agreement by providing an advance 30-day written notice to the other parties, provided that the parties will continue to consult during this 30-day waiting period in an attempt to reach agreement on actions that could be taken to avoid termination.

Effective Date

This MOA will become effective on the date that it has been signed by all signatories. DOE will ensure that each consulting party is provided a copy of the fully executed MOA.

**IV. Signatories**

**Department of Energy**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Dave Brockman  
Manager, Richland Operations Office

**Attachment to Confederated Tribes of the Colville Reservation, September 5, 2007 –  
Memorandum of Agreement (continued)**

Draft September 5, 2007 4:15 p.m.

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Shirley Olinger  
Acting Manager, Office of River Protection

**Washington State Department of Archaeology and Historic Preservation**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Allyson Brooks  
State Historic Preservation Officer

**Advisory Council on Historic Preservation**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Jim Fowler

**V. CONCURRING PARTIES:**

**Nez Perce Tribe**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
XXXXXXXXXX  
title

**Confederated Tribes of the Umatilla Indian Reservation**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
XXXXXXXXXX  
title

**Wanapum Tribe**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
XXXXXXXXXX  
title

**Yakama Nation**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
XXXXXXXXXX  
title

## CONFEDERATED TRIBES OF THE COLVILLE RESERVATION – May 29, 2008

**From:** Prendergast-Kennedy, Ellen L [Ellen.Prendergast@pnl.gov]  
**Sent:** Thursday, May 29, 2008 12:10 PM  
**To:** camille.pleasants@colvilletribes.com; HNRTC - Russell, Jim; Leah Sue; Greg Cleveland; whr2hydro@verizon.net; Dana Miller; Rex; lbuck@gcpud.org; Leila Buck; Mike; veras@nezperce.org; Darla Jackson; HNRTC - Smith, Anthony; hazmat@yakama.com; jlongene; TearaFarrow; HNRTC - Harris, Stuart; tombailor@ctuir.com; HNRTC - Cruz, Rico; Whitlam, Rob (DAHP)  
**Cc:** Rodriguez, Annabelle L; Sijohn, Francis A; Prendergast-Kennedy, Ellen L; Leonard, Michael W; Mcfarland, Douglas P  
**Subject:** APE notification for INTERIM PRETREATMENT SYSTEM FACILITY TO SUPPORT TREATMENT OF HANFORD TANK WASTE AND THE WASTE TREATMENT PLANT. HCRC# 2008-200-017  
**Attachments:** APE.pdf

Good morning all,

Please find attached an APE notification initiating the cultural resources review for Interim Pretreatment System Facility to Support Treatment of Hanford Tank Waste and the Treatment Plant (HCRC#2008-200-017)

We are tentatively planning to conduct a field survey of the ~13 acre area in the 200 East Area where the proposed Interim Pretreatment System facilities may be sited on June 5, 2008 (HCRC# 2007-200-017)

The project engineer has requested FH (landlord) to retrieve the most recent radiological survey data available for the 13 acre area based on the concern regarding site surface contamination raised at the tribal cultural resources issues meeting on May 22, 2008. It is the expectation that the information will be available for you before the June 5 survey date. If the information cannot be made available by the June 5 survey date, the survey will need to be cancelled and rescheduled. A notification of schedule change will be sent no later than Wednesday morning on June 4, 2008.

I will be out of the office between May 30 and June 4, 2008, so all future communications regarding radiological information and survey schedule change will be communicated to you from Annabelle Rodriguez and/or Doug McFarland.

We will be leaving the Sigma Five building at 8:30 and can meet those travelling in at the WTP entrance to the 200 East Area.

**Ellen P. Kennedy, Anthropologist  
Project Manager  
Hanford Cultural Resources Project  
Pacific Northwest National Laboratory  
PO Box 999, MSIN K6-75  
Richland, Washington 99352  
phone (509) 371-7105 fax (509) 371-7083 mobile: (509) 430-6211**

**NOTE: NEW PHONE AND FAX NUMBER**

**Attachment to Confederated Tribes of the Colville Reservation, May 29, 2008 – Project Description**

From the desk of  
**ANNABELLE L. RODRIGUEZ**  
U.S. Department of Energy, Richland Operations Office  
Cultural and Historic Resources Program  
(509) 372-0277 Fax (509) 376-0306

*This letter is to notify your office of a Section 106 Cultural Resources Review recently received by the U.S. Department of Energy, Richland Operations Office. This review proposes a project determined to be an undertaking which might affect historic properties. This notification is in accordance with 36 CFR Part 800.4(a) to document the area of potential effect for this project. This correspondence is also being sent to you to seek consultation on these projects per 36 CFR 800. The Hanford Cultural Resources Project (HCRP), the Hanford Site cultural resources contractor, has compiled the attached information. Please contact me at (509) 372-0277 or Ellen Prendergast, HCRP Section 106 Coordinator (509) 376-4626 if you have any questions.*

*Thank you,  
Annabelle Rodriguez*

May 29, 2008

**CULTURAL RESOURCES REVIEW FOR INTERIM PRETREATMENT SYSTEM  
FACILITY TO SUPPORT TREATMENT OF HANFORD TANK WASTE AND THE  
WASTE TREATMENT PLANT. HCRC# 2008-200-017**

**Background**

Construction of the the U. S. Department of Energy's Waste Treatment Plant (WTP) Pretreatment (PT) facility was delayed to allow for resolution of seismic and other technical issues and is projected to be operational in 2019. The WTP Low Activity Waste (LAW) Vitrification facility construction could be ready for startup approximately five years before the PT facility around 2014. Since the LAW facility relies on the PT facility to provide feed, the LAW startup would have to be delayed or an alternate feed source identified.

The Interim Pretreatment System (IPS) Facility is being proposed as an interim solution to the address the time gaps between completions of these two facilities. The IPS would provide pretreated LAW feed and allow the WTP LAW facility to begin operation in advance of the WTP Pretreatment facility. An earlier start to LAW treatment would also provide additional tank farm space management benefits and would allow for early processing and final treatment of LAW waste. Preliminary evaluations indicated that 5 years of early LAW treatment could free up 4.7 million gallons of double shell tank (DST) space and process up to 8% of the total LAW inventory (see RPP-29981).

**Project Description**

The proposed project is currently in the preconceptual planning stages. Two locations in the 200 East Area of the Hanford Site have been identified for the siting of the IPS facility (Figure 1). Construction and operations are planned to support treatment of tank wastes and the Waste Treatment Plant Vitrification Facility. The two potential sites are identified as IPS Candidate Site numbers 1 & 2 in Figure 2. Figure 2 also depicts the approximate

**Attachment to Confederated Tribes of the Colville Reservation, May 29, 2008 – Project Description (*continued*)**

location of the IPS Facility and additional footprint required for construction. The footprint area for IPS Candidate Site number 1 totals approximately 8 acres and IPS Candidate Site number 2 totals approximately 4.2 acres. Expected ground disturbing activities that may occur in the proposed footprints includes waste processing facilities, connections to water and waste treatment lines, facility ventilation, support buildings, parking area and contingency space for waste processing facility expansion (Figure 2). Waste processing facilities will include concrete vaults containing process vessels that will extend approximately 30 feet below grade; similarly, concrete building enclosed processing vessels may extend approximately 30 feet above grade also.

**Area of Potential Effect (APE):** The direct effects Area of Potential Effect (APE) is confined to the two proposed locations and associated footprint as well as additional areas of ground disturbance required to access existing waste treatment and water lines located north of the proposed facility locations identified in Figure 2 and 3.

**Existing Information**

- The project APE has been surveyed for cultural resources by three different surveys located in close proximity to each other covering all of the project APE; HCRC#96-200-109, HCRC# 87-200-002 and HCRC#88-200-015. No cultural resources were located by these surveys.
- A review of 2006 aerial photographs of the project area indicates that most of the project area is undisturbed (Figure 3)
- The project was presented at the DOE Cultural and Historic Resources Program tribal cultural resources meeting on May 22, 2008. Tribes expressed an interest in having the area resurveyed for cultural resources because the area is undisturbed. A survey is tentatively scheduled for June 5, 2008.

**Next Steps**

- Seek and gather input on impacts to historic properties
- Complete cultural resources review assessment

**Attachment to Confederated Tribes of the Colville Reservation, May 29, 2008 – Project  
Description (continued)**

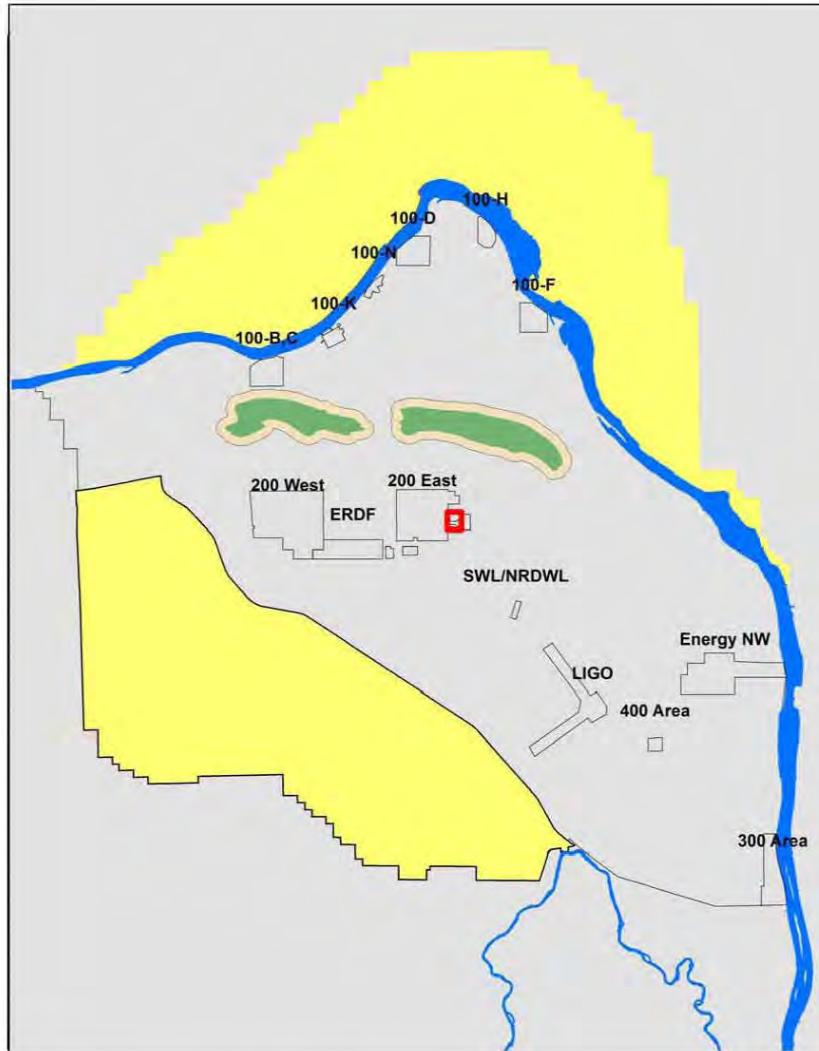


Figure 1. Overview of Hanford Site and relative location of project area, depicted in red, east of the 200 East Area.

**Attachment to Confederated Tribes of the Colville Reservation, May 29, 2008 – Project Description (continued)**

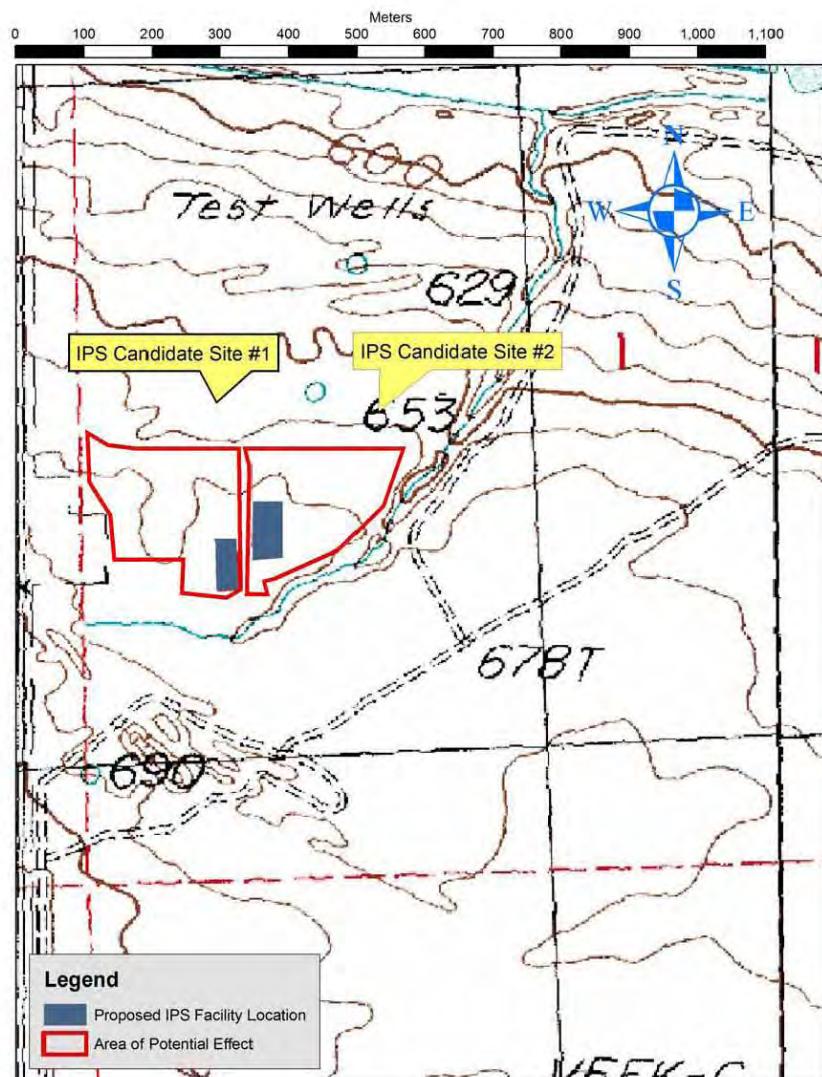


Figure 2. Area of potential effect overlaid on a USGS topographic map, Washington State Quadrangle, Gable Butte, 1986, 7.5' Series. Township 12 North, 26 East, Section 1.

**Attachment to Confederated Tribes of the Colville Reservation, May 29, 2008 – Project  
Description (continued)**



Figure 3. Area of potential effect overlaid on a 2006 aerial photograph.

**References:**

RPP-29981, March 2007, *Evaluation of Starting the Waste Treatment and Immobilization Plant (WTP) Low Activity Waste (LAW) Facility First*, Rev. 1, CH2M HILL Hanford Group, Inc., Richland WA.

### C.3.1.5 Wanapum Correspondence

**To:** Ms. Lenora Seelatsee and Mr. Rex Buck, Wanapum  
**From:** Ms. Annabelle Rodriguez, U.S. Department of Energy  
**Date:** August 12, 2003  
**Subject:** Notification of a Section 106 Cultural Resources Review (see page C-173)

**To:** Ms. Lenora Seelatsee, Wanapum  
**From:** Mr. Joel Hebdon, U.S. Department of Energy  
**Date:** September 3, 2003  
**Subject:** Cultural Resources Review (CRR) of “Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks (Tank Closure) Environmental Impact Statement” (HCRC# 2003-200-044)

**To:** Ms. Lenora Seelatsee and Mr. Rex Buck, Wanapum  
**From:** Ms. Ellen Prendergast-Kennedy, Pacific Northwest National Laboratory  
**Date:** March 27, 2007  
**Subject:** Invitation to Participate in Cultural Resources Survey for Portions of the Area C Borrow Pit Area and the 600 Area for the *Tank Closure and Solid Waste EIS/NHPA 106 Compliance* (see page C-196)

**To:** Ms. Lenora Seelatsee, Wanapum  
**From:** Mr. Doug S. Shoop, U.S. Department of Energy  
**Date:** April 6, 2007  
**Subject:** Transmittal of Area of Potential Effect (APE) for *Tank Closure and Waste Management Environmental Impact Statement (TC & WM EIS) for the Hanford Site, Richland, Washington*

**To:** Wanapum Representatives  
**From:** Ms. Annabelle Rodriguez, U.S. Department of Energy  
**Date:** September 5, 2007  
**Subject:** *Draft Tank Closure and Waste Management Environmental Impact Statement (TC & WM EIS) Memorandum of Agreement*

**To:** Wanapum Representatives  
**From:** Ms. Ellen Prendergast-Kennedy, Pacific Northwest National Laboratory  
**Date:** May 29, 2008  
**Subject:** Notification of a Section 106 Cultural Resources Review

*Tank Closure and Waste Management Environmental Impact Statement for the  
Hanford Site, Richland, Washington*

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**WANAPUM – September 3, 2003**



03-RCA-0377

**Department of Energy**  
Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

**SEP 3 2003**

Ms. Lenora Seelatsee  
Wanapum  
Grant County P.U.D.  
P.O. Box 878  
Ephrata, Washington 98823

Dear Ms. Seelatsee:

CULTURAL RESOURCES REVIEW (CRR) OF RETRIEVAL, TREATMENT, AND  
DISPOSAL OF TANK WASTE AND CLOSURE OF SINGLE-SHELL TANKS (TANK  
CLOSURE) ENVIRONMENTAL IMPACT STATEMENT (HCRC# 2003-200-044)

Enclosed is a CRR completed by the U.S. Department of Energy, Richland Operations Office's (RL) Hanford Cultural Resources Laboratory (HCRL) on August 28, 2003, for the subject project located on the Hanford Site, Richland, Washington. The results of the records and literature review conducted by HCRL staff are described in the enclosed CRR. RL concurs with the findings as stated in the enclosed CRR. Pursuant to 36CFR 800.2 (4), we are providing documentation to support these findings and to involve your office as a consulting party in the NHPA Section 106 Review process. If you have any questions, please contact Annabelle L. Rodriguez, of my staff, on (509) 372-0277.

Sincerely,

Joel Hebdon, Director  
Regulatory Compliance and Analysis Division

RCA:ALR

Enclosure \*

cc w/o encl:  
E. L. Prendergast, PNNL

cc w/encl:  
R. Buck Jr., Wanapum

\* Enclosure is not reproduced here. See September 3, 2003, letter to the Confederated Tribes and Bands of the Yakama Nation on page C-179, which includes the same enclosure.

**WANAPUM – April 6, 2007**



**Department of Energy**  
Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

07-SED-0222

APR 6 2007

Ms. Lenora Seelatsee  
Wanapum  
Grant County P.U.D.  
P.O. Box 878  
Ephrata, Washington 98823

Dear Ms. Seelatsee:

**TRANSMITTAL OF AREA OF POTENTIAL EFFECT (APE) FOR TANK CLOSURE AND WASTE MANAGEMENT ENVIRONMENTAL IMPACT STATEMENT (TC & WM EIS) FOR THE HANFORD SITE, RICHLAND, WASHINGTON**

The purpose of this letter is to initiate the National Historic Preservation Act (NHPA) Section 106 process and to provide your office with the APE for the proposed activities under evaluation in the TC & WM EIS “(the project).” This notification is in accordance with 36 CFR Part 800.4(a). The Notice of Intent (NOI) to prepare the Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington which describes the project, was published February 2, 2006 in the Federal Register (Enclosure 1). The project is determined to be an undertaking that may affect historic properties. In accordance with 36 CFR 800.8, the U.S. Department of Energy, Richland Operations Office (RL) plans to coordinate its NHPA Section 106 review with the ongoing EIS process which will consider all aspects of the cultural environment.

The NHPA Section 106 process for “Borrow Area C” was started in coordination with the Hanford Site Solid Waste EIS (HSW EIS). The RL received feedback at that time indicating that other areas should be considered in the APE, including Rattlesnake Mountain and its viewshed. RL subsequently decided to consolidate several proposed actions into the scope of the TC & WM EIS as described in the NOI. The APE is based on the TC & WM NOI, and includes areas with auditory or visual effects (Enclosure 2, maps and figures).

The regulations for protection of historic properties, at 36 CFR 800.4(b)(2), allow for a phased approach for the identification and evaluation of historic properties. The alternatives under consideration consist of multiple large land areas and RL may use a phased approach to identify and evaluate historic properties. For example, a February 2006 cultural resource review (HCRC# 2006-600-008) was prepared for a portion of “Borrow Area C.” This project is proceeding under a Comprehensive Environmental Response, Compensation, and Liability Act review which incorporates National Environmental Policy Act values. Based on comments received, RL plans to prepare a Memorandum of Agreement for and will provide a draft to your office and the State Historic Preservation Officer for review.

**WANAPUM – April 6, 2007 (continued)**

Ms. Lenora Seelatsee  
07-SED-0222

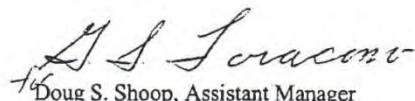
-2-

APR 6 2007

Rattlesnake Mountain, Gable Butte, Gable Mountain, and Goose Egg Hill are known to be revered by area tribes for traditional, cultural and spiritual reasons and have been treated by RL as traditional cultural properties. Surveys, are being planned for the first and second weeks of April 2007. Tribal cultural representatives from your staff have been invited to participate in the surveys.

If you have any questions, please contact Pete J. Garcia, Jr., Director, Safety and Engineering Division, on (509) 372-1909.

Sincerely,



Doug S. Shoop, Assistant Manager  
for Safety and Engineering

SED:ALR

Enclosures\*

1. Federal Register, Vol 71, No. 22
2. Maps and Viewshed Photos

cc w/encls:

R. Buck, Wanapum

cc w/o encls:

E. P. Kennedy, PNNL

\* Enclosures are not reproduced here. See April 6, 2007, letter to the Confederated Tribes and Bands of the Yakama Nation on page C-197, which includes the same enclosures.

## **WANAPUM – September 5, 2007**

**From:** Rodriguez, Annabelle L  
**Sent:** Wednesday, September 05, 2007 5:15 PM  
**To:** 'camille.pleasants@colvilletribes.com'; 'TearaFarrow'; 'julie'; 'StuartHarris'; 'RicoCruz'; 'GabrielBohnee'; 'veras@nezperce.org'; 'Darla Jackson'; 'Mike'; 'Tony Smith'; 'Rex'; 'Jim, Russell'; 'Dana'; 'GregCleveland'; 'Leah Sue'; 'whr2hydro@verizon.net'; 'barbaraharper@ctuir.com'; 'hazmat@yakama.com'; 'lbuck@gcpud.org'  
**Cc:** Clarke, Kevin V; Garcia, Pete J Jr; Prendergast-Kennedy, Ellen L; Sijohn, Francis A; Rodriguez, Annabelle L  
**Subject:** Draft Tank Closure and Waste Management EIS (TC&WM EIS) MOA

All,

Attached is the Draft Tank Closure and Waste Management EIS (TC&WM EIS) MOA. The MOA refers to the February, 2006 Federal Register Notice. That Notice and a map can be found in the July 30, 2007 correspondence that DOE transmitted to Tribes/SHPO (cultural review and survey, 07-SED-0325, for this project).

As stated in my previous email, Project staff would like to meet on September 18 to begin discussin on the draft TC&WM EIS MOA. Location and time to follow. I will set up a telecon line if you would like to participate by phone.

ACHP has been invited to participate in the MOA. You will be receiving a copy of the letter within the week.

Thank you,  
Annabelle Rodriguez

## **Attachment to Wanapum, September 5, 2007 – Memorandum of Agreement**

Draft September 5, 2007 4:15 p.m.

**-DRAFT-**

**MEMORANDUM OF AGREEMENT  
FOR TANK CLOSURE AND WASTE MANAGEMENT  
ENVIRONMENTAL IMPACT STATEMENT,  
HANFORD SITE, RICHLAND, WASHINGTON  
AMONG THE U. S. DEPARTMENT OF ENERGY,  
THE WASHINGTON STATE HISTORIC PRESERVATION OFFICE,  
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION**

**CONSULTING PARTIES & CONCURRING SIGNATORIES: YAKAMA NATION,  
CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION,  
WANAPUM, AND THE NEZ PERCE TRIBE**

**WHEREAS**, the U. S. Department of Energy (DOE) has proposed an undertaking consisting of the proposed actions and alternatives described in the revised Notice of Intent (NOI) for the Tank Closure & Waste Management Environmental Impact Statement (TC&WM EIS) [71 Fed. Reg. 5655, February 2, 2006] [Attachment A]. Two primary project activity areas include the 200 East and 200 West Areas. The proposed actions would involve the use of the borrow source at Area C, located in the 600 Area of the Hanford Site (see attached map for description). In order to implement the action(s) DOE decides to pursue, based on the analyses presented in the TC&WM EIS (and as documented in a Record of Decision, or ROD, at the end of the EIS process), DOE would need to acquire additional quantities of fine-grained silt loam material from Area C; and

**WHEREAS**, the TC&WM EIS analyses will include discussion of potential impacts to cultural, aesthetic, and historic resources, and will identify tribal interests, concerns, and issues regarding the proposed use of the borrow source at Area C. The EIS will also identify possible mitigation measures that DOE could take to offset potential environmental impacts that have been identified. This information will be presented for consideration by other agencies, stakeholders, and Tribal nations during the public comment period on the Draft TC&WM EIS, currently scheduled for Spring 2008. In consideration of the input from Federal, state, and local agencies, consultations with Native American tribal governments, and public comments on the Draft EIS, DOE will revise and publish a Final EIS, followed by a ROD to document the decisions reached by DOE based on the EIS analyses. The ROD will also identify the mitigation actions that DOE would take to minimize or avoid the potential adverse impacts associated with implementing the selected actions; and

**WHEREAS**, the Record of Decision (ROD) for the *Hanford Comprehensive Land Use Plan Environmental Impact Statement* (JICP EIS) selected the preferred alternative for implementation, as presented in the final EIS. Borrow source Area C was designated as

**Predecisional Draft  
For Discussion Purposes Only**

Page 1 of 6

**Attachment to Wanapum, September 5, 2007 – Memorandum of Agreement (continued)**

Draft September 5, 2007 4:15 p.m.

"Conservation (Mining)" as DOE's preferred quarry site for basalt rock and silty soil materials to be used for large waste-management area covers in the Central Plateau. The final HCP EIS preferred alternative indicates that a portion of the ALE Reserve (Borrow Area C) would be managed as Conservation (Mining) during the remediation of the Hanford Site, and would be DOE's preferred quarry site for basalt rock and silty soil materials to be used for large waste-management area covers in the Central Plateau. The final HCP EIS discussion indicates that this designation was being made as a trade-off, based on DOE's receipt of public comments on the Draft EIS and input from the cooperating agencies, including area Tribes. Greater value was placed by the public and the cooperating agencies on preservation of the wildlife corridor running through the McGee Ranch/Umtanum Ridge area, which DOE had previously identified as its preferred quarry site. In addition to the wildlife corridor function, the mature shrub-steppe vegetation structure in the McGee Ranch area was considered to have greater wildlife value than the cheat grass in the ALE Reserve (Borrow Area C) quarry site. As a result of this tradeoff, the McGee Ranch was included in the National Wildlife Refuge and designated as Preservation, and the ALE Reserve (Borrow Area C) designated as Conservation (Mining).

**WHEREAS**, DOE has conducted a cultural resources review (CRR) and inventory in support of the proposed actions being evaluated in the TC&WM EIS (#2007-600-018). Several CRRs are associated with the borrow source at Area C, and the cultural resources review of Area C is now considered to be complete. (Attachment B, Letter dated July 30, 2007 to Dr. Allyson Brooks, State Historic Preservation Officer, from David A. Brockman, Manager, DOE Richland Operations Office). The CRRs identify the cultural resources located within the area of potential project effect; and

**WHEREAS**, after further review, in July 2007 DOE identified that the proposed project activities would indirectly result in visual and auditory effects to Rattlesnake Mountain, Gable Butte, and Gable Mountain. Borrow Source Area C was found to have no potential to contain subsurface cultural resources, and low potential for other areas; and

**WHEREAS**, DOE has consulted with the Washington State Historic Preservation Officer (SHPO), Advisory Council on Historic Preservation (AChP), Confederated Tribes of the Umatilla Indian Reservation, Nez Perce, Wanapum, and the Yakama Nation, in accordance with Section 106 of the National Historic Preservation Act (NHPA), and pursuant to implementing regulations published in 36 CFR Part 800, to address the adverse effects on historic properties; and

**WHEREAS**, pursuant to 36 CFR 800.6(c)(3) DOE has invited the Confederated Tribes of the Umatilla Indian Reservation, Nez Perce Tribe, Wanapum, and the Yakama Nation to sign this MOA as concurring parties;

## **Attachment to Wanapum, September 5, 2007 – Memorandum of Agreement (continued)**

Draft September 5, 2007 4:15 p.m.

**NOW, THEREFORE**, DOE agrees to implement the following stipulations in satisfaction of its NHPA Section 106 obligations for the proposed undertaking:

### **STIPULATIONS**

DOE will ensure that the following stipulations are carried out:

#### **I. MITIGATE ADVERSE EFFECTS TO CULTURAL INTEGRITY OF HABITAT AND TO TRADITIONAL PLANTS**

1. DOE will consider all tribal recommendations consistent with the BrMAP for those areas that will be disturbed and/or affected by the proposed undertaking.
2. Tribes will be invited to participate in ecological and/or biological surveys, and in revegetation efforts related to the Area C borrow source wherever possible.
3. DOE will seek early involvement, consultation, and input from Hanford Tribes and Hanford groups who have experience in Hanford restoration to achieve culturally relevant and successful reclamation and/or re-vegetation of the impacted area. DOE will also review other available reclamation and/or re-vegetation documents that have been prepared for use at Borrow Source Area C for guidance and relevance to the undertakings addressed by this Memorandum of Agreement (MOA) (e.g., the Reclamation Plan developed under the NHPA Section 106 MOA for the 216-U-8 waste site in the 200-West Area, as part of a CERCLA five-year treatability study concerning the effectiveness of surface barriers).
4. DOE will commit to a culturally relevant native plant re-vegetation strategy as a preference where possible. If appropriate and feasible (in accordance with the Biological Resources Management Plan (BrMAP) [identify section(s)] and other guidance documents as described in Stipulation 3, native plant species from local germ-plasm will be used in the reclamation and re-vegetation seed mixture.
5. In accordance with the BrMAP [identify section(s)], DOE will commit to long-term reclamation rather than interim soil stabilization (with the caveat that there may be some cases where interim soil stabilization may not be avoidable if duration of activities is longer term). Specific guidelines will be developed collaboratively and incorporated into this MOA as an appendix, as appropriate, to help achieve this goal.

#### **II. MINIMIZATION AND AVOIDANCE OF VISUAL, AIR QUALITY AND AUDIBLE IMPACTS**

6. To minimize visual impacts resulting from the borrow pit, the project will restore and

**Predecisional Draft**  
**For Discussion Purposes Only**

Page 3 of 6

## **Attachment to Wanapum, September 5, 2007 – Memorandum of Agreement (continued)**

Draft September 5, 2007 4:15 p.m.

recontour the area in a culturally relevant manner as per stipulations 1-5 above.

7. To avoid visual and air quality impacts that may result from dust caused by construction activities, DOE will implement dust control procedures and apply soil fixative and water the area routinely.
8. To minimize visual and audible effects of project activities, DOE will coordinate timing of construction to assure that these activities do not unnecessarily interfere with Tribal ceremonial activities and religious use of Rattlesnake Mountain (*Laliik*). The tribes will be notified prior to project construction activities.
9. On a quarterly DOE will provide information to all parties on the implementation of the stipulations in this MOA over the duration of the project, and then annually over the course of the five-year revegetation effort.
10. Placeholder which could reflect what is in the final TC&WM EIS chapter on mitigation, and to the ROD.

### **III. ADMINISTRATIVE PROVISIONS**

#### Dispute Resolution

1. If the SHPO or ACHP raises an objection to, or has a dispute regarding fulfillment of the terms of this MOA, that party will file a written objection with DOE.
2. Upon receipt of a written objection or dispute, DOE will consult with the disputant to resolve the objection or dispute. DOE also will notify the other signatories and concurring parties of the objection or dispute.
3. If DOE cannot resolve the objection or dispute within 60 calendar days of receipt of the written objection, they will forward to the ACHP documentation of the objection or dispute, a written proposal for its resolution, and request the ACHP's comments.
4. Within 30 calendar days of receipt of the written submittal, the ACHP shall either:
  - a. Notify DOE that it will not consider the dispute or provide recommendations, in which case the agencies may proceed with the proposed action; or,
  - b. Concur with DOE's proposed response to the objection and or dispute, whereupon they may proceed in accordance with the agreed-upon response; or,

## **Attachment to Wanapum, September 5, 2007 – Memorandum of Agreement (continued)**

Draft September 5, 2007 4:15 p.m.

- c. Provide DOE with recommendations, which DOE will take into account in reaching a final decision regarding response to the objection and/or dispute.
5. DOE shall take into account ACHP recommendations or comments provided in accordance with this stipulation with reference only to the subject of the objection; the DOE's responsibility to carry out actions under this MOA that are not the subject(s) of the dispute or objection shall remain unchanged. While the dispute is being resolved, the MOA continues in effect without change or suspension.
6. If the ACHP or a SHPO is contacted by a signatory, concurring party, or by a member of the public to discuss a significant concern or objection about implementation of the terms of this MOA, the contacted entity will notify DOE of the issue.
7. DOE will keep consulting parties apprised of any concern or objection raised and how each is resolved.

### Amendments

Any concurring party and/or signatory to this MOA may request in writing to DOE that the MOA be amended. DOE will consult with the signatory and concurring parties in accordance with the procedures of 36 CFR § 800.6(c) for developing MOAs.

### Termination

This MOA may be terminated by mutual agreement by providing an advance 30-day written notice to the other parties, provided that the parties will continue to consult during this 30-day waiting period in an attempt to reach agreement on actions that could be taken to avoid termination.

### Effective Date

This MOA will become effective on the date that it has been signed by all signatories. DOE will ensure that each consulting party is provided a copy of the fully executed MOA.

## **IV. Signatories**

### **Department of Energy**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Dave Brockman  
Manager, Richland Operations Office

**Attachment to Wanapum, September 5, 2007 – Memorandum of Agreement (continued)**

Draft September 5, 2007 4:15 p.m.

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Shirley Olinger  
Acting Manager, Office of River Protection

**Washington State Department of Archaeology and Historic Preservation**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Allyson Brooks  
State Historic Preservation Officer

**Advisory Council on Historic Preservation**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Jim Fowler

**V. CONCURRING PARTIES:**

**Nez Perce Tribe**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
XXXXXXXXXX  
title

**Confederated Tribes of the Umatilla Indian Reservation**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
XXXXXXXXXX  
title

**Wanapum Tribe**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
XXXXXXXXXX  
title

**Yakama Nation**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
XXXXXXXXXX  
title

**WANAPUM – May 29, 2008**

**From:** Prendergast-Kennedy, Ellen L [Ellen.Prendergast@pnl.gov]  
**Sent:** Thursday, May 29, 2008 12:10 PM  
**To:** camille.pleasant@colvilletribes.com; HNRTC - Russell, Jim; Leah Sue; Greg Cleveland; whr2hydro@verizon.net; Dana Miller; Rex; Ibuck@gcpud.org; Lela Buck; Mike; veras@nezperce.org; Darla Jackson; HNRTC - Smith, Anthony; hazmat@yakama.com; jlongene; TearaFarrow; HNRTC - Harris, Stuart; tombailor@ctuir.com; HNRTC - Cruz, Rico; Whitlam, Rob (DAHP)  
**Cc:** Rodriguez, Annabelle L; Sijohn, Francis A; Prendergast-Kennedy, Ellen L; Leonard, Michael W; Mcfarland, Douglas P  
**Subject:** APE notification for INTERIM PRETREATMENT SYSTEM FACILITY TO SUPPORT TREATMENT OF HANFORD TANK WASTE AND THE WASTE TREATMENT PLANT. HCRC# 2008-200-017  
**Attachments:** APE.pdf

Good morning all,

Please find attached an APE notification initiating the cultural resources review for Interim Pretreatment System Facility to Support Treatment of Hanford Tank Waste and the Treatment Plant (HCRC#2008-200-017)

We are tentatively planning to conduct a field survey of the ~13 acre area in the 200 East Area where the proposed Interim Pretreatment System facilities may be sited on June 5, 2008 (HCRC# 2007-200-017)

The project engineer has requested FH (landlord) to retrieve the most recent radiological survey data available for the 13 acre area based on the concern regarding site surface contamination raised at the tribal cultural resources issues meeting on May 22, 2008. It is the expectation that the information will be available for you before the June 5 survey date. If the information cannot be made available by the June 5 survey date, the survey will need to be cancelled and rescheduled. A notification of schedule change will be sent no later than Wednesday morning on June 4, 2008.

I will be out of the office between May 30 and June 4, 2008, so all future communications regarding radiological information and survey schedule change will be communicated to you from Annabelle Rodriguez and/or Doug McFarland.

We will be leaving the Sigma Five building at 8:30 and can meet those travelling in at the WTP entrance to the 200 East Area.

**Ellen P. Kennedy, Anthropologist  
Project Manager  
Hanford Cultural Resources Project  
Pacific Northwest National Laboratory  
PO Box 999, MSIN K6-75  
Richland, Washington 99352  
phone (509) 371-7105 fax (509) 371-7083 mobile: (509) 430-6211**

**NOTE: NEW PHONE AND FAX NUMBER**

## Attachment to Wanapum, May 29, 2008 – Project Description

From the desk of  
**ANNABELLE L. RODRIGUEZ**  
U.S. Department of Energy, Richland Operations Office  
Cultural and Historic Resources Program  
(509) 372-0277 Fax (509) 376-0306

*This letter is to notify your office of a Section 106 Cultural Resources Review recently received by the U.S. Department of Energy, Richland Operations Office. This review proposes a project determined to be an undertaking which might affect historic properties. This notification is in accordance with 36 CFR Part 800.4(a) to document the area of potential effect for this project. This correspondence is also being sent to you to seek consultation on these projects per 36 CFR 800. The Hanford Cultural Resources Project (HCRP), the Hanford Site cultural resources contractor, has compiled the attached information. Please contact me at (509) 372-0277 or Ellen Prendergast, HCRP Section 106 Coordinator (509) 376-4626 if you have any questions.*

*Thank you,  
Annabelle Rodriguez*

May 29, 2008

### CULTURAL RESOURCES REVIEW FOR INTERIM PRETREATMENT SYSTEM FACILITY TO SUPPORT TREATMENT OF HANFORD TANK WASTE AND THE WASTE TREATMENT PLANT. HCRC# 2008-200-017

#### Background

Construction of the the U. S. Department of Energy's Waste Treatment Plant (WTP) Pretreatment (PT) facility was delayed to allow for resolution of seismic and other technical issues and is projected to be operational in 2019. The WTP Low Activity Waste (LAW) Vitrification facility construction could be ready for startup approximately five years before the PT facility around 2014. Since the LAW facility relies on the PT facility to provide feed, the LAW startup would have to be delayed or an alternate feed source identified.

The Interim Pretreatment System (IPS) Facility is being proposed as an interim solution to the address the time gaps between completions of these two facilities. The IPS would provide pretreated LAW feed and allow the WTP LAW facility to begin operation in advance of the WTP Pretreatment facility. An earlier start to LAW treatment would also provide additional tank farm space management benefits and would allow for early processing and final treatment of LAW waste. Preliminary evaluations indicated that 5 years of early LAW treatment could free up 4.7 million gallons of double shell tank (DST) space and process up to 8% of the total LAW inventory (see RPP-29981).

#### Project Description

The proposed project is currently in the preconceptual planning stages. Two locations in the 200 East Area of the Hanford Site have been identified for the siting of the IPS facility (Figure 1). Construction and operations are planned to support treatment of tank wastes and the Waste Treatment Plant Vitrification Facility. The two potential sites are identified as IPS Candidate Site numbers 1 & 2 in Figure 2. Figure 2 also depicts the approximate

## **Attachment to Wanapum, May 29, 2008 – Project Description (continued)**

location of the IPS Facility and additional footprint required for construction. The footprint area for IPS Candidate Site number 1 totals approximately 8 acres and IPS Candidate Site number 2 totals approximately 4.2 acres. Expected ground disturbing activities that may occur in the proposed footprints includes waste processing facilities, connections to water and waste treatment lines, facility ventilation, support buildings, parking area and contingency space for waste processing facility expansion (Figure 2). Waste processing facilities will include concrete vaults containing process vessels that will extend approximately 30 feet below grade; similarly, concrete building enclosed processing vessels may extend approximately 30 feet above grade also.

**Area of Potential Effect (APE):** The direct effects Area of Potential Effect (APE) is confined to the two proposed locations and associated footprint as well as additional areas of ground disturbance required to access existing waste treatment and water lines located north of the proposed facility locations identified in Figure 2 and 3.

### **Existing Information**

- The project APE has been surveyed for cultural resources by three different surveys located in close proximity to each other covering all of the project APE; HCRC#96-200-109, HCRC# 87-200-002 and HCRC#88-200-015. No cultural resources were located by these surveys.
- A review of 2006 aerial photographs of the project area indicates that most of the project area is undisturbed (Figure 3)
- The project was presented at the DOE Cultural and Historic Resources Program tribal cultural resources meeting on May 22, 2008. Tribes expressed an interest in having the area resurveyed for cultural resources because the area is undisturbed. A survey is tentatively scheduled for June 5, 2008.

### **Next Steps**

- Seek and gather input on impacts to historic properties
- Complete cultural resources review assessment

Attachment to Wanapum, May 29, 2008 – Project Description (continued)

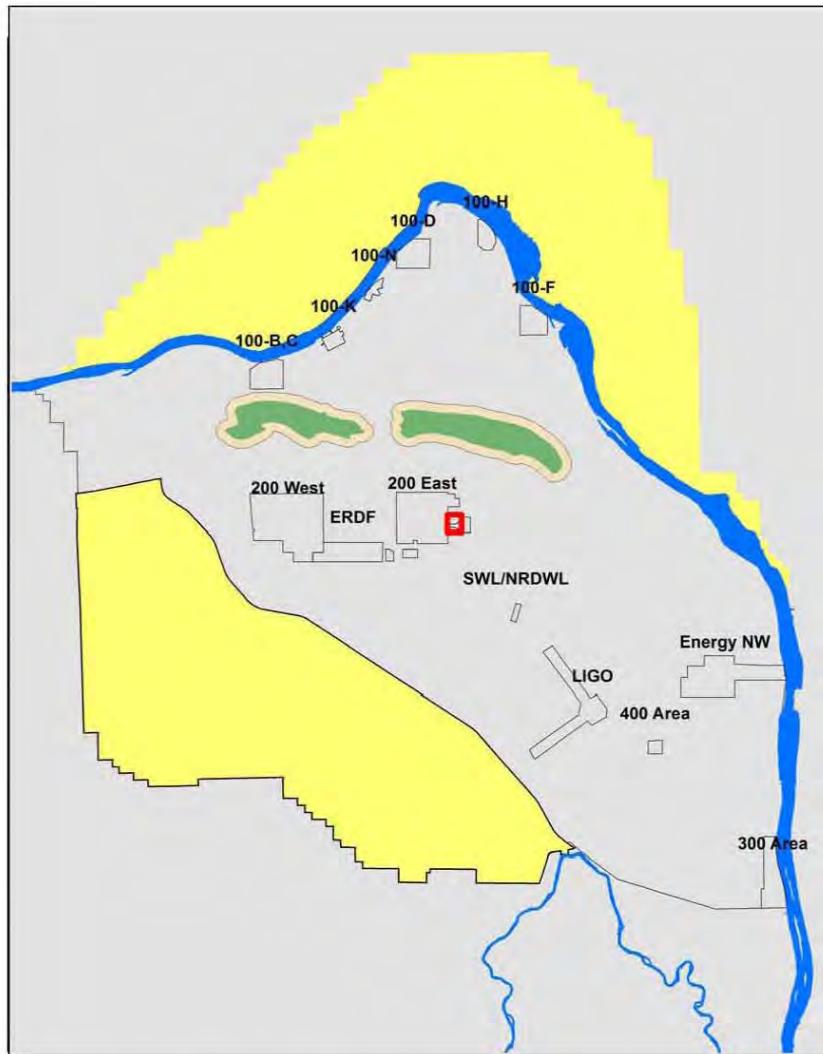


Figure 1. Overview of Hanford Site and relative location of project area, depicted in red, east of the 200 East Area.

Attachment to Wanapum, May 29, 2008 – Project Description (continued)

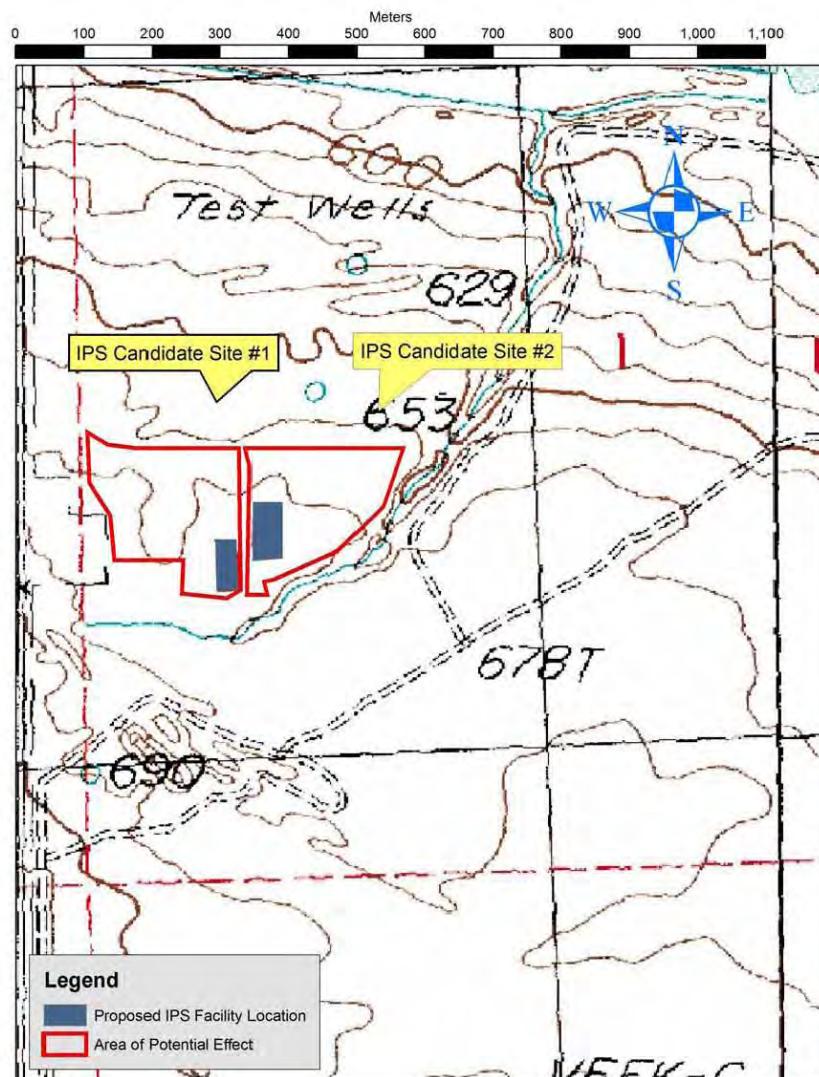


Figure 2. Area of potential effect overlaid on a USGS topographic map, Washington State Quadrangle, Gable Butte, 1986, 7.5' Series. Township 12 North, 26 East, Section 1.

**Attachment to Wanapum, May 29, 2008 – Project Description (continued)**



Figure 3. Area of potential effect overlaid on a 2006 aerial photograph.

**References:**

RPP-29981, March 2007, *Evaluation of Starting the Waste Treatment and Immobilization Plant (WTP) Low Activity Waste (LAW) Facility First*, Rev. 1, CH2M HILL Hanford Group, Inc., Richland WA.

### C.3.2 Responses to U.S. Department of Energy Correspondence

The following are copies of the responses DOE has received in regard to the correspondence provided in Section C.3.1 of this *Final TC & WM EIS*. Below is a list of these responses.

- To:** Ms. Mary Beth Burandt, U.S. Department of Energy  
**From:** Mr. Patrick Sobotta, Nez Perce Tribe  
**Date:** February 12, 2003  
**Subject:** Re: Notice of Intent to Prepare an Environmental Impact Statement for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks at the Hanford Site, Richland, Washington
- To:** Mr. Roy Schepens, U.S. Department of Energy  
**From:** Mr. Russell Jim, Confederated Tribes and Bands of the Yakama Indian Nation  
**Date:** March 11, 2003  
**Subject:** Re: Comments on the Notice of Intent to Prepare an Environmental Impact Statement for the Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks at the Hanford Site.
- To:** Ms. Mary Beth Burandt, U.S. Department of Energy  
**From:** Mr. Patrick Sobotta, Nez Perce Tribe  
**Date:** July 27, 2004  
**Subject:** Re: "Draft Environmental Impact Statement for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks"
- To:** Mr. Roy Schepens, U.S. Department of Energy  
**From:** Mr. Gabriel Bohnee, Nez Perce Tribe  
**Date:** February 10, 2005  
**Subject:** Re: Technical Requirements Document for "Tank Closure Environmental Impact Statement" Vadose Zone and Groundwater Revised Analysis
- To:** Mr. Keith Klein, U.S. Department of Energy  
**From:** Mr. Russell Jim, Confederated Tribes and Bands of the Yakama Nation  
**Date:** July 19, 2006  
**Subject:** Response to June 28, 2006, Letter Regarding Cultural Resources Review and Inventory for Arid Lands Ecology Quarry Borrow Site Development
- To:** Mr. Rob G. Hastings, U.S. Department of Energy  
**From:** Ms. Teara Farrow, Confederated Tribes of the Umatilla Indian Reservation  
**Date:** November 8, 2007  
**Subject:** *Tank Closure and Waste Management Environmental Impact Statement* and Borrow Area C, Cultural Resources Recommendation
- To:** Dr. Inés Triay, U.S. Department of Energy  
**From:** Ms. Teara Farrow, Confederated Tribes of the Umatilla Indian Reservation  
**Date:** November 26, 2007  
**Subject:** Concerns Regarding the *Tank Closure and Waste Management (TC & WM), Environmental Impact Statement (EIS), Hanford Site, Richland, Washington*

**To:** Mr. Gregory B. Jaczko, U.S. Nuclear Regulatory Commission, and Dr. Inés Triay,  
U.S. Department of Energy

**From:** Mr. Ralph Sampson, Jr., Confederated Tribes and Bands of the Yakama Nation

**Date:** October 14, 2009

**Subject:** Concerns Regarding the Cleanup and Closure of the U.S. Ecology Radioactive Waste  
Landfill and Other Similar Waste Sites Related to the Hanford Site

**NEZ PERCE TRIBE – February 12, 2003**



*Nez Perce*

ENVIRONMENTAL RESTORATION & WASTE MANAGEMENT  
P.O. BOX 365 • LAPWAI, IDAHO 83540-0365 • (208) 843-7375 / FAX: 843-7378

February 12, 2003

Mary Beth Burandt  
Document Manager  
DOE Office of River Protection  
U.S. DOE, P.O. Box 450  
Mailstop H6-60  
Richland, WA 99352

Re: *Notice of Intent to Prepare an Environmental Impact Statement for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks at the Hanford Site, Richland, Washington*

Dear Ms. Burandt:

The staff of the Nez Perce Tribe Environmental Restoration and Waste Management Program (ERWM) appreciated the presentation by you and Eric Olds on December 12, 2002, when you came to Lapwai to discuss the draft Notice of Intent (NOI) for preparation of the Environmental Impact Statement for Retrieval, Treatment and Disposal of Tank Waste and Closure of Single-Shell Tanks at Hanford. Subsequently, we informally forwarded comments by e-mail on the draft NOI. The comments below are directed to the final NOI (6450-01-P).

The Nez Perce Tribe retains reserved treaty rights in the Mid-Columbia region under the 1855 and 1863 treaties with the United States Government. These rights have been recognized and reaffirmed through subsequent Federal and State actions. These actions protect Nez Perce rights to utilize our usual and accustomed resources and resource areas, including those in the Hanford Reach of the Columbia River. Accordingly, ERWM has support from the U.S. Department of Energy (DOE) to participate in and monitor relevant DOE activities.

During the December 2002 Hanford Advisory Board meeting in Portland, DOE representatives agreed to prepare a "primer" to assist Tribal Nations, stakeholders and the public in understanding the relationships between the various Hanford waste related environmental impact statements. Please let us know when we can expect a copy of this primer.

In the NOI DOE has preliminarily identified a list of issues for analysis in this EIS. We have the following issues to add.

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DOE/ANPP/DR/PCC

**NEZ PERCE TRIBE – February 12, 2003 (continued)**

Discuss retrieval, treatment, disposal and closure in terms of technical feasibility, not economic feasibility. Economic feasibility is a consideration, but it is by its nature a short-term view. The commitments of the federal government to the tribal nations are intimately associated with the ethics of long-term stewardship, and cannot be sacrificed for the short-term economic view.

Discussion of long-term risks resulting from waste disposal and residual tank system wastes must not only include concerns related to human populations *but also concerns related to protection of the environment.*

Clean closure standards are referred to in the first sentence, second paragraph of **Closure** in Alternative 4.0, but they are not identified or described. Furthermore, this is the only alternative in which it is unclear what is meant by closure.

We look forward to participating in the review of this highly significant EIS later in 2003.

Sincerely,



Patrick Sobotta  
Director

Cc: Kevin Clarke, Indian Nations Program  
Michael Wilson, Ecology  
Nick Ceto, EPA  
Roy Schepens, DOE-ORP  
Keith Klein, DOE-RL  
Ken Niles, Oregon Office of Energy  
Joy Turner

**CONFEDERATED TRIBES AND BANDS OF THE YAKAMA INDIAN NATION –  
March 11, 2003**



Confederated Tribes and Bands  
of the Yakama Indian Nation

Established by the  
Treaty of June 9, 1855

Roy Schepens, Manager  
U.S. Department of Energy  
Office of River Protection  
P.O. Box 450  
Richland, Washington 99352

March 11, 2003

Dear Mr. Schepens:

**Re: Comments on the Notice of Intent to Prepare an Environmental Impact  
Statement for the Retrieval, Treatment, and Disposal of Tank Waste and Closure of  
Single-Shell Tanks at the Hanford Site.**

The Confederated Tribes and Bands of the Yakama Nation is a federally recognized sovereign pursuant to the Treaty of June 9, 1855 made with the United States of America (12 Stat. 951). The National Environmental Policy Act process that U.S. Department of Energy has begun for high-level waste in the 149 single-shell tanks (SST) is of extreme interest to the Yakama Nation since these waste and tanks are located on Yakama Nation ceded lands and because the waste will have long-term impacts if not properly dealt with in accordance to existing environmental laws.

The high-level waste in the single-shell tanks, ancillary infrastructure and piping, and contaminated soils associated with the leaking SSTs poses a long-term, high risk to the Yakama people, the public and the Columbia River. Hazardous substances from the Central Plateau have reached the Columbia River adding additional risk to the chemical risk recently noted in a fish contaminant survey conducted by the U.S. Environmental Protection Agency. In August 2002, EPA released the results of that fish study<sup>1</sup> that found the highest concentration of chemical contaminants in Columbia River fish to be in the Hanford Reach, posing up to a 1 in 50 cancer risk among tribal people. Because of this extraordinary risk, USDOE must take every practicable step possible to reduce and eliminate potential threats emanating from the SSTs, ancillary infrastructure, piping, and contaminated soils associated with the leaking tanks on the Central Plateau.

Given the facts stated above, the Yakama Nation makes the following recommendations:

- High-level wastes, as defined under the Nuclear Waste Policy Act, must be removed and disposed in a permanent geological repository.
- The analysis must include a “clean” closure alternative.

<sup>1</sup> U.S. Environmental Protection Agency, Region X, Seattle, Washington, 98101, “Columbia River Basin Fish Contaminant Survey, 1996-1998, EPA 910-R-02-006, July 2002

**RECEIVED**

Post Office Box 151, Fort Road, Toppenish, WA 98948 (509) 865-5121 MAR 13 2003

DOE ORB/OPR/DOE

**CONFEDERATED TRIBES AND BANDS OF THE YAKAMA INDIAN NATION –  
March 11, 2003 (continued)**

- All waste meeting the criteria for TRU must be retrieved and disposed in a licensed TRU repository and conform to USDOE's disposal requirements for WIPP.
- The analysis should include a comprehensive flow-sheet that includes timelines for SST and Double-shell tank waste retrieval, tank closure or removal, pretreatment, volume reduction, final waste forms, and disposition.
- Consideration of grouting of SST and other HLW should be ruled out.
- Disposition of SST ancillary piping and infrastructure will require a separate RCRA permit. The tank closure NEPA analysis should include the volumes and concentrations of radioactive and non-radioactive hazardous substances contained in the ancillary piping and related infrastructure along with risk to the environment and Yakama people.
- The analysis should assess the risk to the Yakama people via a tribal treaty risk scenario developed in close cooperation with the Yakama and other tribal nations.
- The cumulative impact analysis should include a tribal human risk scenario that takes into consideration EPA's recent Columbia River Basin Fish Contaminant Survey findings. In addition, USDOE's Radiation Dose Guideline should be withdrawn, and a more comprehensive guideline should be established in compliance with RCRA/CERCLA and Endangered Species Act and integrated into the tribal risk scenario.

For the Yakama Nation, closure decisions must protect the resources to which the tribe has specific aboriginal and Treaty reserved rights, to protect the unique culture and worldview and enable continued practice of the tribal religion. Hopefully, USDOE sees the benefits of working closely with the Yakama Nation to comply and protect reserved Treaty resources and rights. Any attempt to abandon HLW, thereby creating a sacrifice zone on the Central Plateau of Hanford, would not meet the intent of the Treaty of 1855 and Congress. It remains the intent of Congress to see that this waste is isolated from the environment to reduce potential risks to humans.

If you have any questions, I may be reached at (509) 452-2502. Thank you.

Sincerely,



Russell Jim, Manager  
YN ER/WM Program

cc: Jesse Roberson, Assistant Sec. USDOE  
Mary Burandt, Document Manager, USDOE-ORP

**NEZ PERCE TRIBE – July 27, 2004**



*Nez Perce*

ENVIRONMENTAL RESTORATION & WASTE MANAGEMENT  
P.O. BOX 365 • LAPWAI, IDAHO 83540-0365 • (208) 843-7375 / FAX: 843-7378

July 27, 2004

Mary Beth Burandt  
Document Manager  
DOE Office of River Protection  
U.S. DOE, P.O. Box 450  
Mailstop H6-60  
Richland, WA 99352

Re: *Draft Environmental Impact Statement for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks*

Dear Ms. Burandt:

On Monday, July 19, the staff of the Environmental Restoration and Waste Management Program (ERWM) of the Nez Perce Tribe received a visit from Steve Wiegman, Kim Ballinger, Woody Russell, and Jeff Lyon regarding the above referenced draft environmental impact statement (EIS). We understand that this draft EIS is scheduled to be released for tribal, state, and public comment in October 2004.

The meeting was both a briefing and an informal discussion of the alternatives as they will likely be presented in the EIS. We found this interaction to be very helpful in understanding what to expect when the EIS arrives, and also in better understanding the nature of alternatives and the Nez Perce Tribe might more effectively comment upon them. We commend you, your colleagues, and WA Department of Ecology for this effort, and are hopeful that discussions of this nature continue throughout this particular EIS process.

Towards that end, we would like to invite your people back for an additional briefing and discussion about two weeks after we receive our copies of the draft, which would likely be near the end of October. Please keep this in mind and arrange this with me or Sandra Lilligren of my staff, sandral@nezpercc.org, (208) 843-7375, ext. 2443 when you know the delivery schedule.

We all know that the issues related to tank farms and associated legacy waste are technically complex, economically expensive, and emotionally truly intense. We at ERWM appreciate all efforts towards a clear, honest, and sensitive approach towards these matters. We thank you for your efforts towards that end, and look forward to our next meeting.

Sincerely,

A handwritten signature in black ink.

Patrick Sobotta,  
ERWM Director

**RECEIVED**

JUL 29 2004

**DOE-ORP/ORPCC**

**NEZ PERCE TRIBE – July 27, 2004 (*continued*)**

Cc      Roy Scheppens, ORP  
Michael Wilson, WA Ecology  
Jeffrey Lyon, WA Ecology  
Nick Ceto, EPA  
Doug Huston, Chair HAB TWC (Oregon)

**NEZ PERCE TRIBE – February 10, 2005**



*Nez Perce*

ENVIRONMENTAL RESTORATION & WASTE MANAGEMENT  
P.O. BOX 365 • LAPWAI, IDAHO 83540-0365 • (208) 843-7375 / FAX: 843-7378

February 10, 2005

Roy Schepens  
Office of River Protection  
PO Box 450, MSIN H6-60  
Richland, WA 99352

Re: *Technical Requirements Document for Tank Closure Environmental Impact Statement Vadose Zone and Groundwater Revised Analysis*

Dear Mr. Schepens:

The document cited above, dated November 23, 2004, has come to the attention of staff of the Nez Perce Tribe Environmental Restoration and Waste Management program (ERWM) during discussions regarding the delay in distribution of the draft tank closure environmental impact statement. The ERWM has a number of concerns with this document, which are discussed below.

The Nez Perce Tribe retains reserved treaty rights in the Mid-Columbia region under the Treaty of 1855 with the United States Government. These rights have been recognized and affirmed through subsequent Federal and State actions. These actions protect Nez Perce rights to utilize our usual and accustomed resources and resource areas, including those in the Hanford Reach of the Columbia River. Accordingly, ERWM has support from the U.S. Department of Energy (DOE) to participate in and monitor relevant DOE activities. Most of what occurs at Hanford is relevant to reserved treaty rights, and therefore we maintain involvement in waste management issues.

ERWM staff are aware that issues related to vadose zone and groundwater modeling are of huge significance in clean-up and waste management at Hanford. At ERWM we are concerned that the questions and doubts, which it appears DOE is experiencing regarding contaminant fate and transport, are being reviewed in a less than open process. In an attempt of resolution to questions and discrepancies, it appears that key decisions are being made in regards to model development and modifications, again in a less than open process. It is our understanding that outside DOE, few if any entities were aware that groundwater modeling discrepancies were a major issue for DOE and were (are) holding up the draft EIS. Additionally, some of the references cited in the Technical Requirements Document (TRD) have not been subjected to rigorous peer review outside the DOE community, and some are not readily available to the tribe or other interested stakeholders.

We are concerned that the lack of an open process could jeopardize the working relationship that DOE has established with tribal nations and other entities, such as the Tri-party agencies and the State of Oregon. We strongly urge that DOE bring such issues into the open, to support trust and cooperation in the decision-making process.

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**DOE-ORP/ORPCC**

## NEZ PERCE TRIBE – February 10, 2005 (*continued*)

Specific technical concerns regarding the document are listed below.

**Purpose and Scope** – The purpose of the TRD is "...to establish consistency or comparability within the assumptions..." as described in the third paragraph of section 1.0. This would seem a worthy goal, provided it is pursued with solid data and good scientific judgment. It is important to note, however, that geologic and hydrological conditions are quite different for various specific sites at Hanford, and there are considerable variations in the wastes under consideration.

**Methods** - Development of a consistent vadose zone and groundwater analytical approach to release and transport of contaminants using the same models and methods, but appropriately different input parameters might be a viable approach. Comparing results of different models or methods with a description of differences and uncertainties between approaches may also be a viable approach to the heterogeneity that occurs at Hanford. However, it should be clear that an application of a consistent set of technical assumptions based on the "one size fits all" principle cannot be justified. ERWM does not concur with the concept of "benchmarking" to the "Hanford Site models".

From the TRD it appears that the Configuration Management Team was to have made some decisions in November (prior to the TRD document being released?) regarding model usage. Has this been done? If so, what are those decisions? What sort of alternative modeling path is currently being constructed?

**Assumptions – Inventory** – paragraph 2: What does "de-aggregation of sources" mean?

**Vadose Zone Modeling** – paragraph 2 in section 4.2: This refers to using the Richard's Equation approach for modeling efforts. A basic assumption of the Richard's Equation is that it applies to fluid flow in a vertical direction through homogenous material. Numerous researchers working over several decades have clearly established the heterogeneity of subsurface materials at Hanford, in addition to major components of horizontal flow in the subsurface. Complex and irregular stratigraphy in combination with unusual and discontinuous structures characterize the geologic materials underlying the Hanford surface. Movement of water and/or liquid waste through such a heterogeneous medium cannot be reasonably modeled by using the Richard's Equation.

**Infiltration Rates** - The information on infiltration rates in section 4.4 is presented somewhat cryptically. Although it is not stated in the text, data in lines three and four of the table indicate that the authors have concluded that infiltration rates through the Hanford tank farms will not change after the surface barrier design life has been exceeded. This is an astounding denial of work by chemists, geologists and others showing clearly that materials exposed to the Earth's surface or near-surface environments do, in fact, change over time. To conclude that the surface barriers will be uniformly effective over infinite time is also contrary to standards of good engineering practice, which requires careful attention to design life of all projects. Therefore, please explain how it is concluded that surface barrier infiltration rates remain the same in perpetuity?

**Groundwater Flow Field** – What is the justification for use of a static groundwater flow field, when we know that the flow fields beneath Hanford are undergoing change and are likely to do so for the time frames the contaminants will remain in the soil and groundwater? What level of confidence can you really have in a static flow field and the recharge to that field? For example, researchers at the National Climatic Data Center in North Carolina have proposed in a peer reviewed journal that in the past century in the United States, total precipitation has increased by 7%. Most of that increase has come in the past 30 years (Groisman, et al, Journal of Hydrometeorology, February 2004).

In summary, ERWM restates its concern regarding open process for decision making at Hanford. The mission statement of the Indian Nations Program within the DOE includes the directives:

**NEZ PERCE TRIBE – February 10, 2005 (continued)**

To provide a proactive program that guides the implementation of the U.S. Department of Energy American Indian Policy in an honorable and consistent manner.  
To provide effective ombudsman services and anticipate and initiate opportunities for meaningful tribal participation in Hanford decision making processes.

Additionally, we reference the memorandum *Government-to-Government Relations with Native American Tribal Governments* by President Clinton of April 29, 2004 which reaffirms Executive Orders No. 12875 and 12866. Section b. states specifically, "Each executive department and agency shall consult...with tribal governments prior to taking actions that affect federally recognized tribal governments. All such consultations are to be open and candid...."

The ERWM would appreciate a timely response to our concerns regarding open decision-making process, as well as to the specific technical concerns cited in this letter. If you have further questions, please contact Sandra Lilligren of our staff, at (208) 843-7375, ext. 2443, or [sandral@nezperce.org](mailto:sandral@nezperce.org).

Sincerely,



Gabriel Bohnee  
Interim Director

Cc: Kevin Clarke, DOE-RL  
Keith Klein, DOE-RL  
Mary Beth Burandt, DOE-ORP  
Mike Wilson, Ecology  
Nick Ceto, US EPA  
Ken Niles, ODE  
Stuart Harris, CTUIR  
Russell Jim, YN

**CONFEDERATED TRIBES AND BANDS OF THE YAKAMA NATION – July 19, 2006**



Confederated Tribes and Bands  
of the Yakama Nation

Established by the  
Treaty of June 9, 1855

July 19, 2006

Mr. Keith Klein, Manager  
U.S. Department of Energy  
Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

The Yakama Nation is responding to your letter dated June 28, 2006 regarding a cultural resources review and inventory for Arid Lands Ecology Quarry Reserve Borrow Site Development (HCRC#2006-600-008).

USDOE is creating a new quarry on Yakama Nation ceded lands. In your letter, you state that for about a decade the USDOE has been consulting tribes concerning quarries. However, the Yakama Nation has never been invited to the table to begin meaningful discussions on the selection of an appropriate site nor in a National Environmental Policy Act review regarding this matter. We await that opportunity.

Actions currently occurring on the ground in the vicinity of the new quarry are in violation of the NEPA (42 U.S.C. 4321 *et seq.*) and the National Historic Preservation Act (16 U.S.C. 470s) and their respective implementing regulations. A National Environmental Policy Act review must be undertaken that includes a rigorous review of all potential adverse effects to cultural resources, including an analysis of aesthetic impacts from the full footprint of a proposed site on culturally significant view points, such as, from Gable Mountain.

USDOE still has yet to fulfill its commitment to perform a NEPA analysis addressing quarries as made in the *Final Hanford Comprehensive Land-Use Plan Environmental Impact Statement* (DOE/EIS-0222-F) *Record of Decision*. USDOE issued a *Environmental Assessment: Use of Existing Borrow Areas, Hanford Site, Richland Washington* in August 2001 and stated under the proposed action section in that document that "The DOE proposes to obtain borrow materials from *existing active* [emphasis added] borrow pits and quarries on the Hanford Site." However, the proposed quarry, and haul road recently constructed are new -- not existing active pits/quarries, and is nearly a mile away from any existing site. Furthermore, a major shortcoming of this environmental assessment analysis was that it failed to include biological and cultural resource reviews, particularly for the proposed action.

Additional documents support our conclusion that the quarry in question is new and not an existing quarry or pit, and that no cultural resource review was conducted at the time for the preferred alternative in the environmental assessment issued in 2001. A notification [email] from USDOE-RL Cultural and Historic Resources Program

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Post Office Box 151, Fort Road, Toppenish, WA 98948 (509) 865-5121

**DOE-RL/RLCC**

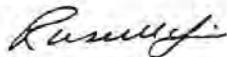
**CONFEDERATED TRIBES AND BANDS OF THE YAKAMA NATION – July 19, 2006**  
*(continued)*

concerning a Section 106 Cultural Resources Review (HCRC Project #2005-600-012) was issued on March 7, 2005 for conducting a review for the haul road recently constructed. Please note that this review was conducted well after the issuance of the environmental assessment mentioned above and the issuance of the associated finding of no significant impact signed 10 October, 2001 by the manager of USDOE-RL. In this cultural resource review notification dated March 7, 2005, USDOE states, "There currently is *no access road* [emphasis added] into the borrow area...[and]...The APE will need to be surveyed". Another cultural resource review was issued in February 22, 2006 to cover 145 acres within which up to a 2-acre area will be impacted by sample pits to characterize the soils in this area. However, this review states, over the next 25 years, it is anticipated that a 300-acre area within the southeast corner of the 2,280 acre borrow area will be affected by the mining operations." So there is no NEPA coverage for this new quarry and an incomplete cultural resource review for the full potential impact of up to 300 or 2,280 acres. Which is it? We also are hearing now that USDOE is considering other commercial uses of this area.

Given the above stated facts, we request that USDOE cease all actions occurring in the APE and related to it, and convene a meeting with the Yakama Nation ERWM Program to discuss an appropriate path forward. Your determination of no adverse effect in your June 28, 2006 letter may be inappropriate and premature at this time.

Thank you for the opportunity to share our views on this issue. You may contact me at (509) 452-2502 to arrange a meeting to further discuss this matter.

Sincerely,



Russell Jim, Manager  
Environmental Restoration/Waste Management

cc:

Philip Rigdon, Deputy Dir. YN DNR  
YN ERWM staff  
Kevin Clarke, USDOE  
Doug Shoop, USDOE  
Allyson Brooks, SHPO-DAHP Office

**CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION – November 8, 2007**



Confederated Tribes  
of the  
Umatilla Indian Reservation  
Department of Natural Resources  
***Cultural Resources Protection Program***  
P.O. Box 638 73239 Confederated Way  
Pendleton, Oregon 97801  
(541) 276-3629 Fax (541) 276-1966



November 8, 2007

Mr. Rob G. Hastings  
Acting Assistant Manager for Safety and Engineering  
U.S. Department of Energy  
Richland Operations Office  
P.O. Box 550  
Richland, WA 99352

**TANK CLOSURE AND WASTE MANAGEMENT ENVIRONMENTAL IMPACT  
STATEMENT AND BORROW AREA C, CULTURAL RESOURCES  
RECOMMENDATION**

Dear Mr. Hastings,

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR), Cultural Resources Protection Program (CRPP) has reviewed the available cultural resources documentation for the Tank Closure (TC) and Waste Management (WM) Environmental Impact Statement (EIS) Project. The Treatability Test Use of the Borrow Area C MOA will encompass an area approximately 5 acres in size. The TC&WM EIS MOA will encompass an area approximately 2200 acres at the base of the Mountain. A "National Register of Historic Places Determination of Eligibility for Laliiik Traditional Cultural Property" has been prepared by the DOE and the Department of Archaeology and Historic Preservation (DAHP) has concurred that this property is eligible. The CRPP agrees with this determination.

The DOE Richland Operations Office has determined the proposed undertakings will have an adverse effect to National Register Eligible Rattlesnake Mountain (Laliiik). The DAHP concurred with these findings and the Advisory Council of Historic Preservation (AChP) has agreed to participate in consultation to develop MOAs to detail the resolution of the undertakings' adverse effects to historic properties.

The CRPP believes that the two undertakings are inextricably linked. We agree with DOE that the entire proposed undertaking will have an adverse effect on Laliiik, a historic property of traditional religious and cultural significance to area Tribes. The projects will

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**CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION – November 8, 2007**  
**(continued)**

be located on the flanks of the Mountain and will not only compromise the view shed, but also the integrity of setting, feeling, and association (36 CFR 800.5(a)(1)). Additionally, there will be visual impacts to Gable Mountain and Gable Butte, also historic properties of traditional religious and cultural significance, which DOE has recognized as eligible for inclusion in the National Register of Historic Places.

The National Historic Preservation Act's implementing regulations indicate that if an undertaking will have an adverse effect on a historic property, "The agency official shall consult with the SHPO/THPO and other consulting parties, including Indian tribes and Native Hawaiian organizations, to develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize, or mitigate adverse effects on historic properties" [36CFR800.6(a)]. The CRPP believes that the adverse effects this undertaking will cause can be avoided or minimized by relocating both projects. An adverse effect under the National Historic Preservation Act (NHPA) is a significant impact under the National Environmental Protection Act (NEPA). We expect the TC&WM EIS to address the significant impact that the project will have under NEPA.

We would like to examine all of the alternatives available to assist DOE to find a way to protect these important places. If you have any questions, please contact me, or my staff member, Julie Longenecker, Anthropologist III/Hanford Cultural Resources Coordinator at (509) 371-0643.

Sincerely,



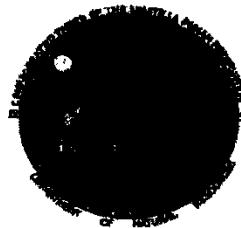
Teara Farrow, Manager  
Cultural Resources Protection Program  
(541) 276-3629

Cc:  
Julie Longenecker, CTUIR  
Pete Garcia, DOE  
Annabelle Rodriguez, DOE  
Francis Sijohn, DOE  
Kevin Clarke, DOE  
Ellen Kennedy, PNNL  
Robert Whitlam, DAHP  
Allyson Brooks, WA SHPO  
Thomas McCulloch, ACHP  
Mike Sabota, NPT  
Anthony Smith, NPT  
Russell Jim, YN  
Rex Buck II, Wanapum  
Camille Pleasants, Colville  
Stuart Harris, CTUIR  
Tom Bailor, CTUIR  
Diane Henkels, CTUIR  
Audie Huber, CTUIR

**CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION –  
November 26, 2007**



Confederated Tribes  
of the  
Umatilla Indian Reservation  
Department of Natural Resources  
**Cultural Resources Protection Program**  
P.O. Box 638 73239 Confederated Way  
Pendleton, Oregon 97801  
(541) 276-3629 Fax (541) 276-1966



November 26, 2007

Dr. Ines Triay  
Principal Deputy Assistant Secretary for Environmental Management EM-1  
Forrestal Building  
U.S. Department of Energy  
1000 Independence Ave., S.W.  
Washington, DC 20585

Dear Dr. Triay,

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Cultural Resources Protection Program (CRPP) has serious concerns regarding the Tank Closure and Waste Management (TC&WM), Environmental Impact Statement (EIS), Hanford Site, Richland, Washington, that is being developed by the Department of Energy Office of River Protection (DOE-ORP) in Richland Washington. The CTUIR is a consulting party to this project and we are extremely concerned about the adverse effects that the undertakings at Borrow C will have on Rattlesnake Mountain, as known as *Laliik*, an eligible property on the National Register of Historic Places and a sacred mountain to the Hanford Tribes (CTUIR, Nez Perce Tribe, Yakama Nation, and Wanapum Band).

The CTUIR CRPP is aware that Science Applications International Corporation (SAIC) is under contract to prepare the cultural resource section in the TC&WM EIS and that they are referencing materials from the Hanford Site for their analysis and write-up. The CTUIR has repeatedly requested from DOE-Hanford/SAIC staff the name and qualifications of the cultural resource staff person who is conducting the analysis and writing the cultural resources section for the subject EIS. The inadequate response we have received is "cultural resources folks in Germantown, MD".

We urge you to use qualified cultural resources staff who understand the cultural significance and sensitive nature of the irreplaceable resources at Hanford, specifically *Laliik*. We do not understand why point of contact information for cultural resources staff is being kept confidential. DOE's refusal to provide public information about the cultural resource analyst causes concern to us about the qualifications of the other technical specialists being used by SAIC for this important project.

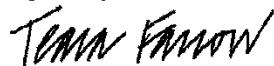
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**CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION –  
November 26, 2007 (continued)**

The CTUIR CRPP requests that you provide us with a response to this letter and an entire list of experts who are preparing the draft Tank Closure and Waste Management Environmental Impact Statement.

We look forward to receiving this information. Thank you for your attention to this important matter.

Respectfully,



Teara Farrow, Manager  
Cultural Resources Protection Program

Cc:

Julie Longenecker, CTUIR  
Pete Garcia, DOE  
Annabelle Rodriguez, DOE  
Francis Sijohn, DOE  
Kevin Clarke, DOE  
Woody Russell, DOE  
Mary E Burandt, ORP/DOE  
Charlotte Johnson, SAIC  
Shirley Olinger, ORP/DOE  
Ellen Kennedy, PNNL  
Thomas McCulloch, ACHP  
Robert Whitlam, DAHP  
Mike Sabota, NPT  
Anthony Smith, NPT  
Russell Jim, YN  
Wade Riggsbee, YN  
Rex Buck II, Wanapum  
Stuart Harris, CTUIR  
Rico Cruz, CTUIR

**CONFEDERATED TRIBES AND BANDS OF THE YAKAMA NATION – October 14, 2009**



Confederated Tribes and Bands  
of the Yakama Nation

Established by the  
Treaty of June 9, 1855

October 14, 2009

The Honorable Gregory B. Jaczko  
Chairman  
U.S. Nuclear Regulatory Commission  
Mail Stop 016G4  
Washington, DC 20555-0001

The Honorable Inez Triay  
Assistant Secretary  
Office of Environmental Management  
U.S. Department of Energy  
1000 Independence Ave SW  
Washington, D.C. 20585

Dear Chairman Jaczko and Secretary Triay:

I am writing to raise serious concerns regarding plans for the cleanup and closure of the U.S. Ecology radioactive waste landfill and other similar waste sites at the Energy department's Hanford site.

In 1964, the U.S. Atomic Energy Commission (AEC) leased 1,000 acres of land in the 200-East Area of the Hanford nuclear weapons material production site. The following year Washington State subleased 100 acres of this land to a private company to operate a commercial radioactive waste landfill, now known as the U.S. Ecology site. In 1966, the Nuclear Regulatory Commission, formerly part of the AEC delegated authority to the State of Washington and subsequently discontinued direct regulatory authority over Special Nuclear Materials, such as plutonium, disposed at the site. Between 1966 and 1980, about 5,000 cubic meters of transuranic wastes containing about 220 pounds of plutonium were disposed, subsequently, the U.S. Ecology site has one of the largest inventories of buried transuranic wastes in the United States

In 2004, the State of Washington completed an Environmental Impact Statement in which the preferred option for disposition of this site is the installation of a cap and abandonment of these wastes. This decision is based on a recommendation made in 1990 by the Washington Department of Ecology.<sup>1</sup> Currently, the State of Washington is in the process of implementing this decision – at a time when the Energy department is now embarking on a major effort to cleanup the Hanford 200-Area. The State of Washington's proposal to abandon buried transuranic wastes in place will set a bad

<sup>1</sup> U.S. Department of Energy, Directions in Low-Level Waste Management, A Brief History of Low-Level Radioactive Waste Disposal, DOE/LLW-103, 1990, p. 44.

**CONFEDERATED TRIBES AND BANDS OF THE YAKAMA NATION – October 14, 2009**  
**(continued)**

2

precedent that will negatively impact cleanup of very large amounts of long-lived radioactive wastes buried at the Hanford site. Under federal law, the U.S. Department of Energy will ultimately assume the liabilities for the U.S. Ecology site once it closes.

This landfill is an unlined disposal facility with a history of hazardous and radioactive waste leakage and contamination of groundwater that enters the Columbia River. Monitoring data shows elevated levels of tritium, uranium, solvents and hexavalent chromium in ground water and extremely high levels of organic soil vapors.

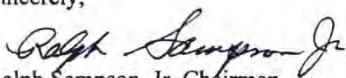
The majority of transuranic wastes in the U.S. Ecology landfill is of DOE-origin and is likely to be in concentrations greater than 100 nanocuries per gram – a level large enough to require exhumation and geological disposal under current federal standards. It also appears that this landfill contains about 95% percent of the total amount of uranium disposed in the soil at the Hanford site.

The threat to groundwater and the Columbia River from buried transuranic wastes at Hanford appears to be more serious than at other DOE sites. As much as 1,800 pounds of plutonium (including the U.S. Ecology Site) may be buried in the soil at Hanford. Deep vadose zone contamination from buried plutonium in the Hanford 200-Area appears to be orders of magnitude greater than at other DOE sites such as the Idaho National Laboratory. For instance, plutonium has reached groundwater at Hanford and has been measured at depths over 120 feet in significant excess of the 100 nCi limit. The proximity the U.S. Ecology Site to the DOE disposal areas complicates the ability to distinguish potential releases from the DOE sites.

In 2000 the U.S. National Academy of Sciences warned against actions such as capping waste sites containing long-lived radioactive wastes, noting that: "the likelihood that institutional management measures will fail at some point is relatively high...contaminant reduction is preferred to contaminant isolation and the imposition of stewardship measure whose risk of failure is high."

Given these circumstances, the Yakama Nation insists that Nuclear Regulatory Commission, the State of Washington, and the U.S. Department of Energy establish a comprehensive cleanup-plan for the removal of all buried transuranic and uranium wastes at the Hanford site; with the goal of removing as much contamination as possible.

Sincerely,

  
Ralph Sampson, Jr., Chairman  
Yakama Nation Tribal Council

CC: Mose Squeochs, Chair, RHW Committee  
Phil Rigdon, Deputy Dir., YN DNR  
Julio Carranza, Office of Legal Counsel  
Ray Givens, Consulting Attorney

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## **C.4 INTERACTIONS WITH HANFORD ADVISORY BOARD AND OREGON HANFORD CLEANUP BOARD**

In addition to formal consultation and communication with American Indian tribal governments, DOE used other forums to reach out to the public during the development of this *Final TC & WM EIS*. The following sections provide summaries of DOE's interactions with the Hanford Advisory Board (HAB) and the Oregon Hanford Cleanup Board and copies of the correspondence with these groups. Comments were received from HAB and the Oregon Hanford Cleanup Board during the public comment period on the *Draft TC & WM EIS*. Those letters and DOE responses can be found in Section 3 of the Comment-Response Document of this *Final TC & WM EIS*.

### **C.4.1 Hanford Advisory Board Mission and Membership**

HAB is a nonpartisan, broadly representative body affected by Hanford cleanup issues. The primary mission of HAB is to provide independent and informed recommendations and advice to DOE, EPA, and Ecology on selected major policy issues related to the cleanup of Hanford.

The goal of HAB is to develop consensus policy recommendations and advice. It is intended to be an integral component of some Hanford tribal and general public involvement activities, but not to be the sole conduit for those activities. Through its open public meetings, advice on agency public involvement activities, and communication by HAB members with their constituencies, HAB assists the broader public in becoming informed and involved in Hanford cleanup decisions.

HAB consists of the following organizations, as defined by a Memorandum of Understanding among DOE, EPA, and Ecology:

- Seven representatives of local governmental interests, including one each appointed by the governing bodies of Benton County; Franklin and Grant Counties jointly; the Cities of Kennewick, Richland, Pasco, and West Richland; and one appointed by the Benton-Franklin Regional Council
- One representative of business interests from the Tri-Cities area
- Five representatives of the Hanford workforce
- One representative of local environmental interests
- Five representatives of regional citizen, environmental, and public interest organizations with an active interest in Hanford cleanup issues
- One representative each of local and regional public health concerns
- One representative each of the three tribes that have treaty rights that are affected by Hanford cleanup decisions, i.e., the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, and the Nez Perce Tribe
- Two representatives of Oregon State citizens' interests that might not otherwise be covered by the categories listed above, including one appointed by the governor of Oregon or the agency that has the lead role for the State of Oregon on Hanford cleanup issues and one that can represent the broad interests of Oregon citizens, appointed by the Oregon Hanford Cleanup Board

- Two representatives from regional universities
- No more than four at-large members—individuals who have expressed a general interest in Hanford cleanup issues and who might otherwise contribute to ethnic, racial, or gender diversity on HAB

Table C–4 provides a chronology of DOE’s interactions with HAB during development of the “Tank Closure EIS” and the *Draft* and *Final TC & WM EIS*.

**Table C–4. Hanford Advisory Board Outreach**

Date	Subject Matter/Purpose of Interaction	Committee
February 7, 2002	HAB Committee sent letter to DOE regarding the scope of the “Tank Closure EIS.”	HAB Committee
December 6, 2002	HAB Committee sent letter to DOE recommending that DOE revise the Notice of Intent for the “Tank Closure EIS” and extend the scoping period.	HAB Committee
January 9, 2003*	DOE provided an overview of the Notice of Intent for the “Tank Closure EIS.”	HAB Tank Waste Committee
January 21, 2003	DOE responded to HAB’s December 6, 2002, letter and transmitted a copy of the Notice of Intent published in the <i>Federal Register</i> .	HAB Committee
March 12, 2003	DOE sent letter to the HAB Committee regarding the scoping comments on the Notice of Intent.	HAB Committee
March 13, 2003*	DOE provided an overview of the alternatives.	HAB Tank Waste Committee
August 12, 2003*	DOE provided an overview of scoping comments on the supplemental treatment technologies being analyzed in the “Tank Closure EIS.”	HAB Tank Waste Committee
October 8 and 9, 2003	DOE provided information regarding public involvement in the “Tank Closure EIS.”	HAB Joint Committees
October 9, 2003	DOE provided a status update on the “Tank Closure EIS.”	HAB Tank Waste Committee
October 21, 2003	DOE provided a written response to issues raised by HAB in a February 7, 2002, letter.	HAB Committee
January 15, 2004*	DOE provided a status update on the “Tank Closure EIS.”	HAB Tank Waste Committee
March 3, 2004	DOE provided a status update on the “Tank Closure EIS.”	HAB Tank Waste Committee
May 13, 2004*	DOE, Ecology, and HAB discussed tank closure and transuranic waste tanks.	HAB Tank Waste Committee
June 3 and 4, 2004*	DOE, Ecology, and HAB discussed HAB’s advice on the “Tank Closure EIS.”	HAB Joint Committees
June 4, 2004	HAB sent letter to DOE and Ecology regarding the scope of the “Tank Closure EIS” and stated that none of the alternatives are compliant with the Tri-Party Agreement.	HAB Committee
July 8, 2004	DOE sent letter to HAB in response to HAB’s June 4, 2004, letter.	HAB Committee
November 3, 2004	DOE met with HAB to discuss HAB’s advice.	Public Involvement Committee

**Table C-4. Hanford Advisory Board Outreach (*continued*)**

Date	Subject Matter/Purpose of Interaction	Committee
April 14, 2005	DOE and Ecology met with HAB to discuss changes to alternatives and the technical guidance document.	HAB Tank Waste Committee
June 2, 2005	DOE met with HAB to discuss the technical guidance document.	River and Plateau Committee
October 13, 2005*	DOE presented the alternatives.	HAB Tank Waste Committee
January 10, 2006*	DOE, Ecology, and HAB met to discuss the Settlement Agreement.	HAB Tank Waste Committee
January 11, 2006*	DOE, Ecology, and HAB met to discuss the Settlement Agreement.	River and Plateau Committee
February 1, 2006	DOE met with HAB to discuss the new Notice of Intent for the <i>Draft TC &amp; WM EIS</i> and scoping.	Public Involvement Committee
February 2, 2006*	DOE, Ecology, and HAB met to discuss the Settlement Agreement, scoping of the <i>Draft TC &amp; WM EIS</i> , and FFTF decommissioning.	HAB Committee
February 8, 2006*	DOE, Ecology, and HAB met to discuss scoping of the <i>Draft TC &amp; WM EIS</i> , cumulative impacts, and alternatives.	River and Plateau Committee
April 6, 2006*	DOE, Ecology, and HAB met to discuss HAB's advice.	HAB Committee
April 7, 2006	HAB sent letter to DOE and Ecology transmitting comments on the scope of the <i>Draft TC &amp; WM EIS</i> .	HAB Committee
June 30, 2006	DOE and Ecology sent letter to HAB in response to HAB's April 7, 2006, letter.	HAB Committee
December 5, 2006	DOE met with HAB to discuss FFTF decommissioning.	Joint Tank Waste and Budgets & Contracts Committee
January 31, 2007	DOE met with HAB to discuss the Technical Review Group and additional workshop topics.	Public Involvement and Communication Committee
February 1 and 2, 2007	DOE met with HAB to discuss manager update on HAB issues.	HAB Committee
February 14, 2007	DOE met with HAB to discuss the groundwater model and public involvement.	HAB Tank Waste Committee
April 5 and 6, 2007	DOE met with HAB to provide status update.	HAB Committee
May 10, 2007	DOE met with HAB to provide overview of the groundwater vadose zone and discuss manager update on HAB issues.	HAB Tank Waste Committee
August 15, 2007	DOE met with HAB to provide status update.	HAB Tank Waste Committee
September 5, 2007*	DOE and Ecology met with HAB to provide status update.	Public Involvement Committee
October 17, 2007*	DOE and Ecology met with HAB to discuss manager update on HAB issues.	Joint Subcommittee

**Table C-4. Hanford Advisory Board Outreach (*continued*)**

Date	Subject Matter/Purpose of Interaction	Committee
November 1 and 2, 2007*	DOE and Ecology met with HAB to provide overview of public involvement and the Technical Review Group.	HAB Committee
February 7, 2008	DOE met with HAB to provide status update.	HAB Committee
April 2, 2008	DOE met with HAB to discuss public involvement and provide status update.	Public Involvement Committee
June 5, 2008	DOE met with HAB to provide status update.	HAB Committee
February 5–6, 2009	DOE met with HAB to discuss HAB's advice on the comment period for the <i>Draft TC &amp; WM EIS</i> .	HAB Committee
April 15, 2009	DOE met with HAB to provide status update.	HAB Committee
May 29, 2009	DOE met with Hanford Communities to provide a briefing on the <i>Draft TC &amp; WM EIS</i> .	Hanford Communities
November 20, 2009	DOE met with Hanford Communities to provide a briefing on the <i>Draft TC &amp; WM EIS</i> .	Hanford Communities
December 15, 2009	DOE met with Hanford Communities to provide a briefing on the <i>Draft TC &amp; WM EIS</i> .	Hanford Communities
January 14, 2010	DOE met with HAB to provide feedback on the mailer announcing dates and locations for public hearings.	Public Involvement Committee
January 19–20, 2010*	DOE and Ecology met with HAB to discuss the <i>Draft TC &amp; WM EIS</i> and support comment development.	HAB Committee
February 16–17, 2010**	DOE, Ecology, and EPA attended Committee of the Whole Meeting to receive feedback on the <i>Draft TC &amp; WM EIS</i> .	Hanford Communities
April 14, 2010	DOE and Ecology sent letter to HAB confirming receipt of comments to be responded to in the Comment-Response Document.	HAB Committee
June 16, 2010**	DOE, Ecology, and EPA met with HAB to discuss Ecology comments on the <i>Draft TC &amp; WM EIS</i> and provide an overview of the comment review process.	HAB Tank Waste Committee
August 11, 2010**	DOE, Ecology, and EPA met with HAB to discuss EPA comments on the <i>Draft TC &amp; WM EIS</i> and provide an overview of the comment review process.	HAB Tank Waste Committee
April 13, 2012	DOE briefed HAB on proposed changes to the Preliminary Final <i>TC &amp; WM EIS</i> Preferred Alternatives.	HAB Committee
April 17, 2012*	DOE and Ecology discussed the single-shell tank permit, Integrated Disposal Facility risk budget tool, State Environmental Policy Act, and Preliminary Final <i>TC &amp; WM EIS</i> .	HAB Tank Waste Committee
May 8, 2012*	DOE and Ecology met with HAB to discuss the <i>TC &amp; WM EIS</i> Record of Decision process and relationship to the Hanford sitewide permit.	HAB Joint River and Plateau, Tank Waste, and Public Involvement Committees

**Table C-4. Hanford Advisory Board Outreach (*continued*)**

Date	Subject Matter/Purpose of Interaction	Committee
June 7, 2012*	DOE and Ecology met with HAB to discuss HAB draft advice related to the potential decision on the changes to the discussion on the Preferred Alternative for supplemental treatment.	HAB Committee
June 8, 2012	HAB sent letter to DOE, EPA, and Ecology with advice regarding this <i>Final TC &amp; WM EIS</i> .	HAB Committee
July 26, 2012	DOE sent letter to HAB in response to HAB's June 8, 2012, letter.	HAB Committee
August 3, 2012	Ecology sent letter to HAB in response to HAB's June 8, 2012, letter.	HAB Committee

\* Indicates events in which DOE and Ecology participated.

\*\* Indicates events in which DOE, Ecology, and EPA participated.

**Key:** DOE=U.S. Department of Energy; Ecology=Washington State Department of Ecology; EPA=U.S. Environmental Protection Agency; FFTF=Fast Flux Test Facility; HAB=Hanford Advisory Board; “Tank Closure EIS”=“Environmental Impact Statement for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks at the Hanford Site, Richland, Washington”; *TC & WM EIS*=*Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington*.

**HANFORD ADVISORY BOARD TO U.S. DEPARTMENT OF ENERGY – February 7, 2002**

Feb. 7, 2002

Mary Beth Burandt, Document Manager  
U.S. Department of Energy, Office of River Protection  
P.O. Box 450 – H6-60  
Richland, WA 99352

Re: Tank Waste Retrieval and Closure EIS Scoping

Dear Ms. Burandt,

The U.S. Department of Energy has requested scoping comments based on the “Notice of Intent To Prepare an Environmental Impact Statement for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks at the Hanford Site, Richland, WA” (Federal Register / Vol. 68, No. 5, pp1052-1057 / Wednesday, January 8, 2003). This Environmental Impact Statement (EIS) will have far reaching effects on how the tank wastes are treated and disposed, and how to achieve final closure of the waste storage tanks at Hanford. The Hanford Advisory Board (Board) would like to emphasize that all alternatives should be considered carefully, and the preferred alternative chosen on the basis of the analyses in the EIS.

**The Board advises that the following items be included in the scope of the EIS:**

- \* The EIS should analyze short- and long-term impacts to the environment, including groundwater, of not removing technetium-99 from the Low Activity Waste.
- \* Include analysis of Immobilized Low Activity Waste (ILAW) disposal and any other waste streams that arise in the retrieval, treatment, and disposal of Tank Waste.
- \* The vadose zone is not identified in the current Notice of Intent (NOI) as an important item within the scope of this EIS. It should be. The EIS needs to assess options for remediating the vadose zone.
- \* The EIS as proposed in the NOI will not analyze all “reasonable alternatives.” Some examples of additional alternatives that should be analyzed (including long-term, full life cycle costs) are:
  - different melter technologies
  - different glass formulations
  - removal of tanks to achieve "clean closure"

**HANFORD ADVISORY BOARD TO U.S. DEPARTMENT OF ENERGY – February 7, 2002  
(continued)**

- treatment of all retrieved tank waste as High Level Waste (HLW) and disposal at the HLW repository.

\* Environmental impacts need to be assessed for the time frame necessary for them to achieve their peak value (e.g., > 100 years, > 1000 years, > 10,000 years).

\* This EIS should address retrieval and closure of the Double Shell Tanks.

\* Provide a life cycle cost to site closure for each of the alternatives considered. Per prior Board advice (#8), uncertain costs associated with a national repository should be entirely segregated.

\* For each alternative, evaluate the environmental impacts, human and environmental risks, and costs. Analyses should be carried out in sufficient depth and detail to provide objective and quantitative comparisons of alternatives. In addition, these analyses should include the full time span over which hazards may persist.

\* Impacts on and costs for community services.

**The following items require clarification or definition in the EIS:**

\* Provide a primer for the reader that identifies the various types of waste, their treatment methods, and disposal requirements for each waste classification. This EIS should contain, in language understandable to the public, a listing of the specific decisions supported by this EIS and how this EIS will be used in making those decisions.

\* The various Retrieval, Treatment, and Disposal options and closure options need to be presented in a matrix format to allow the "best" combination of actions to be chosen to achieve the optimal balance of technical approach, cost and schedule impact, and risk reduction.

\* A clear statement of the relationships between this EIS, the previous Tank Waste Remediation System (TWRS) EIS, and the Hanford Solid Waste (HSW) EIS should be included. (EIS roadmap.)

\* Under "Preliminary Identification of EIS Issues," clarify what the statement "Short term uses of the environment vs. long-term productivity" means, and how it translates into the requirements of this EIS.

**HANFORD ADVISORY BOARD TO U.S. DEPARTMENT OF ENERGY – February 7, 2002**  
**(continued)**

Sincerely,

Todd Martin, Chair  
Hanford Advisory Board

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*This advice represents HAB consensus for this specific topic. It should not be taken out of context  
to extrapolate Board agreement on other subject matters.*

cc: Roy Schepens, Manager, U.S. Department of Energy, Office of River Protection  
Keith Klein, Manager, U.S. Department of Energy, Richland Operations Office  
John Iani, U.S. Environmental Protection Agency, Region 10  
Tom Fitzsimmons, Washington State Department of Ecology  
Wade Ballard, Deputy Designated Federal Official, U.S. Department of Energy  
Michael Gearheard, Environmental Protection Agency  
Michael Wilson, Washington State Department of Ecology  
Martha Crosland, U.S. Department of Energy Headquarters  
The Oregon and Washington Congressional Delegations

U.S. Senators (OR)

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Brian Baird  
Norm Dicks

**HANFORD ADVISORY BOARD TO U.S. DEPARTMENT OF ENERGY – February 7, 2002**  
**(continued)**

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Jay Inslee  
Richard Hastings  
Rick Larsen  
Jim McDermott  
George Nethercutt  
Adam Smith

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**State Representatives (WA)**

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**HANFORD ADVISORY BOARD TO U.S. DEPARTMENT OF ENERGY – December 6, 2002**

# **HANFORD ADVISORY BOARD**

*A Site Specific Advisory Board, Chartered under the Federal Advisory Committee Act*

**Advising:**  
US Dept of Energy  
US Environmental  
Protection Agency  
Washington State Dept  
of Ecology

Dec 6, 2002

**CHAIR:**  
Todd Martin

**CO-VICE CHAIRS:**  
Ken Bracken  
Shelley Cimon

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Confederated Tribes of  
the Umatilla  
Washington State  
Department of Health

Roy Schepens, Manager  
U.S. Department of Energy, Office of River Protection  
P.O. Box 450  
Richland, WA 99352

Subject: Accelerated Retrieval, Treatment, and Disposal of Tank Waste and  
Closure of Tanks Environmental Impact Statement Scoping Period

Dear Mr Schepens,

The Department of Energy (DOE) has informed the Hanford Advisory Board (Board) that the 45 - day scoping period for the Accelerated Retrieval, Treatment, and Disposal of Tank Waste and Closure of Tanks Environmental Impact Statement (EIS) is slated to begin December 16, 2002 and has provided the Board with a draft Notice of Intent. We have observed that the Notice of Intent (NOI) is not specific, clear, or informative enough to elicit meaningful comment on the scope of the EIS.

In the NOI, DOE should clearly state that the reason for preparing this EIS is to evaluate proposed alternatives that would replace the decision to retrieve and vitrify all High-Level Nuclear Waste in Hanford's tanks. In addition, the NOI should clearly identify how DOE's intent to change waste classifications would change how the wastes are treated and disposed.

The 1997 Tank Waste Remediation System EIS and its record of decision stated there were inadequate data and characterization of tank waste and soil and groundwater contamination from leaks to consider closure in an EIS at that time. The NOI should contain the basis for the decision to include closure in this new EIS. This is vital for informed public comment on the scope of the EIS.

The Board recommends DOE explain in the NOI what basis it has for its assertion that adding an additional low activity waste vitrification facility in 2012 "is not technically or economically practical." (p. 7)

Considering the importance of this EIS to all stakeholders, the Board strongly recommends that DOE revise the NOI and extend the scoping period to allow more time for the public to comment. The scoping public meetings should be scheduled to avoid conflicts with other scheduled public meetings (i.e., State of the Site) occurring in January and early February.

HAB Consensus Advice #140  
Subject: Accelerated Retrieval, Treatment, and Disposal of Tank Waste and Closure of Tanks Environmental Impact Statement Scoping Period  
Adopted: December 6, 2002

EnviroIssues Hanford Project Office  
1933 Jadwin, Suite 135  
Richland, WA 99352  
Phone: (509) 942-1906  
Fax: (509) 942-1926

**HANFORD ADVISORY BOARD TO U.S. DEPARTMENT OF ENERGY – December 6, 2002**  
**(continued)**

Sincerely,



Todd Martin, Chair  
Hanford Advisory Board

*This advice represents HAB consensus for this specific topic. It should not be taken out of context to extrapolate Board agreement on other subject matters.*

cc: Keith Klein, Manager, U.S. Department of Energy Richland Operations Office  
John Iani, U.S. Environmental Protection Agency, Region 10  
Tom Fitzsimmons, Washington State Department of Ecology  
Wade Ballard, Deputy Designated Federal Official, U.S. Department of Energy  
Michael Gearheard, Environmental Protection Agency  
Michael Wilson, Washington State Department of Ecology  
Martha Crosland, U.S. Department of Energy Headquarters  
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onsensus Advice #140  
: Accelerated Retrieval, Treatment, and Disposal of Tank Waste and Closure of Tanks Environmental Impact  
nt Scoping Period  
d: December 6, 2002

**HANFORD ADVISORY BOARD TO U.S. DEPARTMENT OF ENERGY – December 6, 2002**  
**(continued)**

Norm Dicks  
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HAB Consensus Advice #140  
Subject: Accelerated Retrieval, Treatment, and Disposal of Tank Waste and Closure of Tanks Environmental Impact Statement Sooping Period  
Adopted: December 6, 2002

**U.S. DEPARTMENT OF ENERGY TO HANFORD ADVISORY BOARD – January 21, 2003**



**U.S. Department of Energy**  
**Office of River Protection**  
P.O. Box 450  
Richland, Washington 99352

03-ORP-005

**JAN 21 2003**

Mr. Todd Martin, Chair  
Hanford Advisory Board  
1933 Jadwin Avenue, Suite 135  
Richland, Washington 99352

Dear Mr. Martin:

**HANFORD ADVISORY BOARD (HAB) CONSENSUS ADVICE #140: NOTICE OF INTENT (NOI) TO PREPARE AN ENVIRONMENTAL IMPACT STATEMENT (EIS) FOR RETRIEVAL, TREATMENT, AND DISPOSAL OF TANK WASTE AND CLOSURE OF SINGLE-SHELL TANKS AT THE HANFORD SITE**

Thank you for your letter dated December 6, 2002, regarding the above-mentioned NOI.

The NOI has undergone significant revisions since we shared the draft with you back in November 2002. It was published in the Federal Register on January 8, 2003. I have attached a copy for your information.

As you will see when you read the final NOI, this version has added the specificity, detail and context, based directly on the comments we received from you and others on the earlier draft.

A draft primer has also been developed to help stakeholders and the general public to get a better understanding of the history of the Hanford Site and National Environmental Policy Act of 1969 processes, but more specifically to understand what input we are seeking from the public. The primer explains in more detail the immediate issues that the U.S. Department of Energy's Office of River Protection is facing and why we need to make decisional changes to the project. I have included a copy of the draft primer for your information as well. This primer was also shared in its draft form with the Tank Waste Committee on January 9, 2003.

We do understand that the draft EIS will be of strong interest to the stakeholders. I want you to know that we have heard your concerns about having enough time for comments and that we have agreed to a full 60-day public comment period beginning January 8 and concluding March 10, 2003.

**U.S. DEPARTMENT OF ENERGY TO HANFORD ADVISORY BOARD – January 21, 2003**  
**(continued)**

Mr. Todd Martin  
03-ORP-005

- 2 -

JAN 21 2003

If you have questions or comments, please feel free to contact me, or your staff may contact Erik Olds, Office of Communications, (509) 372-8656.

Sincerely,

  
Roy J. Schepens  
Manager

ORP:SB

Attachments (2)

cc w/attachs:

M. S. Crosland, EM-11  
W. W. Ballard, RL  
K. A. Klein, RL  
M. K. Marvin, RL  
Tom Fitzsimmons, Ecology  
Michael Wilson, Ecology  
R. E. Siguenza, EnviroIssues  
Michael Gearheard, EPA  
John Iani, US EPA, Region 10

**U.S. DEPARTMENT OF ENERGY TO HANFORD ADVISORY BOARD – January 21, 2003**  
**(continued)**

Mr. Todd Martin  
03-ORP-005

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JAN 21 2003

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**Attachment 1 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003**  
**– Notice of Intent**

**Attachment 1**

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Dated: January 6, 2003.

Rod Paige,

Secretary of Education.

[FR Doc. 03-386 Filed 1-7-03; 8:45 am]

BILLING CODE 4000-01-M

**DEPARTMENT OF ENERGY**

**Notice of Intent To Prepare an Environmental Impact Statement for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks at the Hanford Site, Richland, WA**

**AGENCY:** Department of Energy.  
**ACTION:** Notice of intent.

**SUMMARY:** The U.S. Department of Energy (DOE) intends to prepare an environmental impact statement (EIS) on the proposed retrieval, treatment, and disposal of the waste being managed in the high-level waste (HLW) tank farms at the Hanford Site near Richland, Washington, and closure of the 149 single-shell tanks (SSTs) and associated facilities in the HLW tank farms. The HLW tanks contain both hazardous and radioactive waste (mixed waste).

This EIS will be prepared in accordance with the National Environmental Policy Act (NEPA) and its implementing regulations (40 CFR parts 1500-1508 and 10 CFR part 1021). DOE's proposed action is to remove waste from the tanks to the extent that retrieval is technically and economically feasible, treat the waste through vitrification in the planned Waste Treatment Plant (WTP) and/or one of several other treatment processes such as bulk vitrification, grout, steam reforming and sulfate removal, depending on waste type and waste

characteristics. DOE proposes to package the waste for offsite shipment and disposal or onsite disposal. The tanks would be filled with materials to immobilize the residual waste and prevent long-term degradation of the tanks and discourage intruder access.

The 149 underground SSTs and 28 underground double-shell tanks (DSTs) are grouped in 18 tank farms that are regulated under the Resource Conservation and Recovery Act of 1976 (RCRA) as treatment, storage, and disposal units that, for closure purposes, include tanks, associated ancillary equipment, and contaminated soils. DOE proposes to close the tanks in accordance with the Hanford Federal Facility Agreement and Consent Order (also known as the Tri-Party Agreement or TPA). DOE invites public comments on the proposed scope of this EIS.

**DATES:** The public scoping period begins with the publication of this Notice and concludes March 10, 2003. DOE invites Federal agencies, Native American tribes, State and local governments, and members of the public to comment on the scope of this EIS. DOE will consider fully all comments received by the close of the scoping period and will consider comments received after that date to the extent practicable.

Public meetings will be held during the scoping period. Meetings will be held in Seattle and Richland, Washington and in Portland and Hood River, Oregon on the following dates.

*Richland:* February 5, 2003.

*Hood River:* February 18, 2003.

*Portland:* February 19, 2003.

*Seattle:* February 20, 2003.

At least 15 days prior to the meetings, DOE will notify the public of the meeting locations and times and will provide additional information about each meeting through press releases, advertisements, mailings and other methods of encouraging public participation in the NEPA process. At these scoping meetings, DOE will provide information about the tank waste program and alternatives for retrieving, treating, and disposing of the waste, along with alternatives for closing the SSTs. The meetings will provide opportunities to comment orally or in writing on the EIS scope, including the alternatives and issues that DOE should consider in the EIS.

**ADDRESSES:** DOE invites public comment on the proposed scope of this EIS. Comments may be submitted by mail, electronic mail, fax, or voice mail and addressed as follows: Mary Beth Burandt, Document Manager, DOE Office of River Protection, U.S. Department of Energy, Post Office Box

450, Mail Stop HG-60, Richland, Washington, 99352, Attention: Tank Retrieval and Closure EIS, Electronic mail: [Mary\\_E.Burandt@rl.gov](mailto:Mary_E.Burandt@rl.gov), Fax: (509) 376-2002, Telephone and voice mail: (509) 373-9160.

**FOR FURTHER INFORMATION CONTACT:** To request information about this EIS and the public scoping workshops or to be placed on the EIS distribution list, use any of the methods identified in ADDRESSES above. For general information about the DOE NEPA process, contact: Carol M. Borgstrom, Director, Office of NEPA Policy and Compliance (EH-42), U.S. Department of Energy, 1000 Independence Avenue, SW, Washington, DC, 20585-0119, Fax: (202) 586-7031, Telephone: (202) 586-4600, Voice mail: (800) 472-2756.

**SUPPLEMENTARY INFORMATION**

**Background**

The Hanford Site defense activities related to nuclear weapons production created a wide variety of waste. Over 50 million gallons of waste are presently stored in the HLW tank farms, which are located in the 200 Area of the Site. The waste is stored in 149 underground SSTs (ranging in capacity from approximately 55,000 to 1 million gallons) and 28 underground DSTs (ranging in capacity from approximately one to 1.16 million gallons) grouped in 18 tank farms, and approximately 60 smaller miscellaneous underground storage tanks. This waste has been processed and transferred between tanks, and as a result, the chemical, physical (*i.e.*, liquid, solid and sludge) and radiological characteristics of the waste vary greatly among and within individual tanks. In addition, the tank waste contains chemicals or has characteristics classified as hazardous waste under RCRA regulations (40 CFR Parts 260-268 and Parts 270-272) and as dangerous waste under the Washington Administrative Code "Dangerous Waste Regulations" (WAC 173-303).

In 1996, DOE issued the Tank Waste Remediation System (TWRS) EIS (DOE/EIS-0189), which included analyses of alternatives for retrieving and treating (*e.g.*, immobilizing) the waste stored in the tank farms. Because sufficient data were not available to evaluate a range of closure actions, tank system closure alternatives were not evaluated in the TWRS EIS. Among the uncertainties were data regarding past leak losses from the SSTs and how retrieval technology would perform to meet retrieval objectives.

In 1997, DOE issued its Record of Decision (ROD, 62 FR 8693, February

## Attachment 1 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003

### – Notice of Intent (*continued*)

**Federal Register / Vol. 68, No. 5 / Wednesday, January 8, 2003 / Notices**

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26) in which DOE decided that it would proceed with tank waste retrieval and treatment. In the ROD and subsequent supplemental analyses, DOE acknowledged that there were substantial technical uncertainties that required resolution. Nevertheless, to make progress while resolving the technical uncertainties, DOE decided to implement waste treatment using a phased approach as identified in the TWRS ROD. During the initial phase (Phase I), DOE planned to design, construct and operate demonstration-grade pretreatment facilities. Following the demonstration phase, DOE would construct full-scale facilities to treat the remaining tank waste (Phase II).

DOE's decision in the TWRS ROD was consistent with modifications to the Tri-Party Agreement contained in the M-62, "Complete Pretreatment, Processing and Vitrification of Hanford High-level (HLW) and Low-activity (LAW) Tank Wastes" series of milestones. Accordingly, DOE proceeded with plans to design, construct, and operate facilities that would separate waste into high-level and low-activity waste streams, vitrify the high-level waste stream and vitrify or similarly immobilize the LAW stream. These facilities are now under construction and are collectively referred to as the "Waste Treatment Plant" or WTP.

DOE's strategy for retrieving, treating and disposing of the tank waste and closing the tank farms has continued to evolve, based on information becoming available since the TWRS ROD was issued. New information and proposed changes to DOE's strategy include the following:

- Design of and preliminary performance projections for the WTP support DOE's proposal to extend operations beyond the original plan to operate the WTP for a ten-year period and to enhance throughput compared to facilities planned for in the 1997 ROD.
- New information indicates that deployment of large-scale treatment facilities in approximately 2012 to immobilize waste not processed by the WTP currently under construction, as identified in the TWRS ROD, may be prohibitively expensive (DOE/EIS-0189-SA-3).
- Under DOE Order 435.1 (Radioactive Waste Management), as applicable, DOE may determine that some tank wastes should be managed as low-level waste (LLW) and transuranic (TRU) waste, which may result in changes in how DOE may treat and dispose of portions of the SST and DST wastes from the HLW tank farms.

- DOE wants to consider non-vitrification treatment technologies for LAW and LLW, if these wastes could be immobilized and disposed of onsite or offsite, while providing protection to the human environment comparable to LAW and LLW immobilized by vitrification.

In developing its Performance Management Plan for the Accelerated Cleanup of the Hanford Site (PMP, DOE/RL-2000-47, August 2002), DOE stated its intent to meet its commitments under the Tri-Party Agreement, and identified its plan to complete tank waste retrieval, treatment and disposal by 2028, and to close all of the tanks and associated facilities, including the WTP, by 2033. DOE's current plans call for closing all of the SSTs by 2028.

DOE stated in the PMP that to achieve these objectives, increased capacity will be needed for the WTP, along with additional treatment capacity provided by other waste immobilization technologies, referred to herein as "supplemental" technologies (bulk vitrification, containerized grout, steam reforming, or sulfate removal are examples). Also in the PMP and in the Supplement Analysis for the Tank Waste Remediation System (DOE/EIS-0189-SA3, 2001), DOE concluded that its evolving strategy for treating and disposing of the tank wastes by 2028 and closing the SSTs by 2028 requires NEPA analysis of proposed tank waste retrieval, treatment and disposal, and proposed tank closure actions.

Further, under the TPA Milestone M-45, "Complete Closure of All Single-Shell Tank (SST) Farms," DOE and the Washington State Department of Ecology (Ecology) have identified a process to start discussing how SST closure would occur. An important part of the process DOE and Ecology have defined for closing tank systems is compliance with Washington State Dangerous Waste regulations that require approval of a closure plan and modification of the Hanford Site Dangerous Waste Permit. Before Ecology can approve either a closure plan or modification of DOE's permit, the State of Washington must fulfill its State Environmental Policy Act (SEPA) requirements. As SEPA is very similar to NEPA, Ecology can adopt a NEPA document if it determines that the document is sufficient to meet SEPA requirements. Ecology has agreed to be a cooperating agency in preparing this EIS.

#### **Need for Action**

To meet its commitments under the Tri-Party Agreement and implement its plans to close the tank systems and

associated facilities in a timely manner to reduce existing and potential future risk to the public, site workers, and the environment, DOE needs to complete waste retrieval, treatment and disposal of the waste from the SST and DST systems by 2028 and close all SST systems by 2028.

Although DOE is addressing safety and environmental issues posed by tank wastes to minimize current potential risks to human health and the environment, DOE must also implement long-term actions to safely manage and dispose of waste from the tank waste systems, including waste associated with inactive miscellaneous underground storage tanks, and close the SST systems to reduce permanently the potential risk to human health and the environment. These long-term actions also are needed to ensure compliance with applicable Federal requirements regulating the management and disposal of radioactive waste, as well as Federal and Washington State requirements regulating hazardous and mixed waste.

#### **Proposed Action**

DOE proposes to retrieve waste from the 149 SST and 28 DST systems and close the SST tank farms in a manner that complies with Federal and Washington State requirements and protects the human environment. (Closure of the DSTs and closure of the WTP are not part of the proposed action because they are active facilities needed to complete waste treatment. Closure of the DSTs and WTP would be addressed at a later date, after appropriate NEPA analysis.) DOE proposes to immobilize the retrieved waste in the WTP and through supplemental treatment technologies such as bulk vitrification, grout, steam reforming and sulfate removal, and to package the immobilized waste for offsite shipment and disposal in licensed and/or permitted facilities or disposal onsite. DOE proposes to close the SST farms (including tanks, ancillary equipment and soils) within the tank farm area by 2028. The tanks would be filled with materials to immobilize the residual waste and prevent long-term degradation of the tanks and discourage intruder access. Associated support buildings, structures, laboratories, and the treatment facilities would be decontaminated and decommissioned in a cost-effective, legally compliant, and environmentally sound manner. Under the proposed action, DOE would use existing, modified, or, if required, new systems to assure capability to store and manage waste during retrieval and treatment.

**Attachment 1 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003**  
**– Notice of Intent (continued)**

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**Federal Register / Vol. 68, No. 5 / Wednesday, January 8, 2003 / Notices**

**Background on Development of Alternatives**

The proposed action could result in changes to DOE's tank waste management program with respect to waste storage, waste retrieval, waste treatment, waste disposal, and tank farm closure at the Hanford Site. These key variables were evaluated to develop the range of reasonable alternatives identified below. In terms of waste storage, the EIS would analyze the use of the existing waste storage systems and evaluate the need for new storage systems. With regard to waste retrieval, DOE would evaluate a range of timing of retrieval and the technologies used, from past-practice sluicing as analyzed in the TWRS EIS to dry retrieval. Treatment and disposal alternatives for portions of the SST and DST waste would be evaluated based on some volume of the waste being classified as LLW or TRU waste pursuant to DOE Order 435.1. The waste identified as LLW could be treated and packaged for onsite or offsite disposal. The waste identified as TRU waste could be treated and packaged for transport and disposal at the Waste Isolation Pilot Plant (WIPP) near Carlsbad, New Mexico.

Unless a specific alternative identifies a waste type as LLW and/or TRU waste, the waste would be analyzed as HLW or LAW for the purposes of treatment and disposal. The alternatives for waste treatment include: 1) Treating all wastes via an enhanced WTP as vitrified waste; 2) treating HLW via the WTP and LAW via WTP or supplemental treatments; or 3) treating the waste as stated in #2 and/or supplemental treatment for LLW and TRU waste in the tank farms, in which case some waste would not be processed through the WTP. The options for waste disposal include disposing of the waste onsite using existing or new facilities, disposing of the waste at offsite government facilities (e.g., a geological repository, WIPP, DOE's Nevada Test Site) or using onsite and offsite commercial facilities (such as Envirocare in Utah) for disposal of Hanford waste. Alternatives for tank closure would be evaluated based on broad closure strategies including clean closure (removal of the tanks, ancillary facilities, and contaminated soils) and landfill closure (residual waste left in place and post closure care).

**Proposed Alternatives**

Each of the six alternatives contains a waste storage, retrieval, treatment and disposal component. Alternatives 3 through 6 also include a tank closure component. The main differences among the alternatives include the

extent of waste retrieval, the waste treatment and disposal approach, the tank closure approach, and timing to complete the necessary activities.

**1. No Action**

The Council on Environmental Quality NEPA Regulations (40 CFR parts 1500–1508), and the DOE NEPA Regulations (10 CFR part 1021) require analysis of a No Action alternative.

**Storage:** DOE would continue current waste management operations using existing storage facilities. Immobilized (*i.e.*, vitrified) High-level Waste (IHLW) would be stored onsite pending disposal at a geologic repository. Once WTP operations are completed, all tank waste system storage (SSTs and DSTs), treatment, and disposal facilities at the Hanford Site would be placed in a stand-by operational condition.

**Retrieval:** Waste would be retrieved to the extent required to provide waste feed to the WTP using currently available liquid-based retrieval and leak detection technologies (approximately 25–50% of the total waste volume would be retrieved).

**Treatment:** No new vitrification or treatment capacity beyond that anticipated in the WTP would be deployed. However, the WTP would be modified within parameters provided for in the TWRS ROD to increase throughput. The WTP would continue to operate until its design life ends in 2046.

**Disposal:** The residual waste in tanks and the waste remaining in tanks that had not been retrieved (approximately 50 to 75% of the total waste volume) would remain in the tank farm indefinitely. Immobilized Low Activity Waste (ILAW) (by vitrification) would be disposed of onsite. IHLW would be stored onsite pending disposal at a geological repository. For purposes of analysis, administrative control of the tank farms would end following a 100-year period.

**Closure:** Tank closure would not be addressed; under this alternative, some waste would be left in the tanks indefinitely.

**2. Implement the 1997 Record of Decision (With Modifications)**

This alternative would continue implementation of decisions made in the TWRS ROD and as considered in three supplement analyses completed through 2001. (See "RELATED NEPA DECISIONS AND DOCUMENTS" below for references.) Under these supplement analyses, DOE concluded that changes in the design and operation of the WTP as defined in its contracts and program plans, were within the bounds of

analysis of environmental impacts in the TWRS EIS. Among the key modifications that would occur under this alternative are: (1) Implementing the initial phase of waste treatment with one ILAW facility rather than two, (2) expanding the design capacity of the ILAW facility from 20 metric tons of glass per day to 30 metric tons of glass per day, and (3) extending the design life of the Phase I facilities from 10 years to 40 years. Under this alternative, no new actions would be taken beyond those previously described in the TWRS ROD and supplement analyses regarding the tank waste.

**Storage:** DOE would continue current waste management operations using existing storage facilities as described under No Action.

**Retrieval:** Waste would be retrieved to the Tri-Party Agreement goal (*i.e.*, residual waste would not exceed 360 cubic feet for 100 series tanks or 36 cubic feet for 200 series tanks, which would correspond to 99% retrieval) using currently available liquid-based retrieval and leak detection systems.

**Treatment:** The existing WTP would be modified to enhance throughput and supplemented with additional vitrification capacity, as needed, to complete waste treatment by 2028. Under this alternative, all waste retrieved from tanks (approximately 99%) would be vitrified.

**Disposal:** Retrieved and treated waste would be disposed of onsite (ILAW) or stored onsite pending disposal at a geologic repository (IHLW). Once operations are completed, all tank waste system waste storage, treatment, and disposal facilities at the Hanford Site would be placed in a stand-by operational condition. The residual waste would remain in the tank farm indefinitely. For purposes of analysis, DOE assumes under this alternative that it would cease to maintain administrative control after a 100-year period.

**Closure:** Tank closure would not be addressed under this alternative. Some waste would be left in the tanks indefinitely.

**3.0 Landfill Closure of Tank Farms/Onsite and Offsite Waste Disposal**

**Storage:** DOE would continue current waste management operations using existing storage facilities.

**Retrieval:** Waste would be retrieved to the Tri-Party Agreement goal (*i.e.*, residual waste would not exceed 360 cubic feet for 100 series tanks or 36 cubic feet for 200 series tanks, which would correspond to 99% retrieval) using currently available liquid-based retrieval and leak detection systems.

## Attachment 1 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003

### – Notice of Intent (*continued*)

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**Treatment:** Retrieved waste would be treated with the WTP capacity based on enhanced and/or modified performance of operating systems (e.g., modifications to melters to increase throughput). WTP capacity would be supplemented with additional waste treatment capacity to immobilize LAW using a non-vitrification technology. New non-vitrification supplemental treatment capacity would be developed external to the WTP to immobilize a portion of the tank waste that would be designated as LLW pursuant to DOE Order 435.1 and/or prepare a portion of the tank waste that would be designated as TRU waste for disposal. Waste treatment under this alternative would be completed in 2028 and all SST tank systems would be closed by 2028.

**Disposal:** ILAW immobilized via the WTP would be disposed of onsite or at offsite commercial (e.g., U.S. Ecology of Washington or Envirocare of Utah) or DOE facilities (Nevada Test Site). IHLW would be stored onsite pending disposal at a national geologic repository. LLW immobilized external to the WTP would be disposed of onsite or at offsite commercial or DOE facilities. TRU waste would be packaged and stored onsite in an existing or new facility pending disposal at the Waste Isolation Pilot Plant (WIPP).

**Closure:** As operations are completed, SST waste system, waste storage, treatment and disposal facilities at the Hanford Site would be closed as a RCRA landfill unit under Dangerous Waste Regulations under WAC 173-303 and DOE Order 435.1, as applicable, or decommissioned (waste treatment facilities under DOE Order 430.1A). The tanks would be filled with materials to immobilize the residual waste and prevent long-term degradation of the tanks and discourage intruder access. Tanks, ancillary equipment, and contaminated soils would be remediated and remain in place and the closed tank systems would be covered with an engineered barrier that exceeds RCRA landfill requirements and is the more protective of the landfill options being evaluated (i.e., Hanford barrier).

The main differences between this alternative and other alternatives involve: 1) Using a more robust barrier for closure of tank systems that would provide longer term protection from contaminant releases from closed tank systems and limit intrusion into the closed system compared to the barrier evaluated under Alternatives 5 and 6 (tanks would not be closed under Alternatives 1 and 2, thus no barriers would be used); and 2) Treatment and disposal of treated waste would be the same for Alternatives 3 through 5

allowing for a comparison of the impacts associated with deployment of systems to treat and dispose of transuranic waste (Alternatives 3 through 5) to treatment of waste via the WTP and subsequent management as ILAW and IHLW (Alternatives 2 and 6).

#### **4.0 Clean Closure of Tank Farms/ Onsite and Offsite Waste Disposal**

**Storage:** DOE would continue current waste management operations using existing storage facilities that would be modified, as needed, to support minimizing liquid losses from SSTs and accelerating SST waste retrieval into safer storage pending retrieval for treatment.

**Retrieval:** Waste would be retrieved using multiple waste retrieval campaigns using various retrieval technologies (e.g., confined sluicing, crawlers), to the extent needed to support clean closure requirements (i.e., 0.1% residual in the tanks or 99.9% waste retrieved from tanks) using liquid and non-liquid retrieval and enhanced in-tank and/or ex-tank leak detection systems.

**Treatment:** Retrieved waste would be treated with the WTP capacity based on enhanced and/or modified performance of operating systems (see Alternative 3). New alternative treatment capacity to immobilize LLW (e.g., bulk vitrification, containerized grout, steam reforming, sulfate removal) and/or prepare TRU waste for disposition would be developed external to the WTP. Waste treatment under this alternative would be completed in 2028 and all SST tank systems would be closed by 2028.

**Disposal:** LAW immobilized via the WTP would be disposed of onsite or at offsite commercial or DOE facilities (see Alternative 3). IHLW would be stored onsite pending disposal at a national geologic repository. LLW immobilized external to the WTP would be disposed of onsite or at offsite commercial or DOE facilities (See Alternative 3). TRU waste would be retrieved from tanks, packaged in a new facility, and stored onsite in existing or new storage facilities pending shipment to and disposal at the WIPP.

**Closure:** Clean closure reflects minimal residual waste in tanks and ancillary equipment, and contaminated soils remediated in place and/or removed from the tank system to be treated and disposed of in accordance with RCRA requirements. As operations are completed, all SST system storage, treatment, and disposal facilities at the Hanford Site would be closed. Waste storage and disposal facilities would be closed in a manner that supported

future use on an unrestricted basis and that did not require post-closure care.

The main differences between this alternative and the other alternatives are: 1) The greatest amount of waste is retrieved from tanks based on multiple technology deployments; and 2) tank systems would be closed to meet clean closure standards. Treatment and disposal of treated waste would be the same for Alternatives 3 through 5, allowing a comparison of the impacts associated with deployment of systems to treat and dispose of TRU waste (Alternatives 3 through 5) to treatment of TRU waste via the waste treatment plant (Alternatives 2 and 6).

#### **5.0 Accelerated Landfill Closure/ Onsite and Offsite Waste Disposal**

**Storage:** DOE would continue current waste management operations using existing storage facilities that would be modified or supplemented with new waste storage facilities, to support actions regarding near-term acceleration of tank waste retrieval and treatment. Under this alternative, some SSTs would be retrieved and closed by 2006, exceeding the existing TPA M-45 commitments.

**Retrieval:** Waste would be retrieved to the Tri-Party Agreement goal to the extent feasible using currently available liquid-based retrieval and leak detection systems (residual waste would correspond to 90–99% retrieval).

**Treatment:** Waste treatment would be completed no later than 2024 and SST systems would be closed by 2028. Retrieved waste would be treated with the WTP capacity based on enhanced and/or modified performance of operating systems, as described under Alternative 2. WTP capacity would be supplemented with new treatment capacity to immobilize LLW. New treatment capacity to immobilize LLW and/or prepare TRU waste for disposition would be developed external to the WTP.

**Disposal:** LAW immobilized via the WTP would be disposed of onsite or at offsite commercial or DOE facilities. IHLW would be stored onsite pending disposal at the proposed national geologic repository. LLW immobilized external to the WTP would be disposed of onsite or at offsite commercial or DOE facilities. Transuranic waste would be packaged and stored onsite pending disposal at the WIPP.

**Closure:** As operations are completed, SST tank waste system waste storage, treatment, and disposal facilities would be closed as a RCRA landfill unit under Dangerous Waste Regulations under WAC 173-303 and DOE Order 435.1, or decommissioned (waste treatment

**Attachment 1 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003**  
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facilities under DOE Order 430.1A). Waste storage and disposal facilities would be closed as RCRA landfill units under applicable state Dangerous Waste Regulations (WAC 173-303). The tanks would be filled with materials to immobilize the residual waste and prevent long-term degradation of the tanks and discourage intruder access. Tank systems (tanks, ancillary equipment, and soils) would be closed in place and would be covered with a modified RCRA barrier (*i.e.*, a barrier with performance characteristics that exceed RCRA requirements for disposal of hazardous waste).

The main difference between this alternative and the other alternatives are (1) completion of some SST closure actions by 2006, completion of all waste treatment by 2024, and closure of all SST systems by 2028 in contrast to Alternatives 2, 3 and 6, which would complete waste treatment in 2028 and SST tank systems closure in 2028 and; (2) no remediation of ancillary equipment and contaminated soil, allowing a comparison with the more extensive remediation analyzed under Alternative 3. Another main difference between this alternative and Alternative 3 is the use of a modified RCRA barrier. Treatment and disposal of treated waste would be the same for Alternatives 3 through 5, allowing for a comparison of the impacts associated with deployment of systems to treat and dispose of transuranic waste (Alternatives 3 through 5) to treatment of transuranic waste via the WTP (Alternatives 2 and 6).

#### *6.0 Landfill Closure/Onsite and Offsite Waste Disposal*

*Storage:* DOE would continue current waste management operations using existing storage facilities that would be modified, as needed, to support SST waste retrieval and treatment.

*Retrieval:* Waste would be retrieved to the Tri-Party Agreement goal (*i.e.*, residual waste would not exceed 360 cubic feet for 100 series tanks or 36 cubic feet for 200 series tanks, which corresponds to retrieval of 99%) using liquid and non-liquid based retrieval and enhanced leak detection systems.

*Treatment:* Retrieved waste would be treated with the WTP capacity based on enhanced and/or modified performance of operating systems. Supplemental treatment technologies would be used to immobilize ILW. New non-vitrification treatment capacity to immobilize LLW for disposition would be developed external to the WTP. Waste treatment under this alternative would be completed in 2028, and all SST systems would be closed by 2028.

*Disposal:* ILAW immobilized via the WTP would be disposed of onsite or at offsite commercial or DOE facilities. IHLW would be stored onsite pending disposal at a national geologic repository. LLW immobilized external to the WTP would be disposed of onsite or at offsite commercial or DOE facilities.

*Closure:* As operations are completed, all tank waste system waste storage, treatment, and disposal facilities at the Hanford Site would be closed (tank farm systems) or decommissioned (waste treatment facilities). The tanks would be filled with materials to immobilize the residual waste and prevent long-term degradation of the tanks and discourage intruder access. Waste storage and disposal facilities would be closed as RCRA landfill units under applicable state Dangerous Waste Regulations (WAC 173-303). Residual waste in tanks, ancillary equipment, and contaminated soils would be remediated in place as needed in accordance with RCRA requirements, and the closed tank systems would be covered with a modified RCRA barrier.

The main difference between this alternative and the other alternatives is that under this alternative there would not be a separate TRU waste stream (Alternatives 3 through 5). As with Alternative 2, waste would be treated in the WTP and subsequently managed as either ILAW or IHLW.

*Preliminary Identification of EIS Issues:* The following issues have been tentatively identified for analysis in the EIS. The list is presented to facilitate comment on the scope of the EIS; it is not intended to be all-inclusive or to predetermine the potential impacts of any of the alternatives.

- Effects on the public and onsite workers from releases of radiological and nonradiological materials during normal operations and reasonably foreseeable accidents.
- Long-term risks to human populations resulting from waste disposal and residual tank system wastes.
- Effects on air and water quality from normal operations and reasonably foreseeable accidents, including long-term impacts on groundwater.
- Cumulative effects, including impacts from other past, present, and reasonably foreseeable actions at the Hanford Site.
- Effects on endangered species, archaeological/cultural/historical sites, floodplains and wetlands, and priority habitat.
- Effects from onsite and offsite transportation and from reasonably foreseeable transportation accidents.

- Socioeconomic impacts on surrounding communities.
- Disproportionately high and adverse effects on low-income and minority populations (Environmental Justice).
- Unavoidable adverse environmental effects.
- Short-term uses of the environment versus long-term productivity.
- Potential irretrievable and irreversible commitment of resources.
- The consumption of natural resources and energy, including water, natural gas, and electricity.
- Pollution prevention, waste minimization, and potential mitigative measures.

*Related NEPA Decisions and Documents:* The following lists DOE other NEPA documents that are related to this proposed Hanford Site Tank Retrieval and Closure EIS.

45 FR 46155, 1980, "Double-Shell Tanks for Defense High-Level Radioactive Waste Storage, Hanford Site, Richland, Washington; Record of Decision," *Federal Register*.

53 FR 12449, 1988, "Disposal of Hanford Defense High-Level Transuranic, and Tank Wastes, Hanford Site, Richland, Washington; Record of Decision," *Federal Register*.

60 FR 28680, 1995, "Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Program, Part III; Record of Decision," *Federal Register*.

60 FR 54221, 1995, "Final Environmental Impact Statement for the Safe Interim Storage of Hanford Tank Wastes at the Hanford Site, Richland, WA; Record of Decision," *Federal Register*.

60 FR 61687, 1995, "Record of Decision Safe Interim Storage of Hanford Tank Wastes, Hanford Site, Richland, Washington," *Federal Register*.

61 FR 3922, 1996, "Availability of the Final Environmental Impact Statement for Management of Spent Nuclear Fuel from the K Basins at the Hanford Site, Richland, WA; Notice of Availability of Final Environmental Impact Statement," *Federal Register*.

61 FR 10736, 1996, "Management of Spent Nuclear Fuel from the K Basins at the Hanford Site, Richland, WA. ACTION: Notice of Record of Decision," *Federal Register*.

62 FR 8693, 1997, "Record of Decision for the Tank Waste Remediation System, Hanford Site, Richland, Washington," *Federal Register*.

DOE/EA-0479, 1990, *Collecting Crust Samples from Level Detectors in Tank*

**Attachment 2 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003**  
– Primer

*Understanding the Issues*

**Attachment 2**

RPP-14193, Predecisional Draft

**THE ACCELERATED RETRIEVAL, TREATMENT,  
AND DISPOSAL OF TANK WASTE AND  
CLOSURE OF TANKS AT THE HANFORD SITE  
ENVIRONMENTAL IMPACT STATEMENT:**

**A GUIDE TO UNDERSTANDING THE ISSUES**



**CH2MHILL**  
*Hanford Group, Inc.*

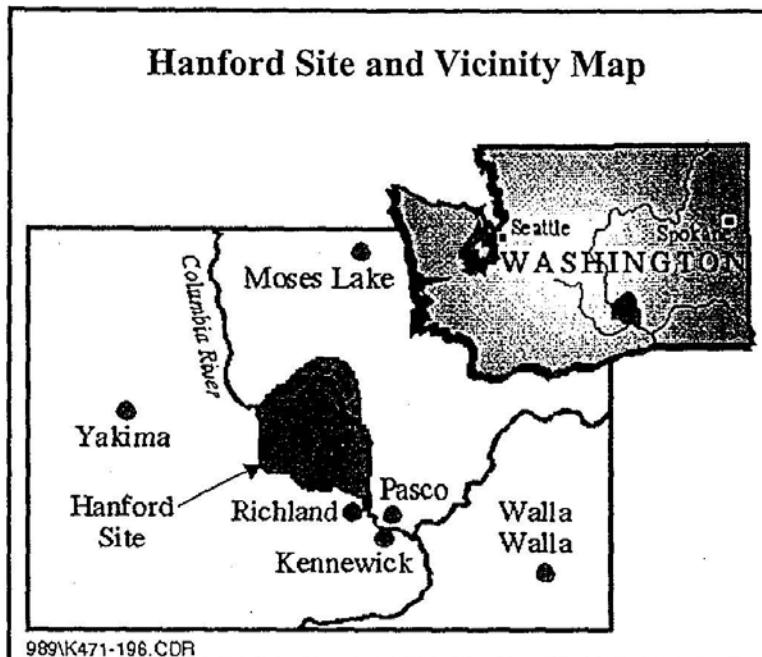
**EFFECTIVE DATE: JANUARY 8, 2003**

**Attachment 2 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003**  
**- Primer (continued)**

*Understanding the Issues*

RPP-14193, Predecisional Draft

The Hanford Site is a 560-square-mile site managed by the U. S. Department of Energy (DOE), formerly dedicated to the production of plutonium and other nuclear materials. The site is located in the southeastern part of Washington State just north of where the Snake and Yakima rivers meet with the Columbia River, about 25 miles north of the Oregon border.



Over the years of production (1943-1987), the site produced approximately 60% (73 tons) of DOE nuclear weapon and reactor-fuel-grade plutonium. The end product and associated *waste* generated from the manufacturing process were like those in no other industry. Approximately 110,000 tons of specially designed uranium metal were exposed to neutrons, or *irradiated* in nine nuclear reactors and reprocessed in four chemical plants. These operations created large volumes of waste, some of which was transferred to underground tanks for long-term storage.

Today, that *tank waste* is stored in 177 underground storage tanks. They are the focus of this guide. All together, they contain about 53 million gallons of waste. Half of the *radioactivity* currently at Hanford rests in these tanks. Most of the remaining half is in spent nuclear fuel now being transferred from a reactor site near the Columbia River to the Hanford plateau, several miles from the river.

**Attachment 2 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003**  
– Primer (continued)

### **Needed — Public Input**

Many people are concerned about Hanford's tank waste because of the potential for tank leaks, near-term safety issues, and long-term needs for waste treatment, waste *disposal*, and *closure* of the tank systems. The tank wastes, if not properly treated and disposed, and the tank systems, if not properly closed, will have even longer-term impacts on the environment and health of future generations of residents of the surrounding area. Never before has a nuclear waste cleanup effort of this scale been attempted anywhere in the world. The work will be expensive and will take a long time. Cost estimates range upward to several billions of dollars, giving both the taxpayers and Congress a major reason to be interested in tank waste issues.

Public input is requested on decisions about how to deal with Hanford's tank wastes and tanks. Active public input and involvement are critical to those decisions. This input requires a basic understanding of the technical issues relating to tank waste retrieval, treatment, and disposal and to tank system closure itself.

### **What Is the Immediate Issue? Why Does DOE Need to Make Decisions?**

The Department of Energy wants to begin a process that will lead to closing four waste tanks by the end of 2004, and all 177 tanks by 2033. Also, DOE decided in 1997 to build a large plant to immobilize the wastes from the tanks by making glass out of it, a process called "vitrification." But that plant, known as the Waste Treatment Plant (WTP), will at most be able to vitrify only about half of the wastes if it is allowed to run until 2046. DOE needs to decide how best to treat the remaining wastes by 2028, which is the completion date agreed to with the Washington State Department of Ecology in the Hanford Federal Facility Agreement and Consent Order, known as the Tri-Party Agreement. This could include supplemental technologies necessary to complete all waste treatment. The process to which you are here to contribute will address tank closure and supplemental waste treatment options and the environmental impacts of several alternatives for waste retrieval, treatment, and disposal, and tank system closure.

#### **Why "Tank Systems"?**

We call them "tank systems" because we are dealing with not only tanks but also an elaborate complex of underground pipes, concrete pits, waste diversion boxes to move wastes from one pipe to another, smaller settling tanks, and lengthy transfer lines.

The National Environmental Policy Act of 1969 (known as NEPA) requires federal agencies that propose to take actions affecting the quality of the human environment in a major way to prepare what is called an Environmental Impact Statement, or EIS. DOE's intention to close the waste storage tanks in the single-shell tank system at Hanford and to develop supplemental treatment of the tank wastes are major federal actions and require an EIS.

Words or terms in *italics* are listed in the glossary, starting on page 17.

**Attachment 2 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003**  
**- Primer (continued)**

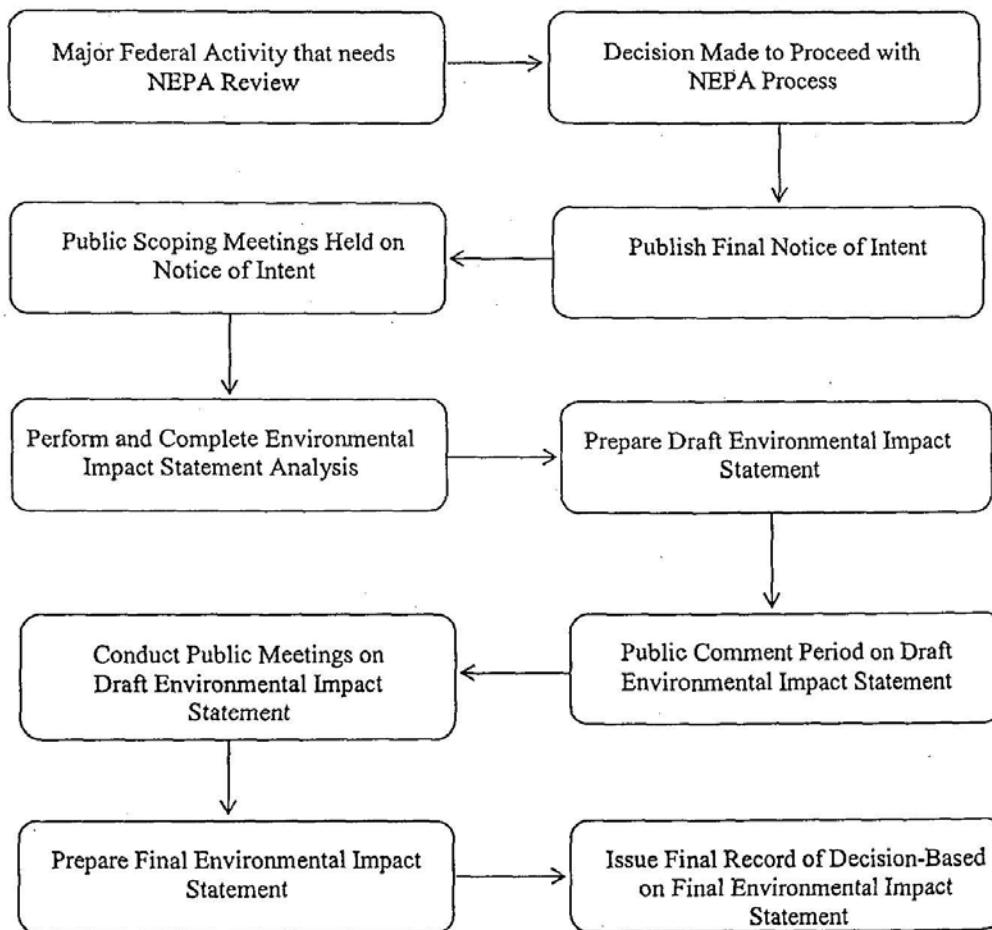
**Understanding the Issues**

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The purpose of an EIS is twofold. First, it gives managers the best available information and analysis about the proposed action, including action alternatives and cumulative impacts to both the environment and human health. Second, it allows involvement by the public in the development of alternatives and projected impacts. The EIS will support decisions made by DOE and regulatory agencies, such as the Washington State Department of Ecology. The actual decisions about waste treatment and tank closure will be made by DOE in a Record of Decision and by Ecology in permits issued under state environmental protection regulations.

**A TYPICAL NEPA PROCESS**



**Attachment 2 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003  
– Primer (continued)**

*Understanding the Issues*

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The first stage in an EIS is a public scoping effort. DOE issued a Notice of Intent (NOI) on January 8, 2003, which describes the proposed scope of the EIS. The NOI is available from DOE's Hanford website, [www.hanford.gov/orp](http://www.hanford.gov/orp). Issuance of the NOI is followed by public scoping meetings. In those meetings DOE will solicit public input on the scope of the EIS and the alternatives to be considered as described in the NOI. DOE has already had internal meetings about the scope of this EIS with the Hanford Advisory Board, the Washington State Department of Ecology, and the U. S. Environmental Protection Agency (EPA). Ecology and EPA, along with DOE, are parties to the Tri-Party Agreement.

Using the input gained from the public scoping process, DOE will prepare a draft EIS document by the end of September 2003. DOE will conduct a second set of public meetings to get comments on that draft EIS document.

The current schedule calls for the final Accelerated Retrieval, Treatment, and Disposal of Tank Waste and Closure of Tanks at the Hanford Site EIS to be available by December 31, 2003 with a Record of Decision issued by April 2004. The Record of Decision will make clear DOE decisions and how DOE considered information from the EIS in reaching its decisions.

To put The Accelerated Retrieval, Treatment, and Disposal of Tank Waste and Closure of Tanks at the Hanford Site EIS in context, we have provided below general information about Hanford's waste storage tanks and tank systems.

**Attachment 2 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003**  
**- Primer (continued)**

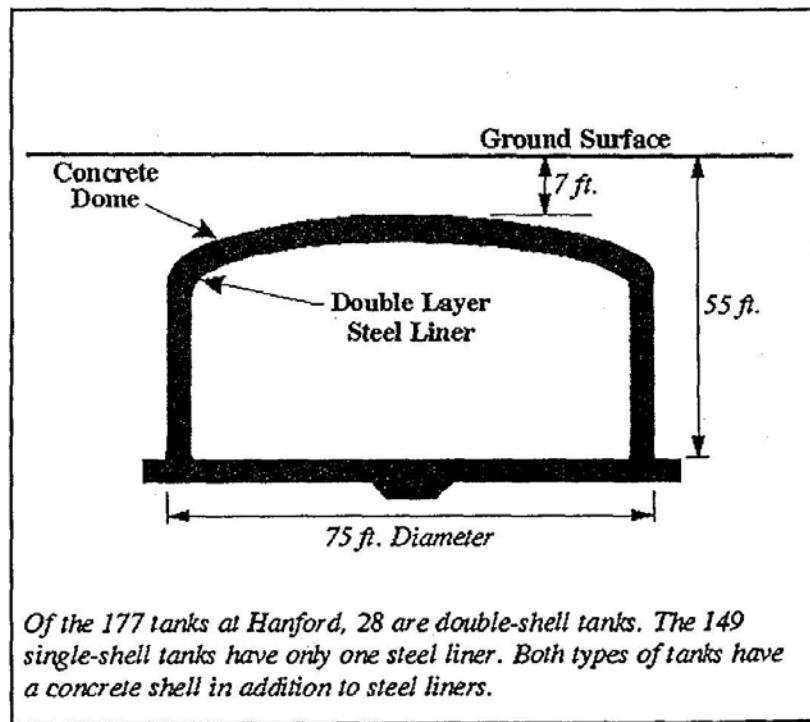
*Understanding the Issues*

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### The Tanks

Hanford's tanks are cylindrical reinforced concrete structures with inner carbon steel liners. Tanks are split into two groups based on their design: 149 *single-shell tanks* having a single carbon steel liner and constructed from World War II until the mid-1960's, and 28 *double-shell tanks* having two steel liners and built between 1968 and 1986. Both types of tanks are covered with about 10 feet of soil and gravel. They range from nearly empty to nearly full. The total amount of waste in the tanks is approximately 53 million gallons. About 23 million gallons are "saltcake" (moist, water-soluble salts), 12 million gallons are "sludge" (a peanut-butter-thick mixture of water and insoluble salts and salt-containing liquids), and the balance is liquid only. It is believed that at the bottom of some tanks there is "hard-heel" waste made up of many types of materials that may turn out to be more difficult to remove with existing retrieval technologies.

The tanks contain about 215 million curies of radioactivity. A curie is a unit of measure to describe the intensity, or strength, of radioactivity in a material. (A typical home smoke detector contains about 1 millionth of a curie of radioactivity.)



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**Attachment 2 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003  
– Primer (continued)****Understanding the Issues**

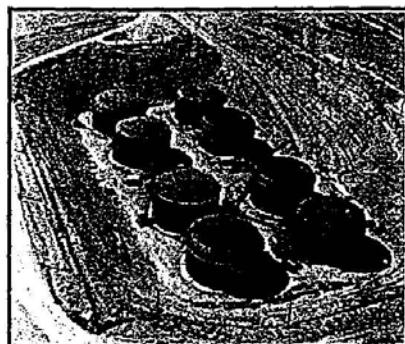
RPP-14193, Predecisional Draft

The radioactive and chemical contents of wastes in the overall tank systems are generally known. The knowledge we have of tank waste characteristics is based on tank operations records and tank samples taken over the past 50 years. Most tank waste was generated from the reprocessing of irradiated uranium (in nuclear fuel) to extract plutonium and recover uranium for recycling. The first and major step was the dissolution of the irradiated fuel elements with acid. This resulted in a highly acidic waste stream. The dissolution and extraction processes also added organic compounds and salts of various metals. Before the acidic waste was pumped to the tanks, it was neutralized with large quantities of sodium to prevent corrosion of the carbon steel tanks.

The 149 single-shell tanks built until the mid-1960's had a design life of only 10 to 20 years. Waste leakage from those tanks to the soils beneath them was suspected as early as 1956 and was confirmed in 1961. By the late 1980's, 67 of these tanks were known or suspected leakers. DOE estimates that about 1 million gallons of waste had been released to the soils in the tank farms.



(left) An Aerial View of Hanford's Tank Farms



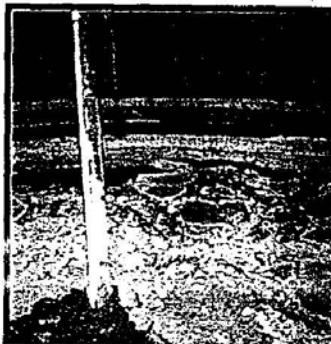
Approximately 150 square miles of groundwater at Hanford is contaminated with chemicals and radionuclides. Some of this contamination may be attributed to the 1 million gallons of wastes believed to have leaked from the storage tanks. Most of the groundwater contamination was caused by intentional discharges of 120 million gallons of tank wastes to cribs and trenches on the Hanford plateau. Also, more than one hundred billions of gallons of slightly contaminated cooling water from eight of the production reactors were discharged to the ground. Less than 1% of the site's total radioactivity has been discharged or leaked to the ground. A portion of these contaminants was trapped in the sediments above the groundwater. Some reached the groundwater to create plumes of tritium, nitrate, carbon tetrachloride, chromium, iodine, and other contaminants that now exceed drinking water standards.

Groundwater moving from beneath the Hanford tank farms will eventually discharge to the Columbia River. Estimated groundwater travel time for the fastest moving contaminant plumes from beneath the tank farms to the river is 25 to 50 years.

**Attachment 2 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003**  
**- Primer (continued)**

*Understanding the Issues*

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Some tanks contain various radionuclides and chemicals that have separated into blended layers of liquids, slurries, sludges, and saltcake.

Liquids from the single-shell tanks are being pumped into the newer and more durable double-shell tanks. By 2004, the process of minimizing the liquid waste contents of all the single-shell tanks (usually by pumping) will be completed. What will remain in those tanks will be saltcakes and sludge.

Double-shell tanks at Hanford have a design life of several decades. No leaks from any of these tanks have been detected. Several have reached their design life and by 2033, when most are expected to be closed, most of them will have exceeded their design life.

### Safety Risks Posed by the Tanks

For years, people have expressed concerns about the potential dangers Hanford tanks pose to workers, the public, and the environment. What conditions cause the safety problems? What has DOE done to manage those risks?

A decade ago, there were thought to be at least four types of safety risks posed by the tanks' contents:

- Hydrogen buildup in the tanks. Hydrogen gas is very flammable, and the concern in the late 1980's was that it could cause a tank explosion.

### Accomplishments at the Hanford Tank Farms

Since 1996, when the last Hanford tanks EIS (known as the "Tank Waste Remediation System EIS") was published, much has happened at the tank farms:

- All four remaining tank safety issues were closed (see above).
- A flammable gas safety issue surrounding the most troublesome tank has been resolved.
- Pumping has been completed on 132 of the 149 aging single-shell tanks, and this effort is ahead of a Consent Decree schedule for completion in 2004.
- Waste storage system safety documentation, equipment, and instrumentation have been upgraded.
- All direct discharges of wastes from the tanks to the soils have been stopped.
- Construction has begun on the Waste Treatment Plant, designed to vitrify the tank wastes.

**Attachment 2 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003  
– Primer (continued)**

*Understanding the Issues*

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- Ferrocyanide igniting in the tanks. This chemical compound was added to the tank wastes in the 1950's to reduce the levels of cesium and strontium in tank wastes being discharged to cribs and trenches. There was concern at one time that it could catch fire if mixed with nitrates or nitrites in the tanks.
- High concentrations of organic chemicals igniting in the tanks. Millions of pounds of these chemicals were added to the wastes to separate out strontium, a radioactive element. The concern was that these chemicals could mix with nitrates and nitrites, and would catch fire.
- Plutonium in the tanks causing a chain reaction (criticality). Our best estimate is that the 53 million gallons of tank waste include about 1,200 pounds of plutonium. If enough plutonium were concentrated in a small enough area, it could cause a criticality.

Congress was so concerned about these perceived risks that in 1995 it placed 25 tanks on a "Watch List." Since then, through a process of research, study, experiments, and complex monitoring of the Watch List tanks, all of those tanks were removed from the Watch List in 2001 and the Tri-Party Agreement commitment to evaluate these tanks was met. DOE showed Congress that none of the four issues above presented a significant risk in the Hanford tank farms.

**Waste Types in the Tank Farm System**

**High-level waste** is a by-product of reprocessing spent nuclear fuel. This waste requires radiation shielding and special handling techniques. Its disposal requires special measures to isolate it permanently from humans and the environment.

**Transuranic waste** is material contaminated with radioactive elements with atomic numbers greater than uranium. This waste does not require as much isolation as high-level waste. However, it cannot be disposed of in a facility located at or just below ground level. DOE disposes of these wastes at the Waste Isolation Pilot Plant in Carlsbad, New Mexico.

**Low-activity waste** remains after separating as much radioactivity (consisting of key radionuclides) as technically and economically possible from high-level waste. Low-activity waste may be disposed of just as low-level waste (below) if certain additional requirements are met.

The least hazardous radioactive waste is **low-level waste**. It is all radioactive waste that is not high-level waste, transuranic waste, low-activity waste, spent nuclear fuel, or by-product material. It may be disposed of in a near-surface facility.

**Hazardous waste** is ignitable, corrosive, reactive, toxic, and persistent in the environment, exhibits dangerous characteristics, or appears on special lists published by the U.S. Environmental Protection Agency and the Washington State Department of Ecology. This waste may cause or contribute to an increase in health hazards when treated, stored, transported, or disposed of improperly.

**Mixed waste** is both hazardous or dangerous and radioactive.

**Attachment 2 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003**  
**- Primer (continued)**

**Waste Retrieval: How Will the Waste Be Dislodged and Moved?**

As part of the cleanup process, tank waste is planned to be removed from all 149 single-shell tanks. It will then be transported to processing facilities that may be located adjacent to or up to several miles from the tanks.

One issue to overcome during accelerated waste retrieval is having adequate space in the 28 double-shell tanks. The space issue is a delicate balance of retrieval and closure schedules for the single-shell tanks and limited WTP capacity for treating the waste. The plan is to stage the waste retrieved from the 149 single-shell tanks into the double-shell tanks whenever possible. From the double-shell tanks, the waste will either be pumped to the WTP to be made into glass or treated by a supplemental treatment technology. Double-shell tank space is very limited until treatment begins. Proposed solutions range from managing the retrieval sequence of the single-shell tanks or processing the double-shell tanks to a higher level to concentrating the wastes through evaporation, to finding different storage capacity.

Since we have not yet retrieved extensive amounts of waste, it is not clear that one single retrieval technology will be effective in getting 99% of the wastes out of the single-shell tanks. The saltcakes and sludge in the tanks are varied and are in many forms to yield to just one method. The most commonly used method in past retrieval efforts has been sluicing. Sluicing is the spraying of liquid at high pressures and volumes into the waste to break apart the solids for pumping out of the tank. The disadvantage of past-practice sluicing is that it puts large volumes of liquids into tanks that are known or suspected leakers, potentially causing more leakage into the soils beneath the tanks.

Another promising retrieval technology is called "saltcake dissolution." A solvent, primarily water, is poured into the tanks with this type of waste structure to dissolve the saltcakes. After the saltcake dissolves, the liquids are pumped out of the tank. This technology uses lower volumes of liquids and may cost less than older sluicing technologies.

A third retrieval technology combines confined sluicing and robotic technology. A robotic crawler vehicle, equipped with a mast carrying a vacuum system capable of sucking waste sludge out of the tank, would be put into a tank. The vehicle would also have mounted sluicing nozzles and would direct a low volume of high-pressure fluid onto the sludge, creating a slurry mixture that would be sucked through the mast out of the tank.

DOE is planning actual in-tank demonstrations of saltcake dissolution and robotic sluicing, as well as other promising technologies.

All of the discussion so far has focused on retrieval of the single-shell tank waste. That will require a complex infrastructure and miles of pipes, much of it already in place, for moving wastes across the site from west to east, from the single-shell tanks into the double-shell tanks.

**Attachment 2 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003**  
**– Primer (continued)**

### Treating the Tank Wastes

After retrieval of the wastes, the next step in the tank waste cleanup process is waste treatment. The waste must be treated and packaged into a form that will minimize *radiation* and hazardous chemicals reaching the environment and coming into contact with humans at levels that exceed regulatory limits or pose risks to health.

The first step in preparing tank wastes for final treatment is called pretreatment. This is a critical step in the tank waste cleanup process because it is when key *radionuclides* are separated from the bulk of the chemicals and metals making up the waste. Pretreatment can save time and money, and reduce the volume of *high-level waste* to be later disposed of in the Yucca Mountain (Nevada) Geologic Repository.

After pretreatment, the tank waste must be converted into a durable, solid form before it is disposed. This is to minimize the threat of releasing radioactive and chemical materials into the environment. The low-activity portions of the tank waste can be turned into a waste form (some type of glass, grout, or dried and packaged material) and disposed of in a near-surface facility to allow later retrieval if needed. The high-level radioactive waste must be turned into a form that is safe for interim storage at Hanford until Yucca Mountain can receive the waste for permanent disposal deep beneath the earth's surface.

In 1988 DOE issued a plan to treat the tank wastes. It called for building a vitrification plant to treat the wastes in the 28 double-shell tanks. The plan was stopped in the early 1990's for two primary reasons. First, the plant as it was conceived did not have enough capacity to make glass out of the high-level waste fraction of the wastes in the required time frame. Second, the facility that would be used to pretreat the wastes, an old fuel processing plant at Hanford, was found to be inadequate for safety and cost reasons.

DOE examined a new waste treatment plan in 1996 in the Tank Waste Remediation System Environmental Impact Statement. This plan, selected in that EIS Record of Decision and known as "Phased Implementation," proposed a demonstration-scale (small-scale) WTP which would begin operations in 2002. The demonstration plant would serve as a way to gather information and reduce uncertainties before a decision to build a larger plant to treat the rest of the tank wastes.

The intent of DOE was to vitrify all the wastes, both high-level and low-activity contaminant streams, from all 177 tanks. However, the demonstration-scale WTP was designed to make glass of only 10 percent of the wastes by 2012. Following completion of the demonstration phase, DOE would have to expand the WTP or build a second, larger plant in order to treat all the wastes by 2028, the milestone date in the Tri-Party Agreement.

**Attachment 2 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003**  
**- Primer (continued)**

*Understanding the Issues*

RPP-14193, Predecisional Draft

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In 1998, DOE decided to make the Waste Treatment Plant a full-scale vitrification plant and to delay startup of the plant until approximately 2007. Under this new plan, the plant would have the capacity to treat about 10 percent of the tank waste by 2018. In that year the capacity of the plant would be doubled. Even with the added capacity to make glass, it still would have the capability to vitrify only about 50 percent of the wastes by the 2028 milestone date. DOE will need added treatment capability to supplement the WTP as it is planned now to meet that deadline. DOE is still committed to treating all tank wastes by 2028. The Accelerated Retrieval, Treatment, and Disposal of Tank Waste and Closure of Tanks at the Hanford Site EIS will look at several ways to do that.

One option is to make a number of changes to the existing design of the WTP. More pretreatment capacity, changes in high-level waste melter designs and capacities, and added *low-activity waste* treatment capacity would all increase the output of the plant. The added low-activity waste treatment capacity would be developed through expanded vitrification volume or through supplemental treatment technologies that would result in a waste form other than glass. This option could include adding treatment systems to supplement the capacity of the WTP.

A second option is to add sulfate-removal capability to the WTP. Sulfates in the low-activity waste stream make the waste more difficult to vitrify.

A third option is to use "supplemental" waste treatment technologies outside the WTP. One technology that will be evaluated is "containerized grout." This would be different from the previously proposed 1980's grout concept in several ways: the grout would be stored in easily retrievable containers; the more dangerous radionuclides would be separated from the waste before it is grouted; and more durable grout mixtures would be used.

Another supplemental treatment technology that may be evaluated is "bulk vitrification." Wastes would be made into glass outside the WTP in very large containers. The waste melter would itself be part of the container and disposed of after each use.

Finally, analysis may show that the wastes in about a dozen tanks could be classified as *transuranic* or *low-level wastes*. The transuranic wastes could be treated and packaged and transported to the Waste Isolation Pilot Plant in New Mexico. This would also free up additional WTP capacity for the high-level wastes that must be vitrified.

All of these options for increasing waste treatment capabilities and for re-designating wastes at Hanford are still in the conceptual stage. The Washington State Department of Ecology would have to approve permits and modifications to the Tri-Party Agreement to increase DOE capability to treat wastes before supplemental treatments could be implemented.

**Attachment 2 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003**  
**– Primer (continued)**

### **Disposing of the Treated Wastes**

Once radioactive and hazardous tank wastes are converted into their final forms (some type of glass, grout, or dried and packaged material), they must be disposed of in a way that is safe for humans and the environment.

The high-level and low-activity waste forms will be disposed of differently. The high-level waste glass produced at the Waste Treatment Plant will be poured into large steel canisters. The canisters will probably be stored initially at Hanford, and then moved to the national repository at Yucca Mountain starting in 2015. Disposal at Yucca Mountain is meant to isolate the wastes from the environment for a very long time (thousands of years). It is possible that Yucca Mountain will not be ready for high-level waste storage on time or, in later years, will not have enough space for all of Hanford's high-level waste canisters. Some high-level waste glass may have to be stored for a very long time at Hanford.

Options for disposing of the treated low-activity wastes are being studied. The disposal site will likely be on the plateau at Hanford where the waste tanks are. The plateau's ground surface is 200 to 300 feet above the water table. The plateau is about six miles from the Columbia River at its nearest point.

**Attachment 2 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003**  
**- Primer (continued)**

*Understanding the Issues*

RPP-14193, Predecisional Draft

### **Coming to Tank Closure**

The name of the EIS that will be prepared is "The Accelerated Tank Retrieval, Treatment, and Disposal and Closure of Tanks at the Hanford Site EIS," and that says it all. After the wastes have been removed from the tanks, the tanks themselves must be "closed." Looking at what closure means and the environmental impacts of closure is a major purpose of this EIS.

The Tank Waste Remediation System EIS, published in 1997, did not examine tank system closure. When that EIS was prepared, DOE believed there was not enough information to be able to examine the impacts of tank closure. Before making decisions, DOE wanted to know more about how much tank waste would be retrieved and treated, how much would be left in the tanks, and how much contamination would be left in the related pipes and pits and converter boxes. In 1997 there was no real pressure to answer those questions.

Six years later, DOE does know more. The Department knows more about how contaminants that have leaked from tanks move in the soils and about tank retrieval methods. It knows more about processes for making glass from wastes. The Tri-Party Agreement now calls for beginning efforts to close several tanks in 2004 timeframe. It makes sense to evaluate the impacts of tank closure now.

Closure is the final step in the process of disposing of tanks' chemical and radioactive wastes. Federal and state laws describe two options for closing tanks. The meaning of "clean closure" can vary. It could mean that chemical and radioactive wastes associated with a tank and its supporting structures have been removed. The tanks would be filled with inert material such as sand, gravel, or cement to prevent collapse and the waste transfer pipes cleaned and plugged. Because the waste has been removed, the tanks may remain buried in place. Soils contaminated by tanks that have leaked approximately one million gallons of high-level wastes must be cleaned up, as well as miles of pipeline and other support equipment.

A more thorough clean closure approach would include tank removal. After wastes are retrieved from the tanks, the tanks would be broken apart. The tank pieces (and pieces of support structures) would be removed from the tank farms for treatment, disposal, and monitoring, probably at another location on the Hanford site. Removal of just the 149 single-shell tanks would be the equivalent of moving 21,000 tons of steel (enough to build 14,000 cars); 745,000 cubic yards of concrete (enough for the foundations of 30,000 1,200-square-foot homes); and 130,000 cubic yards of contaminated soil (enough to fill about 30 Olympic-sized swimming pools).

**Attachment 2 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003**  
– Primer (continued)

*Understanding the Issues*

RPP-14193, Predecisional Draft

**What Do Waste Treatment and Tank Closure  
Mean to You?**

Tank waste treatment and disposal, and eventual tank closure, mean different things to different people. To some, the tanks and tank farms on the Hanford plateau will only be cleaned up when the tank farm areas are available for industrial or residential uses. At the other end of the spectrum, some people would settle for having the Hanford plateau be a "sacrifice zone" where a very long-term government presence would be needed to limit human access.

Each definition of tank cleanup—at either end of the spectrum and at points in between—would affect Hanford cleanup costs, schedules, human health risks, and technology needs in different ways. Some of the problems with Hanford's tanks wastes may only be handled, because of cost implications, by technologies that may have to be adapted to the complexities of Hanford's tank wastes.

Much remains unknown about tank waste cleanup. Different definitions of cleanup are accompanied by different risks, both during cleanup and for many years into the future, and different costs. This is why it is important to evaluate in this EIS the environmental consequences of various cleanup alternatives.

Taxpayers have different values and preferences about tank waste cleanup. What are your values and preferences for tank waste cleanup? How would you answer these questions?

- What level of tank waste cleanup is necessary?
- How should the land on the Hanford plateau be used after cleanup?
- What should be the final waste forms for low-activity waste?
- What is an acceptable level of human health risk, both while the tanks are being cleaned up and in future generations?
- To what degree should tank waste cleanup decisions be consistent with other Hanford cleanup decisions?

The Accelerated Tank Retrieval, Treatment, and Disposal of Tank Waste and Closure of Tanks at the Hanford Site EIS is the first study that will seriously look at what it means to finish cleaning up the most highly contaminated part of the Hanford site, the tanks and tank farms. It raises many questions about what nuclear waste cleanup means to the citizens of the United States.

Radiation *exposure* to workers doing the cleanup tasks would be high, even though most of the wastes and therefore most of the radioactivity already would have been retrieved from the tanks in the removal scenario. Both clean closure options would likely cost more and would require a higher level of exposure of workers to radioactively contaminated materials than the third alternative: landfill closure.

Landfill closure means leaving the emptied tank structures, with their residual contamination, contaminated soils, and support equipment in place. The tanks would be structurally strengthened against subsidence by filling them with sand, gravel, or cement. The tanks and surrounding contaminated soils may or may not be treated to reduce contamination or to create barriers against further spread of contamination. Aboveground barriers may be placed over the

**Attachment 2 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003**  
**- Primer (continued)**

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*Understanding the Issues*

RPP-14193, Predecisional Draft

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tanks. The barriers may be built of multiple layers of soil and rock, possibly with an asphalt sublayer. The sides of the barrier may be reinforced with rock to protect the barrier against wind and weather erosion.

The landfill option would likely cost less than either clean closure option. It would require less worker exposure to radioactive contaminants. At the same time, landfill closure would be less effective in the long term in preventing the spread of contaminants to the groundwater and to the Columbia River. More detailed evaluation of landfill and clean closure in the EIS may result in different answers.

The selection of a tank closure option will consider:

- The health risks and costs of decontaminating and/or removing tanks versus leaving them in place with residual contamination
- Available technical and regulatory options applied to both the clean closure and landfill closure alternatives
- Regulatory policy, as set by the Washington State Department of Ecology, and stakeholder preferences.

**Attachment 2 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003**  
**– Primer (continued)**

*Understanding the Issues*

RPP-14193, Predecisional Draft

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### **Land Use**

One of the most important questions about Hanford tank waste cleanup is land use. The land currently occupied by the tank farms on the Hanford plateau might eventually be used for agriculture, for industry, or it might be withdrawn indefinitely from uses other than nuclear waste management. Each use would mean different near and long-term impacts to the environment. Each would require a different closure strategy and a different cost to the taxpayers. The need for cleanup standards tied to a long-term land use strategy is clear. This issue will have to be dealt with before the tank systems can be closed.

Furthermore, the land use strategy adopted as a basis for closing tank systems will need to consider land use decisions for the Hanford plateau areas surrounding the tank farms. The tank farms are surrounded by numerous waste disposal and hazardous and *mixed waste* sites that will be closed by other programs managed both by DOE and others at Hanford. The various long-term land use strategies on the Hanford plateau will have to match up or clean-up effectiveness will suffer.

**Attachment 2 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003**  
**– Primer (continued)**

## **Glossary**

**Closure** – Actions that happen after tank wastes have been retrieved from the tanks. Those actions could include but not be limited to decontamination and/or removal of tanks and ancillary tank equipment, treatment or removal of contaminated soils beneath the tanks, placement of long-term barriers over tanks, and treatment of groundwater.

**Contamination** – Radioactive or hazardous chemical materials where they are not wanted or in a concentration that threatens human health or environmental health.

**Curie** – A unit of radioactivity defined as the quantity of any radioactive nuclide in which the number of disintegrations per second is 37 billion. It was originally defined as the amount of radioactivity in 1 gram of the isotope radium-226. A typical home smoke detector contains about 1 millionth of a curie of radioactivity.

**Disposal** – Removal of contamination or contaminated material from the human environment, although with provisions for monitoring, control, and maintenance.

**Double-shell tank** – A reinforced concrete underground vessel with two inner steel liners. Instruments are placed in the space between the liners (the annulus) to detect liquid waste leaks from the inner liner.

**Exposure** – The act of being exposed to a harmful agent, such as breathing air containing some hazardous agent like radioactive materials, smoke, lead, or germs; coming in contact with some hazardous agent (for example, getting radioactive material or poison ivy on the skin); being present in an energy field such as sunlight or other external radiation; or ingesting a hazardous agent.

**High-level waste** – Radioactive material (containing fission products, traces of uranium and plutonium, and other radioactive elements); it results from the initial chemical reprocessing of nuclear fuel used in nuclear reactors.

**Irradiate** – To expose uranium metals to neutrons to convert them to plutonium.

**Low-activity waste** – Waste that remains following the process of separating as much radioactivity as is technically and economically practicable from high-level waste. When additional requirements are met, low-activity waste may be disposed of as low-level waste in a near-surface facility.

**Low-level waste** – All radioactive waste that is not high-level waste, transuranic waste, spent nuclear fuel, or by-product material and may be disposed of in a near-surface facility.

**Mixed waste** – Waste that is both hazardous or dangerous and radioactive.

**Attachment 2 to U.S. Department of Energy to Hanford Advisory Board, January 21, 2003**  
**– Primer (continued)**

*Understanding the Issues*

RPP-14193, Predecisional Draft

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**Radiation** – Particles or energy waves emitted from an unstable element or nuclear reaction.

**Radioactivity** – Property possessed by some isotopes of elements of emitting radiation (alpha, beta, or gamma rays) spontaneously in their decay process.

**Radionuclide** – Radioactive atomic species or isotopes of an element.

**Single-shell tank** – An older-style underground vessel with a single steel wall liner surrounded by reinforced concrete. The domes of single-shell tanks are made of concrete without an inner covering of steel.

**Tank waste** – Radioactive mixed waste materials left over from the production of nuclear materials and stored in underground tanks.

**Transuranic waste** – Waste contaminated with alpha-emitting transuranic elements with half-lives of greater than 20 years in concentrations of more than 1 ten-millionth of a curie per gram (0.03 ounce) of waste.

**Waste** – Unwanted materials left over from production of nuclear materials. Waste was either stored in above or below ground structures or released into the environment.

*Tank Closure and Waste Management Environmental Impact Statement for the  
Hanford Site, Richland, Washington*

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**U.S. DEPARTMENT OF ENERGY TO HANFORD ADVISORY BOARD – March 12, 2003**



**U.S. Department of Energy**  
**Office of River Protection**  
P.O. Box 450  
Richland, Washington 99352

03-ORP-019

**MAR 12 2003**

Mr. Todd Martin, Chair  
Hanford Advisory Board  
1933 Jadwin Avenue, Suite 135  
Richland, Washington 99352

Dear Mr. Martin:

**HANFORD ADVISORY BOARD (HAB) CONSENSUS ADVICE #144: TANK  
WASTE RETRIEVAL AND CLOSURE ENVIRONMENTAL IMPACT  
STATEMENT (EIS) SCOPING**

Reference: HAB letter from T. Martin to M. E. Burandt, ORP, "Tank Waste Retrieval and Closure EIS Scoping," dated February 7, 2003.

Thank you for the formal comments (Reference) on the proposed scope of the EIS for Retrieval, Treatment, and Disposal of Tank Waste and Closure of the Single-Shell Tanks at the Hanford Site. We recently completed public scoping meetings in Richland and Seattle, Washington, and Hood River and Portland, Oregon, and are reviewing the scoping comments received during the scoping period.

The next step is development of the draft EIS. In chapter 1 of the draft EIS, the HAB, stakeholders, Tribal Nations and the public will be able to see how scoping comments were addressed. I also committed to provide periodic updates to the HAB on major activities through the Tank Waste Subcommittee as we develop the draft EIS.

I have enclosed a copy of the presentation used at the public scoping meetings in Hood River, Portland, and Seattle.

I appreciate the time the HAB has taken throughout the EIS process to date, during internal and formal scoping, to provide feedback during this process. I am looking forward to continued dialog on these important issues.

**ATTACHMENT SAME AS LETTER NO.  
03-ORP-002**

**U.S. DEPARTMENT OF ENERGY TO HANFORD ADVISORY BOARD – March 12, 2003**  
**(continued)**

Mr. Todd Martin  
03-ORP-019

- 2 -

MAR 12 2003

If you have any questions or comments, please feel free to contact me at (509) 373-9160, or Erik Olds, Office of Communications, (509) 372-8656.

Sincerely,

*Mary Beth Burandt*

ORP:MEB

Mary Beth Burandt  
NEPA Document Manager

Enclosure \*

cc w/encl:

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M. S. Crosland, EM-11  
W. W. Ballard, RL  
K. A. Klein, RL  
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Michael Wilson, Ecology  
Penny Mabrie, EnviroIssues  
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Rick Larsen  
Jim McDermott  
George Nethercutt  
Adam Smith

U.S. Senators (OR)  
Gordon H. Smith  
Ron Wyden

State Senators (WA)  
Pat Hale  
Mike Hewitt

U.S. Senators (WA)  
Maria Cantwell  
Patty Murray

State Representatives (WA)  
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Shirley Hankins

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Peter DeFazio  
Darlene Hooley  
Greg Walden  
David Wu

\* Enclosure not included.

*Tank Closure and Waste Management Environmental Impact Statement for the  
Hanford Site, Richland, Washington*

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**U.S. DEPARTMENT OF ENERGY TO HANFORD ADVISORY BOARD – October 21, 2003**



**U.S. Department of Energy**  
~~OFFICE OF ENVIRONMENTAL MANAGEMENT~~  
P.O. Box 450  
Richland, Washington 99352

OCT 21 2003

03-ED-144

Mr. Todd Martin, Chair  
Hanford Advisory Board  
1933 Jadwin, Suite 135  
Richland, Washington 99352

Dear Mr. Martin:

HANFORD ADVISORY BOARD (HAB) CONSENSUS ADVICE #144: TANK WASTE RETRIEVAL AND CLOSURE ENVIRONMENTAL IMPACT STATEMENT (EIS) SCOPING

- References:
1. HAB letter from T. Martin to M. E. Burandt, ORP, "Tank Waste Retrieval and Closure EIS Scoping," dated February 7, 2002.
  2. ORP letter from M. E. Burandt to T. Martin, HAB, "Hanford Advisory Board (HAB) Consensus Advice #144: Tank Waste Retrieval and Closure Environmental Impact Statement (EIS) Scoping," dated March 12, 2003.

In response to Reference 2, we promised you continuing dialogue on the issues raised in the advice. Since that time, we have made significant progress in preparation of the draft Tank Closure EIS. Prior to release of the draft Tank Closure EIS, I wanted to update you about how we dealt with the previous advice. The attachment updates our response to each item identified in your February 7, 2002, advice letter.

If you have any questions, please contact me, or Mary E. Burandt, Environmental Division, (509) 372-7770.

Sincerely,

Roy J. Schepens  
Manager

ED:MEB

Attachment

cc: See page 2

**U.S. DEPARTMENT OF ENERGY TO HANFORD ADVISORY BOARD – October 21, 2003**  
**(continued)**

Mr. T. Martin  
03-ED-144

-2-

cc w/attach:  
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State Senators (WA)  
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**Attachment to U.S. Department of Energy to Hanford Advisory Board, October 21, 2003 –  
Response to Advice #144**

Attachment  
03-ED-144

**INFORMATION RELATED TO TANK CLOSURE ENVIRONMENTAL IMPACT  
STATEMENT (EIS) AND HANFORD ADVISORY BOARD (HAB) ADVICE #144**

**1. Item:** The HAB would like to emphasize that all alternatives should be considered carefully, and the preferred alternative chosen on the basis of the analyses in the EIS.

**Response:** The U.S. Department of Energy (DOE), Office of River Protection (ORP) accepts the advice. ORP has constructed each alternative based on feedback from internal scoping and, as a result of the public scoping process, has made changes. ORP management will make their programmatic decisions in the Record of Decision based on the EIS analyses of each alternative. These will be decisions within the framework of the EIS' alternatives.

**2. Item:** The EIS should analyze short- and long-term impacts to the environment, including groundwater, of not removing technetium-99 from the Low-Activity Waste (LAW).

**Response:** ORP accepts the advice. The alternatives in the EIS are defined to analyze the short- and long-term impacts to the environment from both removing technetium-99 from the LAW, as well as leaving the technetium-99 in the LAW.

**3. Item:** Include analysis of Immobilized Low Activity Waste (ILAW) disposal and any other waste streams that arise in the retrieval, treatment, and disposal of Tank Waste.

**Response:** ORP accepts the advice. The EIS will analyze the environmental impacts of ILAW and other supplemental waste streams that arise in retrieval, treatment, and disposal of Tank Waste.

**4. Item:** The vadose zone is not identified in the current Notice of Intent (NOI) as an important item within the scope of this EIS. It should be. The EIS needs to assess options for remediating the vadose zone.

**Response:** ORP accepts the advice. The EIS will analyze impacts to the vadose zone as influenced by the various closure scenarios being proposed (landfill closure, with and without some tanks and ancillary equipment being removed and clean closure which is removal of all the tanks, ancillary equipment and contaminated soil).

**5. Item:** The EIS, as proposed in the NOI, will not analyze all “reasonable alternatives.” Some examples of additional alternatives that should be analyzed (including long-term, full life cycle costs) are:

- different melter technologies
- different glass formulations
- removal of tanks to achieve “clean closure”
- treatment of all retrieved tank waste as High Level Waste (HLW) and disposal at the HLW repository

**Attachment to U.S. Department of Energy to Hanford Advisory Board, October 21, 2003 – Response to Advice #144 (continued)**

Attachment  
03-ED-144

**Response:** ORP accepts the advice to analyze “clean closure” and treatment of all retrieved tank waste as HLW. With regard to analysis of melter technologies and glass formulations, DOE does not accept analysis of different melter technologies and waste forms. ORP is committed to constructing and operating the Waste Treatment and Immobilization Plant as currently designed, using current technology and glass formulations. We believe it is important to remain focused on delivering the current treatment commitment. It is not to say, however, that ORP will not evaluate opportunities as we learn from process implementation, like at the first melter change out.

**6. Item:** Environmental impacts need to be assessed for the time frame necessary for them to achieve their peak value (e.g., >100 years, >1000 years, >10,000 years).

**Response:** ORP accepts the advice. The EIS will analyze the environmental and health impacts for a range of pathways (e.g., inhalation, ingestion, etc.) that could impact a variety of end state future site land users over a wide variety of timeframes (i.e., 100, 500, 1000, peak risk, and 10,000 years).

**7. Item:** The EIS should address retrieval and closure of the Double Shell Tanks (DST).

**Response:** The EIS will address retrieval and closure of the DST insofar as it is necessary to understand all connected actions associated with the cumulative impacts of retrieval and closure of the single-shell tanks. The NOI clearly stated, “closure of the DST and closure of the WTP are not part of the proposed action because they are active facilities needed to complete waste treatment.” All active facilities will be evaluated later, likely when analyzing their closure.

**8. Item:** Provide a life cycle cost to site closure for each of the alternatives considered. Per prior Board Advice (#8), uncertain costs associated with a national repository should be entirely segregated.

**Response:** ORP accepts the advice. Total costs will be presented for each alternative and repository costs will be identified.

**9. Item:** For each alternative, evaluate the environmental impacts, human and environmental risks, and costs. Analyses should be carried out in sufficient depth and detail to provide objective and quantitative comparisons of alternatives. In addition, these analyses should include the full time span over which hazards may persist.

**Response:** ORP accepts the advice.

**10. Item:** Impacts on and costs for community services.

**Response:** ORP accepts the advice. Socioeconomic impacts will be addressed for each alternative.

**Attachment to U.S. Department of Energy to Hanford Advisory Board, October 21, 2003 –  
Response to Advice #144 (continued)**

Attachment  
03-ED-144

**11. Item:** Provide a primer for the reader that identifies the various types of waste, their treatment methods, and disposal requirements for each waste classification. This EIS should contain, in language understandable to the public, a listing of the specific decisions supported by this EIS and how this EIS will be used in making those decisions.

**Response:** ORP accepts the advice. ORP developed the primer to support the public scoping meetings and that primer is available on the OPR website. ORP is committed to making this complex subject as clear as we can to the public. As we discussed during scoping, Chapter One will address decisions this EIS will enable. Over the last six months, we have continued to have members of the HAB and stakeholders review various presentation materials and have welcomed continued support and suggestions for improvement.

**12. Item:** The various Retrieval, Treatment, and Disposal options and closure options need to be presented in a matrix format to allow the “best” combination of actions to be chosen to achieve the optimal balance of technical approach, cost and schedule impact, and risk reduction.

**Response:** ORP accepts the advice. Inherent in the alternatives structure a matrix will be included, however, combining all processes and alternatives in a matrix will not imply the ability to select at will from a “menu” of technical options because not all retrieval, treatment, disposal, and closure options are technically consistent. For example, 90 percent retrieval of wastes from tanks is not consistent with clean closure of tank systems.

**13. Item:** A clear statement of the relationships between this EIS, the previous Tank Waste Remediation System EIS, and the Hanford Solid Waste EIS should be included.

**Response:** ORP accepts the advice.

**14. Item:** Under “Preliminary Identification of EIS Issues,” clarify what the statement “Short term uses of the environment vs. long-term productivity” means, and how it translates into the requirements of this EIS.

**Response:** ORP accepts the advice. The EIS will evaluate both long-term and short-term impacts related to the different alternatives.

**HANFORD ADVISORY BOARD TO U.S. DEPARTMENT OF ENERGY AND WASHINGTON STATE DEPARTMENT OF ECOLOGY – June 4, 2004**

June 4, 2004

Roy Schepens, Manager  
U.S. Department of Energy, Office of River Protection  
P.O. Box 450  
Richland, WA 99352

Linda Hoffman, Director  
Washington State Department of Ecology  
P.O. Box 47600  
Olympia, WA 98504-7600

Re: Tank Closure EIS Alternatives

Dear Mr. Schepens and Ms. Hoffman,

The Department of Energy-Office of River Protection (DOE-ORP) took comment on the scope of the Tank Closure Environmental Impact Statement (EIS) in early 2002. DOE-ORP recently shared the scope and outline of alternatives under consideration with the Hanford Advisory Board's (Board) committees. DOE-ORP hopes to issue the draft EIS in September for comment.

The Board wishes to register its strong concern that no alternative in the scope of the EIS is compliant with the Tri-Party Agreement (TPA). DOE-ORP's proposed suite of alternatives includes only one alternative that meets the TPA treatment standard of vitrifying all the wastes (after retrieval of 99% or better). All other alternatives in the EIS use additional treatment technologies and/or are not based on retrieving and treating all wastes by 2028. The Board advises DOE-ORP that the EIS should analyze at least one alternative that complies with the TPA requirements for treatment and removal of tank wastes by 2028.

The baseline assumptions used for alternatives in this EIS, and others, should be in compliance with the TPA and other relevant legal requirements.

Sincerely,

Todd Martin, Chair  
Hanford Advisory Board

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*This advice represents HAB consensus for this specific topic. It should not be taken out of context to extrapolate Board agreement on other subject matters.*

---

HAB Consensus Advice #164  
Subject: Tank Closure EIS Alternatives  
Adopted: June 4, 2004  
Page 1

**HANFORD ADVISORY BOARD TO U.S. DEPARTMENT OF ENERGY AND WASHINGTON  
STATE DEPARTMENT OF ECOLOGY – June 4, 2004 (continued)**

cc: Keith Klein, Manager, U.S Department of Energy, Richland Operations  
John Iani, U.S. Environmental Protection Agency, Region 10  
Howard Gnann, Deputy Designated Federal Official, U.S. Department of Energy  
Michael Gearheard, Environmental Protection Agency  
Michael Wilson, Washington State Department of Ecology  
Sandra Waisley, U.S. Department of Energy Headquarters  
The Oregon and Washington Congressional Delegations

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Ron Wyden

U.S. Senators (WA)

Maria Cantwell  
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State Representatives (WA)

**HANFORD ADVISORY BOARD TO U.S. DEPARTMENT OF ENERGY AND WASHINGTON STATE DEPARTMENT OF ECOLOGY – June 4, 2004 (*continued*)**

Jerome Delvin  
Shirley Hankins

**U.S. DEPARTMENT OF ENERGY TO HANFORD ADVISORY BOARD – July 8, 2004**



**U.S. Department of Energy**  
**Office of River Protection**  
P.O. Box 450  
Richland, Washington 99352

JUL 08 2004

04-ORP-046

Mr. Todd Martin, Chair  
Hanford Advisory Board  
1933 Jadwin Avenue, Suite 135  
Richland, Washington 99352

Dear Mr. Martin:

**HANFORD ADVISORY BOARD (HAB) ADVICE #164 – TANK CLOSURE EIS ALTERNATIVES**

Reference: HAB letter from T. Martin to R. Schepens, ORP and L. Hoffman, Ecology, "Tank Closure EIS Alternatives," dated June 4, 2004.

In response to HAB Consensus Advice #164, the Council on Environmental Quality regulations requires agencies such as the U.S. Department of Energy, Office of River Protection (ORP) to analyze a full range of alternative actions in each EIS, including the no action alternative, and the potential impacts associated with those alternatives. ORP believes that alternatives currently under development in the draft EIS are consistent with tank waste treatment commitments under the Tri Party Agreement.

Public discussion during the scoping phase of the Tank Closure EIS focused on inclusion of an all Waste Treatment and Immobilization Plant (WTP) vitrification alternative and general timeframes for completion of the various alternatives to be evaluated. The EIS currently focuses on two aspects relative to treatment, an all glass WTP vitrification alternative and an all glass WTP with supplemental treatment vitrification alternative. Both alternatives are consistent with the Tri Party Agreement commitments for treatment of tank waste.

The draft EIS also evaluates a range of completion dates for the alternatives to examine the short-term and long-term impacts. These timeframes include dates for completion of waste treatment in 2024, 2030, 2034, 2083, or 2153, depending on the assumptions for the particular alternative. In the preliminary evaluation, slight shifts in timeframes (between two and five years) between the start and completion of the longer operational cycles have minimal impacts. The 2028 timeframe is incorporated in the range of treatment dates analyzed, specifically the 2024-2034 periods, and is consistent with TPA commitments for completion of tank waste treatment.

As ORP has briefed the HAB on several occasions, the River Protection Project baseline achieves the completion of tank waste treatment in 2028 - a TPA commitment ORP intends to meet or exceed. We look forward to further discussions with the HAB regarding the draft Tank Closure EIS and to the HAB's advice once the draft is released for public review in the fall.

**U.S. DEPARTMENT OF ENERGY TO HANFORD ADVISORY BOARD – July 8, 2004**  
**(continued)**

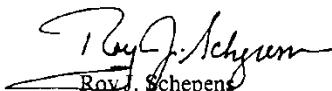
Mr. Todd Martin  
04-ORP-046

-2-

JUL 03 2004

If you have any further questions please contact me, or you may contact Mary Beth Burandt, ORP,  
(509) 373-9160.

Sincerely,



\_\_\_\_\_  
Roy J. Schepen

ORP:TEO

Manager

cc: S. L. Waisley, EM-33  
M. Wilson, Ecology  
M. Gearheard, EPA  
J. Iani, EPA  
K. A. Klein, RL  
The Oregon and Washington  
Congressional Delegations

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**HANFORD ADVISORY BOARD TO U.S. DEPARTMENT OF ENERGY AND WASHINGTON  
STATE DEPARTMENT OF ECOLOGY – April 7, 2006**

# **HANFORD ADVISORY BOARD**

*A Site Specific Advisory Board, Chartered under the Federal Advisory Committee Act*

**Advising:** April 7, 2006

US Dept of Energy  
US Environmental Protection Agency  
Washington State Dept of Ecology

**Keith Klein, Manager**  
**U.S. Department of Energy, Richland Operations**  
P.O. Box 550 (A7-50)  
Richland, WA 99352

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Todd Martin

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Susan Leckband

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Confederated Tribes of the Umatilla  
Washington State Department of Health

**Roy Schepens, Manager**  
**U.S. Department of Energy, Office of River Protection**  
P.O. Box 450  
Richland, WA 99352

**Jay Manning, Director**  
**Washington State Department of Ecology**  
P.O. Box 47600  
Olympia, WA 98504-7600

**Re: Tank Closure & Waste Management Environmental Impact Statement**

Dear Mssrs. Klein, Schepens, and Manning,

### **Advice**

The Hanford Advisory Board (Board) is concerned that the timeline to develop and issue the Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS) is inadequate to ensure the quality of the requisite product. The present timeline is arbitrary and does not ensure that adequate characterization of contamination and waste will be performed before a credible cumulative impact analysis can be undertaken.

The Board has repeatedly called for a cumulative impact analysis in a Central Plateau EIS. The TC&WM EIS presents an opportunity for just such an analysis.

As soon as possible, Ecology should identify the state requirements that are necessary to define an adequate EIS under the State Environmental Policy Act (SEPA) and the relevant rules related to state decisions that will be made from this EIS.

The following comments on the scope of the EIS are also Board advice. Attachment 1 provides new comments detailing the Board's advice. Attachment 2 provides previous Board advice relevant to this EIS.

HAB Consensus Advice #185  
Subject: TC&WM EIS  
Adopted: April 7, 2006  
Page 1

**EnviroIssues Hanford Project Office**  
713 Jadwin, Suite 4  
Richland, WA 99352  
Phone: (509) 942-1906  
Fax: (509) 942-1926

**HANFORD ADVISORY BOARD TO U.S. DEPARTMENT OF ENERGY AND WASHINGTON STATE DEPARTMENT OF ECOLOGY – April 7, 2006 (continued)**

**General Comments**

- o All known existing and planned waste streams on the Hanford site should be included in the analysis to provide a sound foundation for cleanup decisions and remedy selections. After credible characterization is done, the cumulative impact analysis will need to address the impacts from policy choices and alternatives for such things as:
  - a) retrieving pre-1970s and other buried and discharged wastes;
  - b) contamination from high-level nuclear waste tank leaks; and,
  - c) long-term stewardship.

The analyses of alternatives in the EIS, after characterization, must address what will be done with the wastes retrieved; what are the quantities and types of wastes which may remain, need treatment or disposal; and what are the impacts from each alternative.

- o DOE currently estimates the EIS will take two years to complete (with a Record of Decision issued in June, 2008). The Board is concerned that the schedule does not allow for the necessary characterization. While the Board is not suggesting an open-ended characterization project, reasonable characterization of waste sites not currently adequately characterized is necessary to support credible analyses. The schedule for the EIS should be driven by characterization, data, and analysis needs, not an arbitrary timeline.

A reasonable timeline should be provided to the public regarding the time required to characterize waste releases and residues to meet the minimum requirements for a credible cumulative impact analysis.

As support for this concern, in response to Board Advice #148 (August, 2003), the EPA Region 10 Hanford Project Office stated that site-wide analysis of cumulative impacts could be initiated by 2008 based on the completion of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and Resource Conservation and Recovery Act (RCRA) facility investigations.

- o The EIS must recognize, incorporate and meet the requirements, methodologies and standards of all applicable federal and state regulations. Failing to meet these requirements could result in an EIS that is not acceptable to Washington State and result in wasted time, money and effort.
- o The EIS should include analysis of at least one alternative that complies with the Tri-Party Agreement for treatment and removal of tank wastes.

**HANFORD ADVISORY BOARD TO U.S. DEPARTMENT OF ENERGY AND WASHINGTON  
STATE DEPARTMENT OF ECOLOGY – April 7, 2006 (continued)**

- o The EIS should be accompanied by a peer-reviewed quality assurance process. Past Board Advice (#162) recommended an independent panel to review the groundwater risk assessment work in the Tank Closure EIS, Solid Waste EIS and Composite Analysis on behalf of the Board. This panel was never constituted. However, this EIS provides an opportunity for the spirit of this advice to be included during the development of the TC&WM EIS.
- o Additionally, DOE and Ecology should work with the Board to create public involvement mechanisms that ensure regular dialogue between risk assessors, document authors and stakeholders concerning the status of the EIS and its assumptions, analyses, methodologies, etc. This dialogue can be used to illustrate how Board comments have been incorporated into the EIS, will assist the agencies in real-time problem resolution, and will hopefully build Board support for the final EIS.

Sincerely,



Todd Martin, Chair  
Hanford Advisory Board

*This advice represents HAB consensus for this specific topic. It should not be taken out of context  
to extrapolate Board agreement on other subject matters.*

cc: Carol Borgstrom, Director, Office of NEPA Policy and Compliance, U.S. Department of Energy, Headquarters  
Mary Beth Burandt, U.S. Department of Energy, Office of River Protection  
Laura Cusack, Washington State Department of Ecology  
Michael Bogert, U.S. Environmental Protection Agency, Region 10  
Shirley Olinger, Co-Deputy Designated Federal Official, U.S. Department of Energy, Office of River Protection  
Dave Brockman, Co-Deputy Designated Federal Official, U.S. Department of Energy, Richland Operations Office  
Nick Ceto, Environmental Protection Agency  
Jane Hedges, Washington State Department of Ecology  
Doug Frost, U.S. Department of Energy Headquarters  
The Oregon and Washington Congressional Delegations

**HANFORD ADVISORY BOARD TO U.S. DEPARTMENT OF ENERGY AND WASHINGTON STATE DEPARTMENT OF ECOLOGY – April 7, 2006 (*continued*)**

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Shirley Hankins

**Attachment 1 to Hanford Advisory Board to U.S. Department of Energy and Washington  
State Department of Ecology, April 7, 2006 – Detailed Comments**

**Attachment 1: DETAILED COMMENTS**

The HAB requests specific responses to each comment.

**TOPIC ONE: Actions, alternatives and impacts for all Hanford waste sites.**

1. Scope should include a roadmap to locate actions, alternatives and impacts for all identified waste sites on the Central Plateau.
2. Disposition alternatives for the Fast Flux Test Facility (FFTF), Plutonium Reaction Test Reactor (PRTR) and N Reactor should be included in a separate, self-standing EIS which should also update actions, alternatives and impacts for the eight production reactors (B, C, D, DR, F, H, KE, and KW.) The cumulative impact of all 11 reactors should be included in the TC&WM EIS.
3. Scope should include cumulative impacts of all wastes proposed to be disposed. In addition, the burden from prior disposal and contamination needs to be considered, along with mitigation measures. Analyses should be based on State cleanup and health-based standards and the Native American subsistence scenario, not solely DOE's own standards.
4. Scope should include consideration of the range of alternatives for cleanup and closure of the unlined burial grounds which includes pre-1970 waste sites and chemical wastes. The alternatives presented should be retrieval and cleanup to the extent practical in compliance with applicable requirements.
5. Scope should include an estimated inventory of wastes in the burial grounds, cribs and soil around leaking SSTs, and characterizing the extent and mobility of contamination as required by applicable laws. The EIS should include an explanation pursuant to 40 CFR 1502.22 of how the cumulative impact analysis can be performed when inventory and characterization data do not exist.
6. Scope should include alternatives for the treatment of tank wastes as entirely separate from alternatives for closure of tanks.
7. Scope should include a discussion of how DOE intends to make tank closure decisions on those tanks where there may be inadequate current characterization to support regulatory closure decisions.
8. Scope should include the cumulative and route-specific effects of transporting wastes from multiple sites to and from Hanford. For example, the HSW-EIS estimated impacts in Oregon and Washington using generic transportation

**Attachment 1 to Hanford Advisory Board to U.S. Department of Energy and Washington State Department of Ecology, April 7, 2006 – Detailed Comments (continued)**

parameters. The analysis did not consider the specific transport route conditions, which may result in alternate routes being used.

9. The EIS should not assume additional landfill volume for offsite waste disposal beyond the limits established in the June 2004 Record of Decision.
10. The risks from Hanford waste should be clearly delineated from the risks from offsite waste in the EIS to determine whether acceptable risk levels will be exceeded prior to the addition of offsite waste. This delineation is needed to determine whether Hanford can accept offsite waste without unacceptable risk to the environment.

**TOPIC TWO: Infrastructure.**

Because of delays in the startup and operation of the Waste Treatment and Immobilization Plant to beyond 2017, important infrastructure that was originally expected to operate 2007-2018 may exceed design life and need replacement by the time of hot startup. As a result, the scope should include actions, alternatives, and impacts related to replacement of aging infrastructure due to extended TPA schedules.

1. Scope should include replacement or life-extension of 242-A Evaporator.
2. Scope should include life-extension of the 222-S Analytical Laboratory, or replacement or consolidation with the Waste Treatment and Immobilization Plant Analytical Laboratory.
3. Scope should include modifications, additions and/or life-extension of the Effluent Treatment Facility.
4. Scope should include the impact of retrieval delays on the ability to retrieve waste from deteriorating waste tanks with failing infrastructure.
5. Scope should include analysis of electrical, water supply, support and transportation facilities and other general infrastructure.

**TOPIC THREE: Compliance with TPA, EPA requirements and State requirements.**

1. Scope should include at least one alternative that is fully compliant with the TPA and EPA and State requirements (e.g., emptying the tanks to 99% and

**Attachment 1 to Hanford Advisory Board to U.S. Department of Energy and Washington  
State Department of Ecology, April 7, 2006 – Detailed Comments (continued)**

characterizing and remediating leaks and releases from the tank farms to the extent practicable.) Any alternative with elements that do not meet TPA requirements should only be presented as a "contingent."

2. Scope should not include consideration of a proposed alternative to leave ten percent of the waste in the tanks.
3. Scope should include identification of injury to natural resources to meet the Natural Resource Damage Assessment requirements of CERCLA.

**TOPIC FOUR: Quality Assurance.**

1. The EIS preparation process should include measures to ensure no repetition of the deficiencies and inaccuracies that the DOE Headquarters review of the Hanford Solid Waste EIS found in the health and safety analyses, as with the groundwater and transportation analyses. The TC&WM EIS should contain revised health and safety analyses.
2. Scope should include compliance with 40 CFR 1502.24, which addresses the DOE responsibility for oversight of methodology and scientific accuracy. DOE should ensure the professional integrity and scientific integrity of discussions and analyses in the EIS.
3. Scope should incorporate assumptions that reflect the minimum required default assumptions appropriate for Eastern Washington cleanup sites, including maximum reasonable exposure scenarios.
4. Scope should include a discussion of impacts which compare the health-based cleanup and risk standards in state law for cleanup. If decisions are proposed to leave waste or allow potential exposures which would result in violation of those standards, the scope of the TC&WM EIS should outline enforceable commitments to mitigate the impacts, and assess both alternatives for mitigation and impacts from mitigation (e.g., restricting use of a land area or groundwater resource).
5. Scope should include analysis of cost/benefit trade-offs of supplemental treatment (both pretreatment and immobilization) and of WTP construction, operations, decontamination and decommissioning costs pursuant to 40 CFR 1502.23.

**Attachment 1 to Hanford Advisory Board to U.S. Department of Energy and Washington State Department of Ecology, April 7, 2006 – Detailed Comments (continued)**

**TOPIC FIVE: All known and reasonably foreseeable impacts to groundwater.**

1. Scope should include analysis of the impact of catastrophic events such as earthquake, fire and flood.
2. Scope should include consideration of precipitation change due to climate changes and include impact on vegetation.

**Attachment 2 to Hanford Advisory Board to U.S. Department of Energy and Washington State Department of Ecology, April 7, 2006 – Previous Comments**

**Attachment 2: PREVIOUS BOARD COMMENTS**

**TOPIC ONE: Actions, alternatives and impacts for all Hanford waste sites.**

1. Scope should include a comprehensive, integrated, and publicly vetted strategy for all nuclear materials disposition for the complex to support the Waste Management Programmatic Environmental Impact Statement (PEIS). (Advice #133)
2. Scope should include the cumulative impacts of all Hanford waste decisions, related major actions, onsite and complex-wide. (Advice #133)
3. Scope should define the quantities and nature of waste in all forms proposed to be stored, treated or disposed at Hanford (applicable to WRAP facility, low level burial grounds and the Central Waste Complex). (Advice #133)
4. Scope should include an inventory of how much waste will be exported. (Advice #133)
5. Scope should include an estimate of how much new waste will be accepted. (Advice #133)
6. Scope should include the impacts from contact-handled TRU waste retrieval. (Advice #133)
7. Scope should include the impacts of not retrieving or shipping to WIPP all of the post-1970 TRU waste. (Advice #133)
8. Scope should include a roadmap to locate actions, alternatives and impacts of burial of environmental restoration waste which was excluded from HSW-EIS. (Advice #133)
9. Scope should include the impacts of hazardous waste (e.g. lead shielding) buried with various forms of radioactive waste. (Advice #133)
10. Scope should include low level waste burial grounds for disposal of hazardous or dangerous wastes including liquids, flammables and solvents. (Advice #133)
11. Scope should include releases of hazardous substances. (Advice #133)

**Attachment 2 to Hanford Advisory Board to U.S. Department of Energy and Washington State Department of Ecology, April 7, 2006 – Previous Comments (continued)**

12. Scope should include a discussion of how DOE's **intent to change waste classifications** would change how the wastes are treated and disposed. (Advice #140)
13. Scope should include the analysis of Pre-treatment Plant and WTP secondary waste streams that arise in the retrieval, treatment, and disposal of Tank Waste. (Advice #140)
14. Scope should include the vadose zone and options for remediating the vadose zone for all tanks/pipelines/underground equipment, and all disposal sites (planned and unplanned) within the vadose zone. (Advice #140)
15. Scope should include reasonable alternatives including the long-term full life cycle costs of different melter technologies and different glass formulations. (Advice #140)
16. Scope should include retrieval from, closure and disposition of all tanks not just SSTs and MUSTs. (Advice #140)
17. Scope should include long term effects of Yucca Mtn not receiving Hanford immobilized HLW, e.g. building new glass waste storage buildings. (Advice #140)
18. Scope should include analyses carried out in sufficient depth and detail to provide objective and quantitative comparisons of alternatives over the full time span over which the hazards may persist, e.g. 100 yrs, 1000 yrs, 10,000 yrs etc. (Advice #140)
19. Scope should include decisions about Hanford-only waste:
  - o Whether to use an existing facility or build a new facility to treat waste.
  - o Whether to dispose of Hanford low-level waste (LLW), mixed low-level waste (MLLW), and ILAW in a common facility or continue to use separate disposal operations.
  - o Where such disposal facilities should be located. (Advice #148)
20. Scope should include more detail to support selection of Hanford as a repository for DOE complex-wide disposal of LLW and MLLW. (Advice #148)
21. Scope should include the disposal of both the vitrified waste and the melters in which the vitrified waste were processed. (Advice #148)

**Attachment 2 to Hanford Advisory Board to U.S. Department of Energy and Washington  
State Department of Ecology, April 7, 2006 – Previous Comments (continued)**

**TOPIC TWO: Infrastructure**

(No previous comments.)

**TOPIC THREE: Compliance with TPA, EPA requirements and State  
requirements.**

1. Scope should adjust the No Action alternative to comply with legal and regulatory requirements. (Advice #133)
2. Scope should incorporate EPA and State regulatory limits in analyses including all actions and alternatives. (Advice #148)
3. Scope should include the use of legally controlling standards from EPA and the State of Washington for cleanup decisions or for permitting of mixed waste facilities. DOE uses as its benchmark in the HSW EIS the DOE 25 millirem all sources limit. This dose is not the legally controlling standard for cleanup decisions or for permitting of mixed waste facilities. This dose is greater than the EPA's and State's required regulatory risk ranges. (Advice #148)
4. Scope should include the application of either the specific EPA or MTCA carcinogen-risk standards for radionuclides, or the State and Federal anti-degradation standards, which are applicable to this analysis. (Advice #148)
5. Scope should include a discussion of whether the results of the modeling indicate whether proposed actions or cumulative impacts will exceed relevant standards or be in compliance with Federal and State laws and regulations. (Advice #162)
6. Scope should include at least one alternative that complies with the TPA requirements for treatment and removal of tank wastes by 2028. (Advice #164)

**TOPIC FOUR: Quality Assurance.**

1. Scope should include explanation of modeling and inventory assumptions. (Advice #133)
2. Scope should include those modeling and inventory assumptions to be consistent with known data on the movement of radioactive and hazardous waste at Hanford, and to be consistent with site actions. (Advice #133)

**Attachment 2 to Hanford Advisory Board to U.S. Department of Energy and Washington State Department of Ecology, April 7, 2006 – Previous Comments (continued)**

3. Scope should include a true “No Action” alternative that does not import and bury offsite-generated LLW and MLLW from DOE sites and other generators. (Advice #133)
4. Scope should include malevolent events in the accident analysis. (Advice #133)
5. Scope should provide consistency between SW and PEIS. (Advice #133)
6. Scope should include analyses for import of TRU waste. (Advice #133)
7. Scope should include an adequate analysis of cap performance. (Advice #133)
8. Scope should include more than an analysis of a single cap, assuming it meets RCRA requirements. (Advice #133)
9. Scope should include analyses to support the assertion that use of deep lined megatrenches is bounded by the analysis performed for shallow trenches. (Advice #133)
10. Scope should include analysis of long term stewardship over thousands of years. (Advice #133)
11. Scope should include a discussion of costing methods to apply to offsite generators of waste to be buried at Hanford. (Advice #133)
12. Scope should include the use of the most recent budget and cost comparison data. (Advice #133)
13. Scope should include an explanation of how DOE will handle the statement in the 1997 Tank Waste Remediation System EIS (and its ROD) that there were inadequate data and characterization of tank waste and soil and groundwater contamination from leaks to consider closure in an EIS at that time. Explain why such inadequacies have changed enough to prepare and EIS at this time. (Advice #140)
14. Scope should include environmental impacts for the time frame necessary to achieve peak values, e.g. 100 yrs, 1000 yrs, 10,000 yrs. (Advice #140)
15. Scope should include a life cycle cost to site closure for each of the alternatives considered. (Advice #140)

**Attachment 2 to Hanford Advisory Board to U.S. Department of Energy and Washington  
State Department of Ecology, April 7, 2006 – Previous Comments (continued)**

16. Scope should include an analysis of the cumulative impacts from all Hanford wastes on Hanford soil, groundwater, the Columbia River, its ecosystem, interconnected ecosystems and the people living downstream from Hanford. (Advice #148)
17. Scope should include performance assessments for alternatives using supplemental technologies for treatment of tank wastes resulting in performance "as good as glass". The summed contributions of all components of the LAW supplemental treatment disposal package and secondary wastes should be as good as glass produced from the WTP LAW vitrification facility. (Advice #148)
18. Scope should include the use of legally controlling standards from EPA and the State of Washington for cleanup decisions or for permitting of mixed waste facilities. DOE uses as its benchmark in the HSW EIS the DOE 25 millirem all sources limit. This dose, however, is not the legally controlling standard for cleanup decisions or for permitting of mixed waste facilities. This dose is greater than the EPA's and State's required regulatory risk ranges. (Advice #148)
19. Scope should include a life-cycle cost analysis for each alternative. This analysis is needed in order to make a reasonable selection of the appropriate supplemental process(es) to be included in the EIS. By performing these analyses outside of and in front of the EIS, the number of alternatives and variables in the EIS could be significantly reduced. (Advice #140)
20. Scope should include a definition of analytical models used in the EIS. Scope should include a discussion if these analytical models are consistent with the professional standards or best industry practices. (Advice #162)
21. Scope should include a definition of what assumptions are made in the documents and in the analytical models. For example:
  - o Are these assumptions reasonable and consistent with relevant cleanup standards and requirements?
  - o Are the assumptions consistent with reasonable maximum exposure scenarios? (Advice #162)

**TOPIC FIVE: All known and reasonably foreseeable impacts to groundwater.**

1. Scope should include impacts to groundwater and human health at the point of compliance for waste management units. (Advice #148)

**Attachment 2 to Hanford Advisory Board to U.S. Department of Energy and Washington State Department of Ecology, April 7, 2006 – Previous Comments (continued)**

2. Scope should address non-degradation to ground water beyond the edge of the waste management unit. (Advice #148)
3. Scope should show area of ground water where irreversible impact will occur. The draft HSW-EIS improperly asserts a claim for irretrievable and irreversible impact to an unidentified area of ground water (which may encompass the entire Hanford site) forever, with no analysis or disclosure of how large an area this may be, how bad the conditions may become, or how long this may persist. (Advice #148)
4. Scope should include groundwater monitoring around burial grounds and in vadose zone to be able to substantiate assumptions of future movement, or lack thereof. (Advice #148)
5. Scope should include the potential impacts at the edge of, and under, the disposal sites in the vadose zone and groundwater. (The HSW EIS analyzed the potential impacts to groundwater at a line one kilometer away from the proposed disposal sites. This is inadequate.) Additionally, DOE should analyze the potential worst case impacts from overlapping releases. Future releases from these disposals, which exceed regulatory limits, will trigger additional cleanup requirements under the Resource Conservation and Recovery Act (RCRA) and/or the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). (Advice #148)
6. Scope should include existing plumes of contamination in the groundwater. Groundwater is a State resource, not a Federal resource. DOE lacks authority to decide to all contamination of groundwater to levels that prevent future use---and “irreversible and irretrievable commitment.” This claim should be deleted. Both State and Federal law for environmental cleanup require the protection of groundwater. The scope should contain a clarification that no irreversible and irretrievable commitment of groundwater has already been assumed or will be made as a consequence of any action addressed in the EIS. Further, ongoing cleanup programs should continue to address historic releases with the goal of groundwater restoration. (Advice #148)

**TOPIC SIX: A clear and comprehensive public review and comment process**

1. Scope should include a primer for the reader that identifies the various types of waste, their treatment methods, and disposal requirements for each waste classification. This EIS should contain, in language understandable to the

**Attachment 2 to Hanford Advisory Board to U.S. Department of Energy and Washington  
State Department of Ecology, April 7, 2006 – Previous Comments (continued)**

public, a listing of the specific decisions supported by this EIS and how this EIS will be used in making those decisions. If this primer is placed on the ORP website, the site should have clear directions for finding it. (Advice #144)

2. Scope should include a clear statement of the relationships between this EIS, the previous Tank Waste Remediation System (TWRS) EIS and the DOE Programmatic EIS (WMPEIS). (Advice #133 and #144)

**U.S. DEPARTMENT OF ENERGY AND WASHINGTON STATE DEPARTMENT OF ECOLOGY TO HANFORD ADVISORY BOARD – June 30, 2006**



U.S. Department of Energy  
Office of River Protection



JUN 30 2006

06-ESQ-057

Mr. Todd Martin, Chair  
Hanford Advisory Board  
1933 Jadwin Avenue, Suite 135  
Richland, Washington 99352

Dear Mr. Martin:

**HANFORD ADVISORY BOARD (HAB) ADVICE #185 TANK CLOSURE & WASTE MANAGEMENT (TC & WM) ENVIRONMENTAL IMPACT STATEMENT (EIS)**

Thank you for the time you took to provide advice related to the TC & WM EIS. Your continued interest and involvement in the TC & WM EIS is appreciated. Some comments address specific items, and others address policy statements. Some comments were not scoping comments but were comments on how information in previous EIS documents was presented. Our responses are attached. Attachment 1 is the “Responses to HAB Advice Cover Letter,” Attachment 2 is “Responses to New HAB Advice,” and Attachment 3 is “Responses to Previous HAB Advice.”

We found your advice useful in describing similar expectations that the U.S. Department of Energy (DOE) and the State of Washington Department of Ecology (Ecology) share related to transparency and quality assurance related to the TC & WM EIS. DOE and Ecology share these expectations. DOE and Ecology also agree additional characterization may be needed for some permits. However, both agencies believe that sufficient characterization exists to complete the TC & WM EIS.

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P O Box 550  
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Office of River Protection  
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State of Washington  
Department of Ecology  
P.O. Box 47600  
Olympia, Washington 98504

**U.S. DEPARTMENT OF ENERGY AND WASHINGTON STATE DEPARTMENT OF  
ECOLOGY TO HANFORD ADVISORY BOARD – June 30, 2006 (continued)**

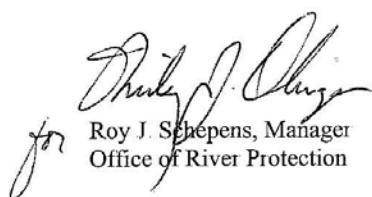
Mr. Todd Martin  
06-ESQ-057

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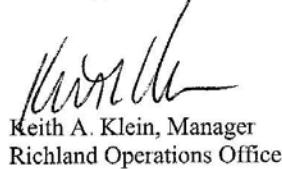
JUN 30 2006

If you have any questions concerning the responses, please contact Mary Beth Burandt, DOE TC & WM EIS National Environmental Policy Act Document Manager, (509) 372-7772, or Suzanne Dahl, Ecology Project Manager, (509) 372-7892.

Sincerely,



for  
Roy J. Schepens, Manager  
Office of River Protection



Keith A. Klein, Manager  
Richland Operations Office



J. Manning, Director  
State of Washington  
Department of Ecology

Attachments: (3)

cc w/attachs:  
C. Borgstrom, EH-41  
D. E. Frost, EM-30.1  
S. Dahl, Ecology  
J. Lyon, Ecology  
N. Ceto, EPA  
D. A. Brockman, RL  
K. Lutz, RL

**Attachment 1 to U.S. Department of Energy and Washington State Department of Ecology  
to Hanford Advisory Board, June 30, 2006 – Response to April 7, 2006, Letter**

Attachment 1  
06-ESQ-057

Responses to HAB Advice Cover Letter

**Attachment 1 to U.S. Department of Energy and Washington State Department of Ecology  
to Hanford Advisory Board, June 30, 2006 – Response to April 7, 2006, Letter (continued)**

**“Responses to Hanford Advisory Board (HAB) Advice #185 Cover Letter”**

**General Comments**

**1. Schedule:** In your advice #7185, the HAB stated the concern that the timeline to develop and issue the Tank Closure and Waste Management (TC & WM) Environmental Impact Statement (EIS) is too short.

**A:** Both the U.S. Department of Energy (DOE) and the State of Washington Department of Ecology (Ecology) feel it is important to do this EIS correctly. As stated in the Memorandum of Understanding (MOU) between both parties, we are working to have a final EIS by June 2008. Just as the HAB supported the settlement agreement and ending the lawsuit, it is important that we complete this EIS to support treatment, disposal, and closure decisions that need to be made. As we proceed, we will keep you updated on our progress toward that goal.

**2. Waste Streams:** All known existing and planned waste streams on the Hanford Site should be included in the analysis to provide a sound foundation for cleanup decisions and remedy selections. After credible characterization is done, the cumulative impact analysis will need to address the impacts from policy choices and alternatives for such things as:

- a) Retrieving pre-1970s and other buried and discharged wastes;
- b) Contamination from High-Level nuclear waste tank leaks; and
- c) Long-term stewardship.

**A:** We agree that all known existing or planned waste streams should either be included in the alternatives or the cumulative impact sections of the EIS. There are waste streams and processes that DOE needs to make near term decisions on (in the next five to 15 years)—these are covered in the alternatives. For activities that have a previous National Environmental Policy Act (NEPA) Record of Decision (ROD), are a Comprehensive Environmental Response Compensation and Liability Act (CERCLA) activity, or are otherwise not ripe for decision making, these will be included in the cumulative impacts analysis. See also the answer to # 4 related to characterization.

**3. Alternatives:** The analyses of alternatives in the EIS, after characterization, must address what will be done with the wastes retrieved; what are the quantities and types of wastes which may remain, need treatment or disposal, and what are the impacts from each alternative.

**A:** We agree that the EIS should identify the assumptions, treatment, and disposition pathways for waste streams in both the alternatives and cumulative impacts analyses.

**4. Characterization:** DOE currently estimates the EIS will take two years to complete (with a ROD issued in June, 2008). The HAB is concerned that the schedule does not allow for the necessary characterization. While the HAB is not suggesting an open-ended characterization project, reasonable characterization of waste sites not currently adequately characterized is necessary to support credible analyses. The schedule for the EIS should be driven by characterization, data, and analysis needs, not an arbitrary timeline.

**Attachment 1 to U.S. Department of Energy and Washington State Department of Ecology to Hanford Advisory Board, June 30, 2006 – Response to April 7, 2006, Letter (continued)**

A reasonable timeline should be provided to the public regarding the time required to characterize waste releases and residues to meet the minimum requirements for a credible cumulative impact analysis.

**A:** Both DOE and Ecology believe there is sufficient characterization information to support this EIS. The goal of NEPA is to complete an impact analysis to support decisions that an agency needs to make related to a proposed Federal (or State, in the case of State Environmental Policy Act [SEPA]) action early enough in the decision making process to be useful. As a result, there must be a balanced judgment concerning an agency's decision to start the NEPA process early enough to inform its decisions, recognizing that information may be incomplete or missing. The Council on Environmental Quality regulations have long recognized this tension and provide an appropriate way to proceed with an EIS despite incomplete or unavailable information (40 CFR 1502.22). For example with respect to the tank farms, eight of the 18 tank farms have undergone vadose zone characterization and two more are currently in process.

Characterization activities will continue on the Hanford Site as required by the Hanford Federal Facility Agreement and Consent Order (HFFACO) for both Resource Conservation and Recovery Act (RCRA) and CERCLA activities while this EIS is being prepared. Additional information may be necessary before final permit decisions are made.

**5. Cumulative Impact Analysis:** As support for this concern, in response to HAB Advice #148 (August 2003), the U.S. Environmental Protection Agency Region 10 Hanford Project Office stated that sitewide analysis of cumulative impacts could be initiated by 2008 based on the completion of CERCLA and RCRA facility investigations

**A:** DOE has agreed, as part of the settlement agreement, to conduct a comprehensive cumulative impact analysis and to revise, update, or redo the groundwater, human health and transportation analyses as a result of the Quality Assurance (QA) review of the Hanford Solid Waste (HSW) EIS. A considerable amount of work has been done to document, QA, and update information to support the cumulative impact section since the HSW EIS. The goal of the cumulative impacts analysis is to put the alternatives in the context of other activities occurring onsite.

**6. State and Federal Requirements:** The EIS must recognize, incorporate, and meet the requirements, methodologies, and standards of all applicable Federal and state regulations. Failing to meet these requirements could result in an EIS that is not acceptable to Washington State and result in wasted time, money, and effort.

**A:** We agree, the EIS will describe how the proposed action and alternatives are related to State and Federal laws and regulations. As stated in the Settlement Agreement re: WASHINGTON vs. BODMAN (Civil No. 2:03-cv-05018-AAM), both agencies are undertaking this expanded EIS with the intent to satisfy applicable NEPA and SEPA requirements so that clean up work at Hanford can continue.

**Attachment 1 to U.S. Department of Energy and Washington State Department of Ecology  
to Hanford Advisory Board, June 30, 2006 – Response to April 7, 2006, Letter (continued)**

**7. Hanford Federal Facility Agreement and Consent Order:** The EIS should include analysis of at least one alternative that complies with the HFFACO for treatment and removal of tank wastes.

**A:** DOE strongly supports the values identified in the HFFACO, including requirements to retrieve the waste from the tanks, treat it, and close the tanks, and we are committed to implementing those values. Due to recent delays to the Waste Treatment and Immobilization Plant, it is unlikely that the existing HFFACO dates will be met.

Ecology expressed a similar concern as this HAB advice related to the treatment dates in the HFFACO of 2028. DOE and Ecology are working to evaluate issues related to meeting 2028 and will continue to discuss throughout the summer.

**8. Past Board Advice:** The EIS should be accompanied by a peer-reviewed QA process. Past HAB Advice (#162) recommended an independent panel to review the groundwater risk assessment work in the Tank Closure EIS, Solid Waste EIS, and Composite Analysis on behalf of the HAB. This panel was never constituted. However, this EIS provides an opportunity for the spirit of this advice to be included during the development of the TC & WM EIS.

**A:** We agree that this EIS provides an opportunity to meet the spirit of the advice. DOE has agreed to redo groundwater analyses from the HSW EIS, and the TC & WM EIS cumulative impact analysis will be the only comprehensive cumulative analysis onsite. This analysis will also be used as a composite analysis to support DOE O 435.1.

Ecology and DOE agree with the Science Applications International Corporation (SAIC) proposal to have an external panel, made up of non-Hanford, DOE, or site contractor personnel, to review the assumptions used in the groundwater model, and provide advice to SAIC. We believe this goes a long way to meet the intent of Advice #162, as the HAB itself acknowledged a need for technical assistance, because the issues were “beyond the expertise of the vast majority of the Board members.” In addition to the external panel, Ecology has agreed to conduct periodic QA slices throughout the EIS process. DOE Headquarters has also committed to providing QA reviews as appropriate. We will keep the HAB updated as the EIS progresses.

**9. Public Involvement:** Additionally, DOE and Ecology should work with the HAB to create public involvement mechanisms that ensure regular dialogue between risk assessors, document authors, and stakeholders concerning the status of the EIS and its assumptions, analyses, methodologies, etc. This dialogue can be used to illustrate how HAB comments have been incorporated into the EIS, will assist the agencies in real-time problem resolution, and will hopefully build HAB support for the final EIS.

**A:** We agree that regular dialogue is important as the EIS is being developed and felt that we had some successes with the Tank Closure EIS processes which was expanded to include HAB initiated issues manager workshops, regular presentations at committee meetings, and a TC & WM EIS-specific website to update the EIS’s status and issues. As a result of the MOU for the TC & WM EIS, DOE and Ecology have also agreed to maintain an issues list. As a result of scoping, the HAB public involvement committee was asked for feedback on getting the word out including review of advertisements and the use of a listserv. If the HAB has additional specific ideas which could be implemented we would appreciate your input and please, contact the TC & WM EIS NEPA Document Manager.

**Attachment 2 to U.S. Department of Energy and Washington State Department of Ecology  
to Hanford Advisory Board, June 30, 2006 – Response to Detailed Comments**

Attachment 2  
06-ESQ-057

Responses to New HAB Advice

**Attachment 2 to U.S. Department of Energy and Washington State Department of Ecology  
to Hanford Advisory Board, June 30, 2006 – Response to Detailed Comments (continued)**

**“Responses to new Hanford Advisory Board Advice”**

**TOPIC ONE: Actions, alternatives, and impacts for all Hanford waste sites.**

1. Scope should include a roadmap to locate actions, alternatives, and impacts for all identified waste sites on the Central Plateau

A: We agree that the Environmental Impact Statement (EIS) should identify the waste sites on site, regardless of whether those waste sites are related to the alternatives or the cumulative impacts

2. Disposition alternatives for the Fast Flux Test Facility (FFTF), Plutonium Reaction Test Reactor (PRTR) and N Reactor should be included in a separate, self-standing EIS which should also update actions, alternatives, and impacts for the eight production reactors (B, C, D, DR, F, H, KE, and KW.) The cumulative impact of all 11 reactors should be included in the TC & WM EIS.

A. We disagree with including all the reactors in the alternatives. As identified in the Notice of Intent, FFTF will be included in the alternatives since it was included in an on-going EIS. The production reactors are already covered by an existing EIS, and therefore, will be addressed in the cumulative impacts section.

3. Scope should include cumulative impacts of all wastes proposed to be disposed. In addition, the burden from prior disposal and contamination needs to be considered, along with mitigation measures. Analyses should be based on State cleanup and health-based standards and the Native American subsistence scenario, not solely U.S. Department of Energy's (DOE) own standards

A. We agree that the EIS should address the impact of waste to be disposed as well as other contamination which may remain on site. The EIS should describe how the alternatives are related to State and Federal laws.

4. Scope should include consideration of the range of alternatives for cleanup and closure of the unlined burial grounds which includes pre-1970 waste sites and chemical wastes. The alternatives presented should be retrieval and cleanup to the extent practical in compliance with applicable requirements

A: We agree that all known existing or planned waste streams should either be included in the alternatives or the cumulative impact sections of the EIS. There are waste streams and processes that DOE needs to make near term decisions on (in the next five-15 years), these are covered in the alternatives. For activities that have a previous National Environmental Policy Act Record of Decision (ROD), are a Comprehensive Environmental Response Compensation and Liability Act (CERCLA) activity or are otherwise not ripe for decision making, these will be included in the cumulative impacts analysis.

5. Scope should include an estimated inventory of wastes in the burial grounds, cribs, and soil around leaking Single-Shell Tanks, and characterizing the extent and mobility of contamination as required by applicable laws. The EIS should include an explanation pursuant to 40 CFR 1502.22 of how the cumulative impact analysis can be performed when inventory and characterization data do not exist.

**Attachment 2 to U.S. Department of Energy and Washington State Department of Ecology  
to Hanford Advisory Board, June 30, 2006 – Response to Detailed Comments (continued)**

A: We agree that the EIS should identify the inventory of waste in the tanks and burial grounds. When information is incomplete or unavailable, the EIS will address the requirements of 40 CFR 1502.22

6. Scope should include alternatives for the treatment of tank wastes as entirely separate from alternatives for closure of tanks.

A: In order to close the tanks the waste must be retrieved and treated. We agree the EIS should describe the different aspects of the alternatives in a way the reader can understand the different activities involved.

7. Scope should include a discussion of how DOE intends to make tank closure decisions on those tanks where there may be inadequate current characterization to support regulatory closure decisions.

A: The EIS will evaluate the impacts of different closure actions and the impacts on the environment. An EIS is the first step in that closure process. After the EIS is complete, Washington State law requires that a closure permit be issued. The M-45 Milestone and its associated appendices identify additional information which will be needed prior to the actual closure of a specific waste management area.

8. Scope should include the cumulative and route-specific effects of transporting wastes from multiple sites to and from Hanford. For example, the Hanford Solid Waste (HSW) EIS estimated impacts in Oregon and Washington using generic transportation parameters. The analysis did not consider the specific transport route conditions, which may result in alternate routes being used.

A: The Tank Closure and Waste Management (TC & WM) EIS will use the best information on routes at the time the EIS is complete. Representative routes used in an EIS conform to Department of Transportation (DOT) regulations for shipment of radioactive materials per (49 CFR 397.101 and 49 CFR 103), where preferred routes consist of Interstate System highways, Interstate System bypass or beltway around a city, and State designated preferred routes. Selection of routes using DOT guidelines can reduce risk more populated areas and minimize potential exposure. TC & WM EIS will use routes which meet current Federal and State transportation guidelines, regulations, and practices for transporting highway route controlled quantity of radioactive materials. The TC & WM EIS deals with transportation occurring over an extended period of time, highway infrastructure, demographics, or weather conditions could alter the actual route used to transport the waste. Therefore, the selected routes may not be actual routes that would be used in the future.

9. The EIS should not assume additional landfill volume for offsite waste disposal beyond the limits established in the June 2004 ROD.

A: DOE plans to update the waste volumes to be disposed of, approximating those volumes for offsite waste that are in the HSW EIS ROD (i.e., 20,000 cubic meters of Low-level mixed waste, and 62,000 cubic meters of low-level waste).

10. The risks from Hanford waste should be clearly delineated from the risks from offsite waste in the EIS to determine whether acceptable risk levels will be exceeded prior to the addition

**Attachment 2 to U.S. Department of Energy and Washington State Department of Ecology  
to Hanford Advisory Board, June 30, 2006 – Response to Detailed Comments (continued)**

of offsite waste. This delineation is needed to determine whether Hanford can accept offsite waste without unacceptable risk to the environment.

A: We agree that the potential impacts from offsite waste should be clearly delineated.

**TOPIC TWO: Infrastructure.**

Because of delays in the startup and operation of the Waste Treatment and Immobilization Plant (WTP) to beyond 2017, important infrastructure that was originally expected to operate 2007-2018 may exceed design life and need replacement by the time of hot startup. As a result, the scope should include actions, alternatives, and impacts related to replacement of aging infrastructure due to extended Hanford Federal Facility Agreement and Consent Order (HFFACO) schedules

1. Scope should include replacement or life-extension of 242-A Evaporator.
2. Scope should include life-extension of the 222-S Analytical Laboratory, or replacement or consolidation with the WTP Analytical Laboratory
3. Scope should include modifications, additions and/or life-extension of the Effluent Treatment Facility.
4. Scope should include the impact of retrieval delays on the ability to retrieve waste from deteriorating waste tanks with failing infrastructure
5. Scope should include analysis of electrical, water supply, support and transportation facilities, and other general infrastructure.

A: With delays in some of the site plans, we are currently evaluating what infrastructure upgrades may be necessary in the EIS. A final decision related to these and other facilities has not been made and the draft EIS will address this topic.

**TOPIC THREE: Compliance with HFFACO, U.S. Environmental Protection Agency (EPA) requirements, and State requirements.**

1. Scope should include at least one alternative that is fully compliant with the HFFACO and EPA and State requirements (e.g., emptying the tanks to 99% and characterizing and remediating leaks and releases from the tank farms to the extent practicable.) Any alternative with elements that do not meet HFFACO requirements should only be presented as a “contingent.”

A: See answer to #7 in Attachment 1.

2. Scope should not include consideration of a proposed alternative to leave 10% of the waste in the tanks

A: We disagree. The HFFACO requires removal to 99%. The goal of the 90% removal is to evaluate the impact of the HFFACO M-45 Appendix H process.

**Attachment 2 to U.S. Department of Energy and Washington State Department of Ecology to Hanford Advisory Board, June 30, 2006 – Response to Detailed Comments (continued)**

3. Scope should include identification of injury to natural resources to meet the Natural Resource Damage Assessment requirements of CERCLA.

A: Natural resource damages are currently under litigation and the outcome is not known.

**TOPIC FOUR: Quality Assurance.**

1. The EIS preparation process should include measures to ensure no repetition of the deficiencies and inaccuracies that the DOE Headquarters review of the HSW EIS found in the health and safety analyses, as with the groundwater and transportation analyses. The TC & WM EIS should contain revised health and safety analyses

A: We agree. The Memorandum of Understanding between DOE and the State of Washington Department of Ecology for the expanded TC & WM EIS was done to strengthen the areas where potential problems could exist. In addition, we have agreed to conduct lessons learned. We are also redoing groundwater, health and safety, and transportation analyses performed for the HSW EIS.

2. Scope should include compliance with 40 CFR 1502.24, which addresses the DOE responsibility for oversight of methodology and scientific accuracy. DOE should ensure the professional integrity and scientific integrity of discussions and analyses in the EIS

A: We agree. The EIS will identify the methodologies, assumptions, and judgments used for all analyses. DOE is extensively and actively involved in the EIS's preparation through the presence of dedicated, multi-disciplinary Federal staff, with a goal of ensuring the integrity and accuracy of the EIS's analyses.

3. Scope should incorporate assumptions that reflect the minimum required default assumptions appropriate for Eastern Washington cleanup sites, including maximum reasonable exposure scenarios

A: We agree. The EIS will identify the methodologies, assumptions, and judgments used for all analyses.

4. Scope should include a discussion of impacts which compare the health-based cleanup and risk standards in State law for cleanup. If decisions are proposed to leave waste or allow potential exposures which would result in violation of those standards, the scope of the TC & WM EIS should outline enforceable commitments to mitigate the impacts, and assess both alternatives for mitigation and impacts from mitigation (e.g., restricting use of a land area or groundwater resource).

A: We agree that all results of the impacts analysis, regardless of the resource area or discipline, will be compared against the potentially applicable State and Federal requirements. Mitigation is included in the alternatives' construct; however, additional mitigation measures may be identified after the analyses have been completed. Until then, it is premature to define specifics.

5. Scope should include analysis of cost/benefit trade-offs of supplemental treatment (both pretreatment and immobilization) and of WTP construction, operations, decontamination, and decommissioning costs pursuant to 40 CFR 1502.23.

**Attachment 2 to U.S. Department of Energy and Washington State Department of Ecology  
to Hanford Advisory Board, June 30, 2006 – Response to Detailed Comments (continued)**

A: The EIS will not do a cost/benefit trade-off analysis, but, as we agreed to in previous advice, a companion cost report will be prepared for the TC & WM EIS.

**TOPIC FIVE: All known and reasonably foreseeable impacts to groundwater.**

1. Scope should include analysis of the impact of catastrophic events such as earthquake, fire, and flood
2. Scope should include consideration of precipitation change due to climate changes and include impact on vegetation.

A: We received similar comments during the scoping process and are currently evaluating how to address it in the EIS.

**Attachment 3 to U.S. Department of Energy and Washington State Department of Ecology  
to Hanford Advisory Board, June 30, 2006 – Response to Previous Comments**

Attachment 3  
06-ESQ-057

Responses to Previous HAB Advice

**Attachment 3 to U.S. Department of Energy and Washington State Department of Ecology  
to Hanford Advisory Board, June 30, 2006 – Response to Previous Comments  
(continued)**

**“Responses to Previous Hanford Advisory Board (HAB) Advice”**

**PREVIOUS BOARD COMMENTS**

Answer: The topics raised by the HAB on previous advice are listed below but the individual comments have not been repeated. Comments on HAB Advice #133 and #148 deal with the draft Hanford Solid Waste Environmental Impact Statement (EIS). We will evaluate the comments in the development of the Tank Closure and Waste Treatment (TC & WM) EIS. In some cases, the advice referred to deals with concerns related to specific portions of the EIS which will be redone. In other cases the comments related to presentation of results which we will evaluate as the TC & WM EIS development continues.

Specific to HAB Advice #140, we are unable to confirm which advice you are referring to. HAB Advice #140 deals with a request to revise the Notice of Intent and extend the scoping period for the Tank Closure EIS – advice the U.S. Department of Energy accepted. We reviewed the comments against HAB Advice #144, thinking that it was a typographical error. In some cases the advice was similar but the wording not exactly the same. In other cases we could not find the advice identified or the advice was changed substantially so that it no longer has the same meaning as the original advice.

If you would like to discuss this issue in more detail please notify the National Environmental Policy Act Document Manager.

**TOPIC ONE: Actions, alternatives and impacts for all Hanford waste sites.**

**TOPIC TWO: Infrastructure**

(No previous comments )

**TOPIC THREE: Compliance with Hanford Federal Facility Agreement and Consent Order, U.S. Environmental Protection Agency requirements, and State requirements.**

**TOPIC FOUR: Quality Assurance.**

**TOPIC FIVE: All known and reasonably foreseeable impacts to groundwater.**

**TOPIC SIX: A clear and comprehensive public review and comment process.**

**U.S. DEPARTMENT OF ENERGY AND WASHINGTON STATE DEPARTMENT OF ECOLOGY TO HANFORD ADVISORY BOARD – April 14, 2010**



U.S. Department of Energy  
Office of River Protection



APR 14 2010

10-ESQ-096

Ms. Susan L. Leckband, Chair  
Hanford Advisory Board  
Enviroissues Hanford Project Office  
713 Jadwin Avenue, Suite 4  
Richland, Washington 99352

Dear Ms. Leckband:

**HANFORD ADVISORY BOARD (HAB) CONSENSUS ADVICE #229 TANK CLOSURE & WASTE MANAGEMENT (TC & WM) ENVIRONMENTAL IMPACT STATEMENT (EIS)**

Thank you for your letter regarding the comments on the TC & WM EIS. The U.S. Department of Energy (DOE) and State of Washington Department of Ecology appreciate your thoughtful recommendations.

Advice from the HAB is very important to our agencies. The comment period closes May 3, 2010, and the comments received from the HAB and members of the public will be considered as we move forward.

We will issue responses to your advice and all public comments in a Comment Response Document which will be issued with the final TC & WM EIS.

If you have any questions concerning the responses to the comments, please contact Mary Beth Burandt, DOE TC & WM EIS National Environmental Policy Act Document Manager, at (509) 373-9160, or Suzanne Dahl, Ecology Project Manager, (509) 372-7892.

David A. Brockman, Manager  
Richland Operations Office  
U.S. Department of Energy

Shirley J. Olinger, Manager  
Office of River Protection  
U.S. Department of Energy

Jane A. Hedges, Manager  
Nuclear Waste Program  
Washington State Department of Ecology

---

Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

Office of River Protection  
P.O. Box 450  
Richland, Washington 99352

State of Washington  
Department of Ecology  
P.O. Box 47600  
Olympia, Washington 98504

**U.S. DEPARTMENT OF ENERGY AND WASHINGTON STATE DEPARTMENT OF  
ECOLOGY TO HANFORD ADVISORY BOARD – April 14, 2010 (continued)**

Ms. Susan L. Leckband  
10-ESQ-096

-2-

APR 14 2010

cc: I. R. Triay, EM-1  
C. D. West, EM-3.2  
C. Brennan, EM-13  
W. B. Mansel, EM-51  
D. R. Einan, EPA  
D. A. Faulk, EPA  
T. Sturdevant, EPA  
P. Zehm, EPA  
S. Hayman, Enviroissues  
J. A. Hedges, Ecology  
J. Manning, Ecology  
D. S. Shoop, RL  
Administrative Record  
Environmental Portal  
The Oregon and Washington  
Congressional Delegations

U.S. Senators (OR)  
J. Merkley  
R. Wyden

U.S. Senators (WA)  
M. Cantwell  
P. Murray

U.S. Representatives (WA)

B. Baird  
N. Dicks  
R. Hastings  
J. Inslee  
R. Larsen  
J. McDermott  
C. McMorris Rodgers  
D. Reichert  
A. Smith

State Senators (WA)

J. Delvin  
M. Hewitt

State Representatives (WA)

L. Haler  
B. Klippert

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Richland Operations Office P.O. Box 550 Richland, Washington 99352	Office of River Protection P.O. Box 450 Richland, Washington 99352	State of Washington Department of Ecology P.O. Box 47600 Olympia, Washington 98504
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**HANFORD ADVISORY BOARD TO U.S. DEPARTMENT OF ENERGY, WASHINGTON STATE DEPARTMENT OF ECOLOGY, AND U.S. ENVIRONMENTAL PROTECTION AGENCY – June 8, 2012**

# **HANFORD ADVISORY BOARD**

*A Site Specific Advisory Board, Chartered under the Federal Advisory Committee Act*

**Advising:**  
US Dept of Energy  
US Environmental Protection Agency  
Washington State Dept of Ecology

June 8, 2012

**CHAIR:**  
Susan Leckband  
**VICE CHAIR:**  
Steve Hudson  
**BOARD MEMBERS:**

David Huizenga  
Senior Advisor for Environmental Management  
EM-1/Forestal Building  
U.S. Department of Energy  
1000 Independence Avenue  
Washington, D.C. 20585

Scott Samuelson, Manager  
U.S. Department of Energy, Office of River Protection  
P.O. Box 450 (H6-60)  
Richland, WA 99352

Matt McCormick, Manager  
U.S. Department of Energy, Richland Operations  
P.O. Box 550 (A7-50)  
Richland, WA 99352

Dennis Faulk, Manager  
U.S. Environmental Protection Agency, Region 10  
309 Bradley Blvd, Suite 115  
Richland WA 99352

Jane Hedges, Program Manager  
Washington State Department of Ecology  
3100 Port of Benton Blvd.  
Richland, WA 99354

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**Local Environment**  
Gene Van Lew  
**Local Government**  
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Rick Jansons  
Rob Davis  
Jerry Peltier  
Bob Adler  
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Russell Jim  
John Stanfill  
**Public Health**  
Tony Brooks  
Howard Putter  
**University**  
Doug Mercer  
Richard Stout  
**Public-at-Large**  
Norma Jean Germond  
Keith Smith  
Bob Parazin  
Bob Suyama  
**Regional Environment/Citizen**  
Dan Serres  
Susan Leckband  
Paige Knight  
Gerald Pollet  
**State of Oregon**  
Lyle Smith  
Ken Niles  
**Ex-Officio**  
Confederated Tribes of the Umatilla  
Washington State Department of Health

Re: Final Tank Closure and Waste Management Environmental Impact Statement

Dear Messrs. Huizenga, Samuelson, McCormick and Faulk and Ms. Hedges,

**Background:**

The U.S. Department of Energy (DOE) has recently announced that there will be no preferred alternative for additional tank waste treatment in the final Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS or EIS).

**RECEIVED**

**JUN 13 2012**

**DOE-RLCC**

HAB Consensus Advice # 256  
Subject: TCWM EIS  
Adopted: June 8, 2012  
Page 1

**EnviroIssues**  
Hanford Project Office  
713 Jadwin, Suite 3  
Richland, WA 99352  
Phone: (509) 942-1906  
Fax: (509) 942-1926

**HANFORD ADVISORY BOARD TO U.S. DEPARTMENT OF ENERGY, WASHINGTON  
STATE DEPARTMENT OF ECOLOGY, AND U.S. ENVIRONMENTAL PROTECTION  
AGENCY – June 8, 2012 (*continued*)**

Previously, DOE stated that vitrification was the preferred alternative for both high-level and low-activity waste (LAW) in the 1997 Tank Waste Remediation System (TWRS) EIS and record of decision (ROD). DOE is now indicating that waste not scheduled to be treated in the LAW Vitrification Facility might be treated by some other process that will be decided at some later date.

This change in direction is of great concern to the Hanford Advisory Board (HAB or Board). It was not supported by public comment during the review of the draft TC&WM EIS, and is not supported by the actual data in the EIS. It is also not supported by the cost analysis in the Kosson Report<sup>1</sup> that demonstrated the alternate approaches to treatment of LAW are cost-equivalent.

DOE spent at least \$400 million examining bulk vitrification and steam reforming. Both technologies proved unsuccessful technically and financially. Funding, particularly for technology development, is extremely limited. Therefore, it is the opinion of the Board that exploration of a non-glass alternative to LAW vitrification should not be pursued. However, a replacement for the baseline borosilicate glass matrix should be fully explored and evaluated before beginning design of a second LAW Facility.

The Board reminds DOE that when the federal government proposes a major project, the purpose of an EIS is to identify environmental impacts from the proposed action, and alternatives to that action that minimize such impacts or that mitigate the environmental damage insofar as practicable.

**Advice:**

- The Board advises DOE to provide the public and the Board sufficient time (90 days) to review the final EIS and have dialogue with DOE in respect to its findings prior to DOE issuing any formal ROD based upon the EIS. One or more public meetings should be held on this topic.
- The Board supports the State of Washington in advising DOE to select and build a second LAW Facility. In designing this facility, the Board advises DOE to fully explore and evaluate the use of alternative glass matrices as a replacement for the baseline borosilicate glass in the WTP system before beginning design for the second LAW Facility.
- The Board advises DOE to discontinue efforts to utilize bulk vitrification, cast stone, and steam reforming as alternatives to vitrification. The analysis in the draft EIS shows that these methods result in an adverse environmental impact, namely,

---

U.S. Department of Energy External Technical Report (ETR-18); November 2008

**HANFORD ADVISORY BOARD TO U.S. DEPARTMENT OF ENERGY, WASHINGTON STATE DEPARTMENT OF ECOLOGY, AND U.S. ENVIRONMENTAL PROTECTION AGENCY – June 8, 2012 (*continued*)**

the release of unacceptable amounts of Technetium 99 and other contaminants to the groundwater.

- The Board advises DOE to select alternatives for supplemental waste treatment that result in the earliest return of the groundwater to its highest beneficial use (drinking water standards).
- The Board advises DOE to select alternatives and make decisions for supplemental waste treatment that comply to a strict application of all environmental laws and regulations. Many of the alternatives analyzed in the draft of the EIS showed contamination of groundwater at levels exceeding regulatory and drinking water standards over thousands of years.
- The Council on Environmental Quality Regulations in 40 CFR 1502.14(e) strongly advises the lead agency in the preparation of an EIS to select a preferred alternative in the final EIS if not the draft EIS. The Board recommends that DOE identify a preferred alternative in the final EIS.

Sincerely,



Susan Leckband, Chair  
Hanford Advisory Board

---

*This advice represents Board consensus for this specific topic. It should not be taken out of context to extrapolate Board agreement on other subject matters.*

cc: Dana Bryson, Deputy Designated Official, U.S. Department of Energy, Richland Operations Office  
Catherine Brennan, U.S. Department of Energy, Headquarters  
The Oregon and Washington Delegations

**U.S. DEPARTMENT OF ENERGY TO HANFORD ADVISORY BOARD – July 26, 2012**



**U.S. Department of Energy**  
**Office of River Protection**  
P.O. Box 450, MSIN H6-60  
Richland, Washington 99352

12-HAB-0027

JUL 26 2012

Ms. S. L. Leckband, Chair  
Hanford Advisory Board  
Enviroissues Hanford Project Office  
713 Jadwin, Suite 4  
Richland, Washington 99352

Dear Ms. Leckband:

HANFORD ADVISORY BOARD (HAB) JUNE 8, 2012, CONSENSUS ADVICE #256,  
"FINAL TANK CLOSURE & WASTE MANAGEMENT ENVIRONMENTAL IMPACT  
STATEMENT"

Thank you for your continued interest in the Tank Closure and Waste Management  
Environmental Impact Statement (TC&WM EIS).

The U.S. Department of Energy (DOE) Office of River Protection (ORP) is aware of the Board's  
concerns about not identifying a preferred alternative for supplemental waste treatment in the  
TC&WM EIS. It is important that the HAB understand the Department remains committed to  
the continued exploration of alternatives for vitrification of low-activity waste (LAW). As  
technology improves, it is important to maintain an open and flexible attitude to finding new and  
effective ways of treating Hanford's LAW.

The advice mentioned a 90-day review of the final TC&WM EIS and a public meeting. The  
Council on Environmental Quality's (CEQ) National Environmental Policy Act Implementing  
Regulation 40 CFR 1506.10 (b)(2) requires a 30-day waiting period between issuance of the  
Notice of Availability on a final EIS and a Record of Decision (ROD), with some exceptions.  
DOE does not anticipate a ROD on the TC&WM EIS prior to the 30-day waiting period.

As we have mentioned previously we will provide the Board briefings on the final EIS.

If you have any questions, please contact me, or Tifany Nguyen, at (509) 376-3361.

Sincerely,

Scott L. Samuelson, Manager  
Office of River Protection

HAB:TLN

Enclosure

cc w/encl: See page 2

**U.S. DEPARTMENT OF ENERGY TO HANFORD ADVISORY BOARD – July 26, 2012**  
**(continued)**

Ms. S. L. Leckband  
12-HAB-0027

-2-

cc w/encl:

C. Brennan, EM-42  
D. C. Bryson, RL/ORP DDFO  
D. A. Faulk, EPA  
T. W. Fletcher, ORP  
M. A. Gilbertson, EM-10  
T. Gilley, Enviroissues  
S. Hayman, Enviroissues  
J. A. Hedges, Ecology  
W. M. Levitan, EM-10  
W. M. Linzau, DNFSB  
S. S. Patel, EM-51  
G. S. Podonsky, HS-1  
R. G. Quirk, DNFSB  
T. L. Sturdevant, Ecology  
S. G. Van Camp, EM-51  
M. Zhu, EM-51  
Administrative Record  
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M. Cantwell  
P. Murray

**Enclosure to U.S. Department of Energy to Hanford Advisory Board, July 26, 2012 –  
June 8, 2012, Letter**

# **HANFORD ADVISORY BOARD**

*A Site Specific Advisory Board, Chartered under the Federal Advisory Committee Act*

**Advising:**  
US Dept of Energy  
US Environmental Protection Agency  
Washington State Dept of Ecology

June 8, 2012

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Susan Leckband

**VICE CHAIR:**  
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Harold Heacock

**Labor/Work Force**  
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Rebecca Holland

**Local Environment**  
Gene Van Liew

**Local Government**  
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Doug Mercer  
Richard Stout

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Washington State Department of Health

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Dennis Faulk, Manager  
U.S. Environmental Protection Agency, Region 10  
309 Bradley Blvd, Suite 115  
Richland WA 99352

Jane Hedges, Program Manager  
Washington State Department of Ecology  
3100 Port of Benton Blvd.  
Richland, WA 99354

Re: Final Tank Closure and Waste Management Environmental Impact Statement

Dear Messrs. Huizenga, Samuelson, McCormick and Faulk and Ms. Hedges,

**Background:**

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**RECEIVED**  
JUN 13 2012  
**DOE-RLCC**

HAB Consensus Advice # 256  
Subject: TCWM EIS  
Adopted: June 8, 2012  
Page 1

**Enclosure to U.S. Department of Energy to Hanford Advisory Board, July 26, 2012 – June 8, 2012, Letter (continued)**

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U.S. Department of Energy External Technical Report (ETR-18); November 2008

**Enclosure to U.S. Department of Energy to Hanford Advisory Board, July 26, 2012 –  
June 8, 2012, Letter (continued)**

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Sincerely,



Susan Leckband, Chair  
Hanford Advisory Board

---

*This advice represents Board consensus for this specific topic. It should not be taken out of context to extrapolate Board agreement on other subject matters.*

cc: Dana Bryson, Deputy Designated Official, U.S. Department of Energy, Richland Operations Office  
Catherine Brennan, U.S. Department of Energy, Headquarters  
The Oregon and Washington Delegations

**WASHINGTON STATE DEPARTMENT OF ECOLOGY TO HANFORD ADVISORY BOARD –  
August 3, 2012**



**STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY**

*3100 Port of Benton Blvd • Richland, WA 99354 • (509) 372-7950*

August 3, 2012

12-NWP-131

Ms. Susan Leckband, Chair  
Hanford Advisory Board  
1933 Jadwin, Suite 4  
Richland, Washington 99352

Re: Hanford Advisory Board Advice #256 – Final Tank Closure and Waste Management Environmental Impact Statement

Reference: Letter 12-NWP-113, dated July 18, 2012, from Jane Hedges, Ecology, to Tracy Mustin, USDOE, “Tank Closure and Waste Management Environmental Impact Statement”

Dear Ms. Leckband:

Thank you for the Hanford Advisory Board (Board) advice on the Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS). The Department of Ecology (Ecology) considered your comments, and our views are similar to the Board’s on this subject. Because of this, we will limit our response to your advice directed toward Ecology.

Ecology is pleased that the Board supports our position urging the United States Department of Energy (USDOE) to select and build a second low-activity waste (LAW) vitrification facility. Hanford has a long history of working toward vitrification for all LAW. This effort includes broad stakeholder support during the 1993 Hanford Tank Waste Task Force evaluations and a commitment from USDOE in the 1997 Tank Waste Remediation System EIS. In addition, we believe the data in the TC&WM EIS indicates that the only viable option for supplemental treatment is another LAW vitrification facility. Ecology has shared our concerns about the preferred alternative for supplemental treatment in the TC&WM EIS with USDOE (reference).

The Board also advised USDOE to look at other forms of glass as possible alternatives to borosilicate in the Waste Treatment Plant system. While alternative glass forms may hold some promise in the future, Ecology believes borosilicate glass is the most proven and protective form for the vitrified waste. We will encourage USDOE to design facilities that support this proven technology. It is essential that waste be removed from the aging single-shell tanks as soon as possible and placed in the most protective waste form.

**RECEIVED**

**AUG 07 2012**

**DOE-RLCC**



**WASHINGTON STATE DEPARTMENT OF ECOLOGY TO HANFORD ADVISORY BOARD –  
August 3, 2012 (continued)**

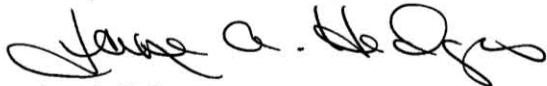
Ms. Susan Leckband  
August 3, 2012  
Page 2

12-NWP-131

We appreciate the Board's attention and guidance to help ensure that treatment and disposal of the large volume of LAW destined for a Hanford landfill is protective of people and the environment for thousands of years into the future. Along with the Board, we urge USDOE to fulfill their obligation.

If you have questions or wish to have further discussion on this topic, please contact me at 509-372-7905 or Suzanne Dahl, Tank Waste Treatment Section Manager, at 509-539-3489.

Sincerely,



Jane A. Hedges  
Program Manager  
Nuclear Waste Program

cc electronic:

Helen Brownell, EPA  
Dennis Faulk, EPA  
Catherine Brennan, USDOE-HQ  
Ken Niles, ODOE  
Suzanne Dahl, Ecology

cc: Scott Samuelson, USDOE-ORP  
Dana Bryson, USDOE-RL  
Matt McCormick, USDOE-RL  
Stuart Harris, CTUIR  
Gabriel Bohnee, NPT  
Russell Jim, YN  
Susan Leckband, HAB  
Administrative Record: TC&WM EIS  
Environmental Portal  
USDOE-ORP Correspondence Control  
USDOE-RL Correspondence Control

## C.4.2 Oregon Hanford Cleanup Board Membership and Role

The Oregon legislature established the Oregon Hanford Waste Board in 1987. The name was changed by the 2003 legislature to the Oregon Hanford Cleanup Board. The board serves as the forum for policy discussions within the state government concerning cleanup and disposal of high-level radioactive waste in the Northwest region. The board makes policy recommendations to the governor and the legislature. After consultation with the governor, the board may also make policy recommendations on other issues related to Hanford, including, but not limited to, defense waste, chemical waste treatment and disposal, and plutonium production.

The Oregon Hanford Cleanup Board shall consist of voting and advisory/nonvoting members as follows:

### Voting members

- Oregon Department of Energy administrator or designee
- Oregon Water Resources Department director or designee
- A representative of the governor
- A representative of the Confederated Tribes of the Umatilla Indian Reservation
- Ten members of the public appointed by the governor, one of whom shall be a representative of a local emergency response organization in eastern Oregon

### Advisory/nonvoting members

- Three members of the Oregon Senate, appointed by the President of the Senate
- Three members of the Oregon House of Representatives, appointed by the Speaker of the House

Table C-5 provides a chronology of DOE's interactions with the Oregon Hanford Cleanup Board during development of the "Tank Closure EIS" and the *Draft* and *Final TC & WM EIS*.

**Table C-5. Oregon Hanford Cleanup Board Outreach**

Date	Subject Matter/Purpose of Interaction	Location
January 23, 2003	DOE met with Board to discuss alternatives and "Tank Closure EIS" schedule.	Salem, Oregon
May 20, 2003	DOE met with Board.	Cascade Locks, Oregon
June 16, 2003	Board sent letter to DOE regarding the analysis of Tc-99 removal in the "Tank Closure EIS."	N/A
October 1, 2003	DOE met with Board to discuss status and update of "Tank Closure EIS."	Astoria, Oregon
November 15, 2005*	DOE and Ecology met with Board to discuss the <i>Draft TC &amp; WM EIS</i> alternatives and focus on closure.	Dalles, Oregon
February 18–19, 2010*	DOE and Ecology met with Board to discuss the <i>Draft TC &amp; EM EIS</i> and support comment development.	Astoria, Oregon
June 21–22, 2010	DOE met with Board to discuss status and update of the <i>Draft TC &amp; WM EIS</i> and Board concerns.	Boardman, Oregon

\* Indicates events where DOE and Ecology participated.

**Key:** Board=Oregon Hanford Cleanup Board; DOE=U.S. Department of Energy; Ecology=Washington State Department of Ecology; N/A=not applicable; "Tank Closure EIS"="Environmental Impact Statement for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks at the Hanford Site, Richland, Washington"; Tc-99=technetium-99; TC & WM EIS=*Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington*.

**OREGON HANFORD CLEANUP BOARD TO U.S. DEPARTMENT OF ENERGY –  
June 16, 2003**

**OREGON HANFORD CLEANUP BOARD**

June 16, 2003

*Shelley Cimon, Chair*

*Casey Beard, Vice Chair*

Mary Beth Burandt

*Larry Clucas*

Department of Energy

Office of River Protection

*Norm Dyer*

P.O. Box 550 MS H6-60

*Norma Jean Germond*

Richland, WA 99352

*Barbara Jarvis*

Re: Analysis of Tc-99 Pretreatment in the Tanks Retrieval  
and Closure Environmental Impact Statement

*Paige Knight*

Dear Ms. Burandt:

*Eric Nisley*

The Oregon Hanford Cleanup Board (Board) is a group of Oregon citizens and legislators appointed by the Governor to advise him on Hanford cleanup issues. At the Board's May meeting in Cascade Locks, the Office of River Protection's (ORP) decision to eliminate Tc-99 removal from the low activity tank waste was discussed.

*Marc Rogelstad*

The Board is concerned that because of Tc-99's very long half-life and high mobility in the vadose zone and groundwater that this decision could have a significant detrimental impact on the environment at Hanford and ultimately the Columbia River. Accordingly, the Board advises ORP that the environmental impacts of this decision need to be thoroughly analyzed and recommends this analysis be done in the tanks retrieval and closure environmental impact statement currently being prepared.

*Paul R. Cleary*

*Water Resources  
Department*

*Armand Minthorn*

*Confederated Tribes of  
the Umatilla Indian  
Reservation*

*Michael Graineay*

*Oregon Office of Energy*

*Sen. Ted Ferrioli*

*Sen. David Nelson*

*Rep. Linda Flores*

Sincerely,

*Rep. Bob Jenson*

*Rep. Steve March*



Shelley Cimon, Chair

cc: Oregon Governor Ted Kulongoski  
Mike Wilson, Washington Department of Ecology  
Nick Ceto, U.S. Environmental Protection Agency  
Russell Jim, Yakama Nation  
Patrick Sobotta, Nez Perce Tribe  
Todd Martin, Chair, Hanford Advisory Board

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phone 503.378.4040 800.221.8035 in Oregon fax 503.373.7806

625 Marion Street, N.E., Suite 1, Salem, Oregon 97301-3742  
[www.energy.state.or.us/nucsafe/hwboard.htm](http://www.energy.state.or.us/nucsafe/hwboard.htm)