UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
612 EAST LAMAR BLVD, SUITE 400
ARLINGTON, TEXAS 76011-4125

September 15, 2009

J. V. Parrish
Chief Executive Officer
Energy Northwest
P.O. Box 968 (Mail Drop 1023)
Richland, WA 99352-0968

SUBJECT: Columbia Generating Station - NRC RADIATION SAFETY TEAM INSPECTION REPORT 05000397/2009009

Dear Mr. Parrish:

On July 23, 2009, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Columbia Generating Station facility. The enclosed Radiation Safety Team Inspection Report documents the inspection findings which were discussed with Mr. Gambhir, Vice President, Technical Services, and other members of your staff. A subsequent telephone exit was conducted on September 1, 2009, with Mr. Christianson, Licensing Engineer, to recharacterize one issue related to effluent radiation monitors based on additional information we received after the onsite inspection period.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license.

The team reviewed selected procedures and records, observed activities, and interviewed personnel. Specifically, the team evaluated the inspection areas within the Radiation Protection Strategic Performance Area that are scheduled for review every two years. These areas are:

- Radiation Monitoring Instrumentation
- Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems
- Radioactive Material Processing and Transportation
- Radiological Environmental Monitoring Program and Radioactive Material Control Program

This report documents one NRC-identified finding of very low safety significance (Green). This finding was determined to involve a violation of NRC requirements. However, because of the very low safety significance and because it is entered into your corrective action program, the NRC is treating this finding as a non-cited violation, consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest the violation or the significance of the non-cited violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001, with copies to the Regional Administrator, U.S. Nuclear

Regulatory Commission, Region IV, 612 E. Lamar Blvd, Suite 400, Arlington, Texas, 76011-4125; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at the Columbia Generating Station. In addition, if you disagree with the characterization of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region IV, and the NRC Resident Inspector at Columbia Generating Station. The information you provide will be considered in accordance with Inspection Manual Chapter 0305.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Gregory E. Werner, Chief
Plant Support Branch 2
Division of Reactor Safety

Dockets: 50-397
Licenses: NPF-21

Enclosure:
NRC Inspection Report 05000397/2009009
w/Attachment: Supplemental Information

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SUNSI Rev Compl.	✓ Yes ☐ No	ADAMS	✓Yes ☐ No	Reviewer Initials	dcg
Publicly Avail	✓ Yes ☐ No	Sensitive	☐ Yes ✓No	Sens. Type Initials	dcg

RIV:DRS/PSB2	PSB2	PSB2	RII	PSB2
DCGraves	LTRicketson	DLStearns	WTLoo	GEWerner
/RA/	**/RA/**	**/RA/**	**/RA/**	**/RA/**
09/11/2009	09/11/2009	09/10/2009	09/10/2009	09/4/2009
C:DRP/A	C:PSB2			
WCWalker	GEWerner			
/RA/	**/RA/**			
09/14/2009	09/15/2009			

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U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket:	50-397
License:	NPF-21
Report:	05000397/2009009
Licensee:	Energy Northwest
Facility:	Columbia Generating Station
Location:	Richland, Washington
Dates:	July 20 through September 1, 2009
Inspectors	C. Graves, Health Physicist Team Leader L. Ricketson, Senior Health Physicist D. Stearns, Health Physicist W. Loo, Senior Health Physicist, Region II
Accompanied by:	M. Vasquez, Health Physicist
Approved by:	Gregory E. Werner, Chief Plant Support Branch 2 Division of Reactor Safety

SUMMARY OF FINDINGS

IR Number – 05000397/2009009; Columbia Generating Station; Radiation Safety Team Inspection; Radiation Monitoring Instrumentation and Protective Equipment

The report covered a four-day period of inspection on site by a team of five region-based health physics inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Emergency Preparedness

Green. The inspectors identified a non-cited violation of 10 CFR 50.47(b)(10) for the failure to provide adequate respiratory protection equipment for emergency response, compromising the protective actions developed for the plume exposure pathway for emergency workers. Adequate quantities of small sized self-contained breathing apparatus respirator masks were not available in the control room for licensed plant operators that were fit-tested for small sizes. This issue was entered into the licensee's corrective action program as Action Request 00201679.

This finding is greater than minor because it is associated with the Emergency Preparedness Cornerstone attribute of response organization performance and adversely affects the cornerstone objective of ensuring the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. The finding was evaluated using Inspection Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," Sheet 1, "Failure to Comply." The issue described was a planning standard problem, was not a risk-significant planning standard problem, and did not involve a planning standard function failure. Therefore, the finding is of very low safety significance. This finding has a crosscutting aspect in the area of human performance, associated with resources because the licensee did not have enough small sized self-contained breathing apparatus respirator masks available in the control room for licensed plant operators that were fit-tested for small sizes [H.2(d)](Section 2OS3).

B. Licensee-Identified Violations

None

Report Details

2. RADIATION SAFETY

Cornerstones: Occupational Radiation Safety and Public Radiation Safety

2OS3 Radiation Monitoring Instrumentation and Protective Equipment (71121.03)

a. Inspection Scope

This area was inspected to determine the accuracy and operability of radiation monitoring instruments that are used for the protection of occupational workers and the adequacy of the program to provide self-contained breathing apparatus to workers. The team used the requirements in 10 CFR Part 20 and the licensee's procedures required by technical specifications as criteria for determining compliance. The team interviewed licensee personnel and reviewed:

- Calibration of area radiation monitors associated with transient high and very high radiation areas and post-accident monitors used for remote emergency assessment
- Calibration of portable radiation detection instrumentation, electronic alarming dosimetry, and continuous air monitors used for job coverage
- Calibration of whole body count equipment and radiation detection instruments utilized for personnel and material release from the radiologically controlled area
- Audits and self-assessments; licensee event reports or special reports, if any were required since the previous inspection
- Corrective action program reports since the last inspection
- Licensee action in cases of repetitive deficiencies or significant individual deficiencies
- Calibration expiration and source response check currency on radiation detection instruments staged for use
- The licensee's capability for refilling and transporting self-contained breathing apparatus air bottles to and from the control room and operations support center during emergency conditions, status of self-contained breathing apparatus staged and ready for use in the plant and associated surveillance records, and personnel qualification and training
- Qualification documentation for onsite personnel designated to perform maintenance on the vendor-designated vital components, and the vital component maintenance records for self-contained breathing apparatus units

Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of nine of the required nine samples as defined in Inspection Procedure 71121.03-05.

b. Findings

Introduction. The inspectors identified a Green non-cited violation of 10 CFR 50.47(b)(10) for the failure to provide adequate respiratory protection equipment for emergency response, compromising the protective actions developed for the plume exposure pathway for emergency workers. An adequate quantity of small sized self-contained breathing apparatus respirator masks were not available in the control room for licensed plant operators that were fit-tested for small sizes.

Description. The inspectors evaluated the adequacy of self-contained breathing apparatus units staged in the control room for emergency use. Through direct observations at the control room, the inspectors determined the licensee staged six self-contained breathing apparatus units for emergency use. The units contained medium respirator masks and on top of the units were staged one small, one large and one extra large respirator masks. Based on those direct observations, discussions with licensee representatives, and records reviewed, the inspectors determined that three of the licensed control room operators on day shift on July 22, 2009, were fit-tested for small respirator masks. In the event of an emergency requiring immediate respiratory protection, two of the three licensed operators who were fit-tested in small respirator masks would not have been qualified to use the pre-staged self-contained breathing apparatus equipment and may have been unable to function in the event the control room became uninhabitable.

Analysis. This finding is greater than minor because it is associated with the Emergency Preparedness Cornerstone attribute of response organization performance and adversely affects the cornerstone objective of ensuring the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. The finding was evaluated using Inspection Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," Sheet 1, "Failure to Comply." The issue described was a planning standard problem, was not a risk-significant planning standard problem, and did not involve a planning standard function failure. Therefore, the finding is of very low safety significance (Green). This finding has a crosscutting aspect in the area of human performance, associated with resources because the licensee did not have enough small sized self-contained breathing apparatus respirator masks available in the control room for licensed plant operators that were fit-tested for small sizes. [H.2(d)].

Enforcement. Title 10 CFR 50.47(b)(10) states, in part, that a range of protective actions will be developed for the plume exposure pathway Emergency Planning Zone for emergency workers. Procedure GEN-RPP-05, “Respiratory Protection Program Description,” Revision 8, Section 2.11.5, implements this requirement and states, in part, that the supervisors responsibilities include ensuring the availability of appropriate respirators and accessories. Contrary to the above, on July 22, 2009, the licensee did

not ensure the availability of appropriate respiratory protective equipment, that is, self-contained breathing apparatus respirator masks, for licensed plant operators with emergency response functions fit-tested for small sized masks. Because this violation is of very low safety significance and has been entered into the licensee's corrective action program as Action Request 00201679, this violation is being treated as a non-cited violation (NCV), consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000397/2009009-01, "Failure to Provide Adequate Respiratory Protection Equipment for Emergency Response."

2PS1 Radioactive Gaseous And Liquid Effluent Treatment And Monitoring Systems (71122.01)

a. Inspection Scope

This area was inspected to: (1) ensure that the gaseous and liquid effluent processing systems are maintained so that radiological discharges are properly mitigated, monitored, and evaluated with respect to public exposure; (2) ensure that abnormal radioactive gaseous or liquid discharges and conditions, when effluent radiation monitors are out-of-service, are controlled in accordance with the applicable regulatory requirements and licensee procedures; (3) verify that the licensee's quality control program ensures that the radioactive effluent sampling and analysis requirements are satisfied so that discharges of radioactive materials are adequately quantified and evaluated; and (4) verify the adequacy of public dose projections resulting from radioactive effluent discharges. The team used the requirements in 10 CFR Part 20; 10 CFR Part 50, Appendices A and I; 40 CFR Part 190; the Offsite Dose Calculation Manual, and licensee procedures required by the technical specifications as criteria for determining compliance.

The team conducted in-office inspection and reviewed:

- Appropriate program documents, procedures and evaluations related to the radiological effluent controls program listed in the attachment to this report
- The implementation of the Radiological Effluent Controls Program requirements as described in Radiological Effluent Technical Specifications
- Changes, if any, to the liquid or gaseous radioactive waste system design, procedures, or operation as described in the Updated Final Safety Analysis Report
- Changes, if any, to the Offsite Dose Calculation Manual made by the licensee since the last inspection
- The annual effluent release reports since the previous inspection
- The correlation between the effluent doses and the environmental monitoring results

The team conducted an onsite inspection which included interviewing cognizant licensee personnel, performing walkdowns of facilities and equipment, and observing licensee activities to review:

- The gaseous and liquid discharge system configuration
- Selected point of discharge effluent radiation monitoring systems and flow measurement devices
- The observation of selected portions of the routine processing and discharge of radioactive gaseous and liquid effluent (sample collection and analysis) including a selection of radioactive gaseous and liquid waste effluent discharge permits
- Effluent discharges made with inoperable (declared out-of-service) effluent radiation monitors including the projected doses to members of the public
- Surveillance test results on nonsafety related ventilation and gaseous discharge systems (HEPA and charcoal filtration) including the methodology to determine the stack and vent flow rates
- The identification of nonradioactive systems that have become contaminated, if applicable
- Effluent monitoring instrument (installed and counting room) maintenance, quality control, and calibration
- The methods used to determine the isotopes in the plant source term
- A selection of monthly, quarterly, and annual dose calculations
- Records of abnormal gaseous or liquid discharges, if any, including the evaluation and analysis of events involving spills or discharges, dose assessments to members of the public, required (or voluntary) offsite notifications, and assessments and reporting of abnormal discharges in the Annual Radiological Effluent Release Report
- Effluent sampling records

The team reviewed the licensee's program of problem identification and resolution, including:

- Placement of problems identified through audits, self-assessments, and monitoring results into the corrective action program and adequacy of immediate and long term corrective actions
- Problem identification and resolution follow-up activities

- Identification of repetitive deficiencies or significant individual deficiencies in problem identification and resolution identified by the licensee's self-assessment activities

Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of three of the required three samples, as defined in Inspection Procedure 71122.01-05.

b. Findings

No findings of significance were identified.

2PS2 Radioactive Material Processing and Transportation (71122.02)

a. Inspection Scope

This area was inspected to verify that the licensee's radioactive material processing and transportation program complies with the requirements of 10 CFR Parts 20, 61, and 71 and Department of Transportation regulations contained in 49 CFR Parts 171-180. The team interviewed licensee personnel and reviewed:

- The radioactive waste system description, recent radiological effluent release reports, and the scope of the licensee's audit program

- Liquid and solid radioactive waste processing systems configurations, the status and control of any radioactive waste process equipment that is not operational or is abandoned in place, changes made to the radioactive waste processing systems since the last inspection, and current processes for transferring radioactive waste resin and sludge discharges

- Radio-chemical sample analysis results for radioactive waste streams and use of scaling factors and calculations to account for difficult-to-measure radionuclide

- Shipment packaging, surveying, labeling, marking, placarding, vehicle checking, driver instructing, and disposal manifesting

- Shipping records for non-excepted package shipments

- Licensee event reports, special reports, audits, state agency reports, self-assessments and corrective action reports performed since the last inspection, if any

Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of six of the required six samples, as defined in Inspection Procedure 71122.02-04.

b. Findings

No findings of significance were identified.

2PS3 Radiological Environmental Monitoring Program And Radioactive Material Control Program (71122.03)

a. Inspection Scope

This area was inspected to ensure that the radiological environmental monitoring program verifies the impact of radioactive effluent releases to the environment and sufficiently validates the integrity of the radioactive gaseous and liquid effluent release program; and that the licensee's surveys and controls are adequate to prevent the inadvertent release of licensed materials into the public domain. The team used the requirements in 10 CFR Part 20, Appendix I of 10 CFR Part 50, the Offsite Dose Calculation Manual, and the licensee's procedures required by technical specifications as criteria for determining compliance. The team interviewed licensee personnel and reviewed:

- Annual environmental monitoring reports and licensee event reports
- Selected air sampling and thermoluminescence dosimeter monitoring stations
- Collection and preparation of environmental samples
- Operability, calibration, and maintenance of meteorological instruments
- Each event documented in the Annual Environmental Monitoring Report which involved a missed sample, inoperable sampler, lost thermoluminescence dosimeter, or anomalous measurement
- Significant changes made by the licensee to the Offsite Dose Calculation Manual as the result of changes to the land census or sampler station modifications since the last inspection
- Calibration and maintenance records for air samplers, composite water samplers, and environmental sample radiation measurement instrumentation, quality control program, inter-laboratory comparison program results, and vendor audits
- Locations where the licensee monitors potentially contaminated material leaving the radiological controlled area (or controlled access area) and the methods used for control, survey, and release from these areas
- Type of radiation monitoring instrumentation used to monitor items released, survey and release criteria of potentially contaminated material, radiation detection sensitivities, procedural guidance, and material release records

- Audits, self-assessments, corrective action documents and licensee event reports or special reports, if any were required, since the previous inspection

Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of ten of the required ten samples, as defined in Inspection Procedure 71122.03-04.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA2 Problem Identification and Resolution

Annual Sample Review

a. Inspection Scope

The team evaluated the effectiveness of the licensee's problem identification and resolution process with respect to the following inspection areas:

- Radiation Monitoring Instrumentation (Section 2OS3)
- Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems (Section 2PS1)
- Radioactive Material Processing and Transportation (Section 2PS2)
- Radiological Environmental Monitoring Program and Radioactive Material Control Program (Section 2PS3)

b. Findings and Observations

No findings of significance were identified.

4OA5 Other Activities

1. (Closed) Temporary Instruction 2515/173, "Review of the Implementation of the Industry Groundwater Protection Voluntary Initiative"

a. Inspection Scope

An NRC assessment was performed of the licensee's groundwater protection program to determine whether the licensee implemented the voluntary Industry Groundwater Protection Initiative, dated August 2007 (Nuclear Energy Institute 07-07, ADAMS Accession Number ML072610036). Inspectors interviewed personnel, performed walkdowns of selected areas, and reviewed the following items:

- Records of the site characterization of geology and hydrology
- Evaluations of systems, structures, and or components that contain or could contain licensed material and evaluations of work practices that involved licensed material for which there is a credible mechanism for the licensed material to reach the groundwater
- Implementation of an onsite groundwater monitoring program to monitor for potential licensed radioactive leakage into groundwater
- Procedures for the decision making process for potential remediation of leaks and spills, including consideration of the long term decommissioning impacts
- Records of leaks and spills recorded, if any, in the licensee's decommissioning files in accordance with 10 CFR 50.75(g)
- Licensee briefings of local and state officials on the licensee's groundwater protection initiative
- Protocols for notification to the local and state officials, and to the NRC regarding detection of leaks and spills
- Protocols and/or procedures for thirty-day reports if an onsite groundwater sample exceeds the criteria in the radiological environmental monitoring program
- Groundwater monitoring results as reported in the annual effluent and/or environmental monitoring report
- Licensee and industry assessments of implementation of the groundwater protection initiative

b. Findings

No findings of significance were identified. Implementation of the Industry Groundwater Protection Initiative is voluntary. Under the final Initiative, each site was to have developed an effective, technically sound groundwater protection program by August 2008. The licensee completed its Industry Groundwater Protection Initiative self-assessment in December 2008. The team found the licensee had not taken action on all items identified in the self-assessment, particularly, scheduling a periodic review of all systems, structures, and components that contain licensed radioactive material to

determine potential leak or spill mechanisms. The licensee entered these issues into its corrective action program. The licensee is scheduled to complete the Nuclear Energy Institute assessment by December 2009.

4OA6 Management Meetings

Exit Meeting Summary

On July 23, 2009, the team presented the inspection results to Mr. Gambhir, Vice President, Technical Services, and other members of his staff who acknowledged the findings. On September 1, 2009, a re-exit meeting was performed by telephone with Mr. Christianson, Licensing Engineer, due to additional information received after the onsite inspection period. The team confirmed that proprietary information was not provided or examined during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION
KEY POINTS OF CONTACT

Licensee Personnel
K. Christianson, Licensing Engineer
M. Davis, Manager, Radiation Services
C. Madden, Technician, Chemistry
R. Shepherd, Supervisor, Radiation Operations
M. Shymanski, Supervisor, Radiation Support

NRC
M. Hayes, Resident Inspector

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000397/2009009-01 NCV	Failure to Provide Adequate Respiratory Protection Equipment for Emergency Response

Closed

NONE

LIST OF DOCUMENTS REVIEWED

Section 2OS3: Radiation Monitoring Instrumentation and Protective Equipment

PROCEDURES

NUMBER	TITLE	REVISION
HPI-12.72	Calibration of the IPM8-M/IPM9 Installed Personnel Monitor	5
HPI-12.98	Calibration of the Canberra Argos-5 A/B Whole Body Contamination Monitor	1
HPI-12.92	Calibration of the Canberra GEM-5 Gamma Sensitive Portal Monitor	2
HPI-12.85	Calibration of the Nuclear Enterprise BM-285 Bag Monitor	1
10.2.62	Breathing Air Compressor Operation	10
11.2.11.3	Issuance of Respiratory Protection Equipment	16

PROCEDURES

NUMBER	TITLE	REVISION
13.14.4	Emergency Equipment Maintenance and Testing	44
GEN-RPP-05	Respiratory Protection Program Description	8
GEN-RPP-10	Use of Respiratory Protection Equipment	8
HPI-15.1	Inspection and Storage of Respirators and Attachments	7
10.27.105	CC/RC – Control Room Radiation Monitor WOA-RIS-31B	0
11.2.10.19	High Range Area Radiation Monitor Calibration Checks	0
16.1.2	Stack Monitor Low Range Detector – RC	9
16.3.1	WEA Low Range Noble Gas Monitor – CC/RC	7
CSP-PRMPE-X301	Rx Bldg Effluent Monitor Intermediate Range – RC	5
CSP-PRMPE-X302	Rx Bldg Effluent Monitor High Range – RC	7
HPI-0.16	Radiation Protection Instrumentation Use and Calibration Guidelines	3
HPI-7.5	Eberline Model RO-2 and RO-2A Calibration	9
HPI-12.23	Out of Tolerance Reporting	6
HPI-12.63	Calibration of the NE SAM-9/11 Small Article Monitor	7
HPI-12.72	Calibration of the IPM8-M/IPM9 Installed Personnel Monitor	5
HPI-12.81	Operation and Calibration of the Shepherd Model Mini-89 Irradiator	
ISP-WEA /PRM-X301	CC/RC – WEA Intermed Range Noble Gas Monitor	0

AUDITS, SELF-ASSESSMENTS, AND SURVEILLANCES

NUMBER	TITLE	DATE
Self Assessment Report No. 200802	Radiological Air Sampling and Respiratory Protection Equipment Issuance	September 4, 2008

AUDITS, SELF-ASSESSMENTS, AND SURVEILLANCES

NUMBER	TITLE	DATE
Self Assessment Report No. 63727	Internal Dose Control	September 19, 2009
AU-CL-09	Calibration Laboratory Program Audit	January 2009
	Radiation Protection Program Annual Review	2007

ACTION REQUEST

54547	54591	55067	55296	56449
56872	194363	194654	194683	194701
201679				

CALIBRATION RECORDS

NUMBER	TITLE	DATE
F093	Ludlum Model 177	August 11, 2008
F189	Ludlum Model 2	April 7, 2009
RO220	Ludlum Model 14C	September 4, 2008
RO142	Eberline RO2	September 3, 2008
RO200	Eberline RO2	January 15, 2009
T009	Eberline Teletector	February 21, 2009

MISCELLANEOUS

TITLE	DATE
Air Compressor Maintenance Certification and Training Records for Selected Maintenance Workers	August 20, 2002 November 16, 2004 January 3, 2005 January 26, 2005 August 3, 2007
Air-Pak 2.2/3.0/4.5/Fifty/75 self-contained breathing apparatus Maintenance and Overhaul Certificates for Selected Instrument and Control Workers	July 16, 2008 June 25, 2009
Scott Functional Testing Worksheets for Scott Air-Pak E-Z Flo Regulators (2216 & 4500 psi), S/Ns 0405000636HB, NE0312011EZVQ4 and NJ0223011EZVQ4	August 10, 2004 through June 1, 2009
Selected Respiratory Protection Qualifications Records for Control Room	2008 through 2009

Operators

WORK ORDER PACKAGES

NUMBER	TITLE	DATE
01162871 01	Inventory Emergency Supplies in Control Room	April 8, 2009
01164679 01	Sample Plant Breathing Air	May 20, 2009
01166272 01	Perform Inventory of Fire Brigade Station	July 7, 2009

Section 2PS1: Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems

PROCEDURES

NUMBER	TITLE	REVISION
1.11.7	ODCM Implementation	10
12.5.8	Gaseous Effluent Discharge Sampling	21
12.11.1a	Gaseous Effluent Calculations	8
12.11.3	Lower Limit of Detection and Data Reporting	6
16.11.1	Monthly Grab Gas Samples	10
16.11.3	Primary Containment Purge Sampling and Analysis	13
16.11.6	Weekly Iodine, Particulate, and Tritium Analysis Results	9
16.12.2	Monthly Gaseous Release Dose Assessment	10
16.12.3	Noble Gas, Particulate, and Iodine Sample Collection and Analysis	3
16.12.4	Total Cumulative Dose Contributions to the Public from Liquid and Gaseous Effluent and Direct Radiation	3
16.14.1	Gaseous Monitor Setpoint Determination	2
16.14.2	Liquid Monitor Setpoint Calculations	6

AUDITS, SELF-ASSESSMENTS, AND SURVEILLANCES

NUMBER	TITLE	DATE
SA-2007-0034	Assessment of the Radioactive Effluent calculation Software QA	May 17, 2007
200843	Effluents	October 30, 2008
AU-CH-08	Offsite Dose Calculation Manual, Radiological Environmental Monitoring Program (REMP), Effluent and Environmental Monitoring Program Audit	October 2, 2008

ACTION REQUEST

57400	57488	57643	176804	179154
180720	182829	185445	186663	187225
188651	193057	196140	199448	200135
201680				

EFFLUENT MONITOR CALIBRATION RECORDS

NUMBER	TITLE	DATE
01157587 01	Liquid Radwaste Effluent Radiation Monitor	April 6, 2009
01131205 02	REA Low Range Noble Gas Monitor – RC	August 27, 2007
01159093 01	REA Low Range Effluent Monitor – CC	January 12, 2009
01159093 02	REA Low Range Noble Gas Monitor – RC	January 14, 2009
01159110 01	Rx Bldg Low Range Effluent Monitor – CC	January 12, 2009
01159087 01	CC/RC – WEA Low Range Noble Gas Monitor	January 16, 2009
01157829 01	WEA Building Exhaust Flow Rate – CC	April 2, 2009
01162778 01	TEA Sample Flow Rate – CC	March 25, 2009
01158876 01	TEA Low Range Noble Gas Monitor	January 14, 2009

SETPOINT CALCULATIONS

TITLE	DATE
PRM-RE-1A/PRM-RR3 (Reactor Building)	May 19, 2005
TEA-RIS-13 (Turbine Building)	May 19, 2005
WEA-RIS-14 (Radwaste Building)	May 19, 2005

Section 2PS2: Radioactive Material Processing and Transportation

PROCEDURES

NUMBER	TITLE	REVISION
1.11.23	Radioactive Material Container Control	4
11.2.23.1	Shipping Radioactive Materials and Waste	7
11.2.23.2	Computerized Radioactive Waste & Material Characterization	18
11.2.23.4	Preparing Radioactive Waste & Materials Packages	19
11.2.23.7	Shipping Empty Radioactive Materials Packages	11
11.2.23.14	Sampling of Radioactive Waste Streams	10
CI-9.5	Radioactive Waste Characterization Scaling Factors	0
DES-2-6	Deactivation of Plant Systems and Components	2
SOP-RW/CPR-OPS	Solid Waste Processing System Operations	1
SWP-RMP-01	Radioactive Waste Management Program	1

AUDITS, SELF-ASSESSMENTS, AND SURVEILLANCES

NUMBER	TITLE	DATE
Quality Services Audit Report AU-RP/RW-07	Radiation Protection/Process Control Program Audit	December 13, 2007
Self Assessment Report No. 80017	Self Assessment of Radioactive Material Transportation	April 25, 2008

ACTION REQUEST

179566 201447

RADIOACTIVE MATERIAL SHIPMENTS

NUMBER	TITLE	DATE
07-97	Equipment and Tools (SCO-II)	August 27, 2007
07-115	Beds Equipment (Plug) (SCO-I)	December 31, 2007
08-21	Resin in 14-190 Cask/HIC (Type LSA-II)	July 22, 2008
08-45	Empty 10-142B Shipping Cask (Type B)	December 5, 2008
09-30	Control Rod Drives (Type A)	May 23, 2009

MISCELLANEOUS

TITLE	DATE
Columbia Generating Station Scaling Factors	July 31, 2008

Section 2PS3: Radiological Environmental Monitoring Program and Radioactive Material Control Program

PROCEDURES

NUMBER	TITLE	REVISION
1.11.1	Radiological Environmental Monitoring Program (REMP) Implementation Procedure	12
1.11.15	Control of Radioactive Material	7
16.13.1	ODCM Implementing Procedures	2
SALI RC 02	Gross Alpha/Beta Analysis	2
SALI RC 03	Sample Preparation for Gamma Analysis	1
SOP 05.12	Use and Maintenance of the American Sigma Composite Water Samplers	3
SOP 05.15	Operation and Calibration of Gamma Assay Systems	2
SOP 08.06	REMP Sample Collection, Tracking and Shipping	3
SOP 11.08	Distribution and Collection of TLDs	5
SOP 12.06	Quality Assurance for the Radiological Laboratory	0
ICP-MET-S301	Wind Speed/Direction Channel Calibration 33’ and 245’	12
ICP-MET-S302	Meteorology Temperature Monitoring Instrumentation Channel Calibration	14

PROCEDURES

NUMBER	TITLE	REVISION
SWP-SNM-01	Special Nuclear Material Control	3

AUDITS, SELF-ASSESSMENTS, AND SURVEILLANCES

NUMBER	TITLE	DATE
Self Assessment	Contamination Control Corrective Action Effectiveness	May 5, 2008
Self-Assessment	Effluents	November 17, 2008

ACTION REQUEST

055121	056256	056338	056979	057676
057240	057451	057530	175831	187587
186883	186886	186900	186902	186903
187963	187979	188148	188502	188651
189493	192192	193273	194133	196028
197115	198121			

MISCELLANEOUS

NUMBER	TITLE	DATE
502.3.1.1	Results of 2008 Five-Mile Land Use Census	July 30, 2008
01162480-01	Work Order - Wind Speed/Direction Channel Cal	April 20, 2009
01146481-01	Work Order – Meteorology Temperature Monitor Cal	April 3, 2008
01162479-01	Work Order - Meteorology Temperature Monitor Cal	April 7, 2009
EN2-RXFE-08-13	Special Nuclear Materials (SNM) Inventory 2008	October 12, 2008
	Calibration of HPGe Detector Gamma-1	January 8, 2009
	Calibration of HPGe Detector Gamma-2	January 6, 2009

Section 4OA5 Temporary Instruction 2515/173

PROCEDURES

NUMBER	TITLE	REVISION
SWP-CHE-01	Groundwater Protection Program	1
SWP-ENG-04	Buried Piping Integrity Program	0
SOP 11.11	Columbia Generating Station Groundwater Monitoring Program	3

PROCEDURES

NUMBER	TITLE	REVISION
ABN-RAD-Spill	Radioactive Material Spill	3
1.10.1	Notifications and Reportable Events	30
1.3.76	Integrated Risk Management	16

MISCELLANEOUS DOCUMENTS

NUMBER	TITLE	DATE
Self-Assessment No. 187583	Groundwater Protection Program	December 12, 2008