UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

October 16, 2003

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

SUBJECT: COLUMBIA GENERATING STATION - NRC RADIATION SAFETY TEAM INSPECTION REPORT 05000397/2003-012

Dear Mr. Parrish:

On September 18, 2003, the NRC completed the onsite portion of the radiation safety team inspection at your Columbia Generating Station. The enclosed report documents the inspection findings which were discussed on September 18, 2003, with yourself and other members of your staff.

This 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 inspectable 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 inspection report documents one self-revealing finding of very low safety significance (Green). However, because of its very low safety significance and because the finding was entered into your corrective action program, the NRC is treating this finding as a non-cited violation (NCV) consistent with Section VI.A of the NRC Enforcement Policy. Additionally, two licensee-identified violations which were determined to be of very low safety significance are listed in Section 4OA7 in this report. If you contest the violations or significance of these NCVs, 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, DC 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Columbia Generating Station facility.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response 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//

Troy W. Pruett, Chief
Plant Support Branch
Division of Reactor Safety

Docket: 50-397
License: NPF-21

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NRC Inspection Report
50-397/03-012

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Columbia Site Secretary **(LEF1)**

ADAMS: ■ Yes ☐ No Initials: _____
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DOCUMENT: R_\COL\2003\CGS2003-012RP-TEAM-MPS.wpd

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket:	50-397
License:	NPF-21
Report No.:	50-397/03-012
Licensee:	Energy Northwest
Facility:	Columbia Generating Station
Location:	Richland, Washington
Dates:	September 15-18, 2003
Inspectors:	M. P. Shannon, Senior Health Physicist, Plant Support - Team Leader D. R. Carter, Health Physicist, Plant Support J. B. Nicholas, Senior Health Physicist, Plant Support L. T. Ricketson, Senior Health Physicist, Plant Support
Accompanying Inspector:	B. K. Tharakan, Health Physicist, Plant Support
Approved By:	T. W. Pruett, Chief, Plant Support Branch
ATTACHMENT:	Supplemental Information

SUMMARY OF FINDINGS

Columbia Generating Station
NRC Inspection Report 05000397/2003-012

IR 05000397/2003-012; 09/15 - 18/2003; Columbia Generating Station; Radioactive Material Processing and Transportation; Radioactive Material Control Program; Radiation Monitoring Instrumentation; Radiation Safety Team Inspection

The report covered a one week period of inspection on site by a team of four region-based health physics inspectors. Three findings of very low safety significance (Green) were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609, "Significance Determination Process," (SDP). Findings for which the SDP does not apply may be "Green" or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Public Radiation Safety

- Green. A self-revealing non-cited violation of 10 CFR 20.2006(b) was reviewed by the team because the licensee failed to provide the maximum dose rate on a uniform manifest and disposal container. On December 3, 2001, the licensee made a shipment of radioactive waste to a burial site that had radiation levels which were approximately 230 percent higher than those indicated on the disposal container and manifest.

  The finding was more than minor because it was associated with the Public Radiation Safety cornerstone attribute (Program and Process) and affected the associated cornerstone objective. The finding involved an occurrence in the licensee's radioactive material transportation program that is contrary to NRC regulations. When processed through the Public Radiation Safety Significance Determination Process the finding was determined to be of very low safety significance because radiation limits were not exceeded, there was no breach of package during transit, there was no certificate of compliance issue, the finding was a low level burial ground nonconformance; however, access to the burial ground was not denied, and the waste was not under classified (Section 2PS2).

B. Licensee Identified Violation

Two violations of very low safety significance (Green) which were identified by the licensee were reviewed by the team. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. These violations and corrective action tracking numbers are listed in Section 4OA7.

Report Details

2. RADIATION SAFETY

Cornerstones: Occupational [OS] and Public Radiation Safety [PS]

2OS3 Radiation Monitoring Instrumentation (71121.03)

a. Inspection Scope

This area was inspected to determine the accuracy and operability of radiation monitoring instruments used for the protection of occupational workers and the adequacy of the program to provide self-contained breathing apparatus (SCBA) to personnel entering unknown atmospheres. The team conducted an in-office review of the licensee's applicable audits, self-assessments, and corrective action documents related to the radiation monitoring instrumentation and SCBA programs. Onsite, the team interviewed cognizant licensee personnel and compared the following items with regulatory and procedural requirements and commitments in the Updated Safety Analysis Report:

- Calibration data, operability, and alarm setpoints of selected area radiation monitors (ARM-2, ARM-3, ARM-18, and ARM-25) and emergency assessment instrumentation (F132, R0155, R0141, and RS14)

- Calibration data and operability of portable radiation detection instrumentation used for job coverage of high radiation area and contaminated area work (F194, T018, R0196, R0219, L030, and F023), the two fastscan whole body counting systems, individual personnel contamination monitors (IPM-8 monitors 15122, 32776, and 32778), and small article contamination monitors (42990, 43000, and 42713)

- Calibration expiration and source response check currency on selected portable radiation detection instruments staged for use (Model 14C, Model 177, Model 19, RO-2, RO-20, RSO–5, AMS-3, NMC, ASP-1/NRD, and 6112B), including the observation of instrument source response checks (RO-2 and 6112B)

- Calibration data for the calibration sources located in the instrument calibration laboratory, including the Eberline 1000B Irradiator, Shepherd Series 28 Beam Irradiator, and Shepherd Model 149 Neutron Irradiator

- Observation of instrument calibration of a Model 14C Geiger Mueller survey meter (R0238), RO-2 ion chamber survey meter (R0198), and ASP-1/NRD neutron survey meter (N013)

- Area radiation monitor alarm setpoint values and calculation methodology (spent fuel pool area radiation monitor, ARM-RIS-2)

- The status of selected SCBA's staged and ready for use in the plant and associated surveillance and maintenance records

- The licensee's capability for refilling and transporting SCBA air bottles to and from the control room and operations support center during emergency conditions

- Training and qualifications of personnel who may use SCBA's during an emergency (control room operators and emergency response personnel), perform maintenance and repair of SCBA's, and refill air bottles

- Periodic air cylinder hydrostatic testing results

- Audits, surveillances, and self-assessments related to the radiation monitoring instrumentation and self-contained breathing apparatus programs performed since the last inspection

- Summary of corrective action documents written since the last inspection and selected documents related to radiation monitoring instruments, self-contained breathing apparatus equipment, and repetitive and significant individual deficiencies

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

This area was inspected to ensure that the gaseous and liquid effluent processing systems were maintained so that radiological releases were properly mitigated, monitored, and evaluated with respect to public exposure. The team conducted an in-office review of the licensee's annual reports, self-assessments, and corrective action documents. Onsite, the team examined procedures and representative records, walked down the major components of the gaseous and liquid release systems, and interviewed cognizant personnel. The following items were reviewed and compared with regulatory requirements and commitments in the Updated Safety Analysis Report:

- 2001 and 2002 Annual Radiological Effluent Release Reports

- Changes to the Offsite Dose Calculation Manual and to the radioactive waste system design and operation

- Sample collection and analysis of gaseous liquid effluents

- Projected dose calculations to members of the public associated with continuous gaseous effluent releases

- Monthly, quarterly, and annual dose calculation methodology

- Air cleaning system surveillance test results associated with the control room emergency filtration system (Train A) and the standby gas treatment system (Train A)

- Surveillance test results for the stack and vent flow rates

- Records of channel calibrations, channel checks, source checks, and channel functional tests performed since the last inspection for selected effluent radiation monitors and associated flow measurement devices (service water system effluent line, reactor building ventilation exhaust, turbine building ventilation exhaust, and radwaste building ventilation exhaust)

- Effluent radiation monitor alarm setpoint values and calculation methodology for selected process radiation monitors (plant service water radiation monitor, TSW-RIS-5; radwaste building ventilation monitor, WEA-RIS-14; and turbine building ventilation monitor, TEA-RIS-13)

- Calibration records of counting room instrumentation associated with effluent monitoring and release activities

- Quality control records for the counting room instruments

- Interlaboratory comparison program and results

- Audits and self-assessments related to the radioactive effluent treatment and monitoring program and the licensee's ability to meet the Radiological Effluent Technical Specification/Offsite Dose Calculation Manual requirements

- Summary of corrective action documents written since the last inspection and selected documents related to the radioactive effluent treatment and monitoring program, and the engineered-safety-feature air cleaning systems

Because of the lack of occurrence, the team did not review anomalous results which would have been reported in the radiological effluent release reports, liquid release permits and associated dose projections, and performance indicator incidents associated with radiological effluents.

b. Findings

No findings of significance were identified.

2PS2 Radioactive Material Processing and Transportation (71122.02)

a. Inspection Scope

The team conducted an in-office review of the licensee's annual reports, self-assessments, and corrective action documents. Onsite, the team interviewed radiation workers and radiation protection personnel involved in radioactive material processing and transportation activities and walked down the liquid and solid radioactive waste processing systems to verify that the current system configuration

and operation agreed with the descriptions contained in the Updated Safety Analysis Report and in the Process Control Program. The team also reviewed radioactive waste processing equipment that was not operational or abandoned in place for material condition, potential unmonitored release pathways, and unnecessary personnel exposure.

The team observed the packaging and shipment of a container of mixed radioactive waste (shipment 2003-49) made during the inspection to verify that the licensee's transportation program complied with Department of Transportation regulations contained in 49 CFR Parts 170-189. In addition, the team reviewed the licensee's overall transportation program to ensure that it complied with the requirements of 10 CFR Parts 20, 61, and 71. The following items were reviewed and compared with regulatory requirements:

- No significant changes were made to the radioactive waste processing systems since the last inspection
- Waste stream determination and sampling procedures
- Radioactive waste transfer and sampling procedures and waste classification methodology
- Radio-chemical sample analysis results and changes to operational parameters affecting the results for each of the licensee's radioactive waste streams
- Scaling factors and calculations used to account for difficult-to-measure radionuclides
- 10 CFR Part 20, Appendix G, quality assurance program
- Transport cask Certificates of Compliance (9208 and 9277)
- Transferee licenses
- Procedures for cask loading and closure
- Training of personnel responsible for the conduct of radioactive waste processing and radioactive material shipment preparation activities
- Documentation for five non-excepted package shipments which demonstrated shipment packaging, surveying, labeling, marking, placarding, vehicle checks, emergency instructions, disposal manifest, shipping papers provided to the driver, and licensee verification of shipment readiness
- Audits and self-assessments related to the radioactive material and transportation programs performed since the last inspection
- Summary of corrective action documents written since the last inspection and selected documents involving the radioactive material and shipping programs, and repetitive and significant individual deficiencies

b. Findings

Introduction. A Green self-revealing non-cited violation was reviewed by the team for the failure of the licensee to determine the maximum dose rate on the exterior of a disposal container.

Description. During the review of problem evaluation requests associated with the radioactive material processing and transportation programs, the team noted a violation of 10 CFR 20.2006(b). On December 3, 2001, the licensee initiated Problem Evaluation Request PER 201-2696 that described a shipment of radioactive waste to a burial site that had radiation levels greater than those indicated on the disposal container and manifest. The radioactive package Survey 7-97-01 indicated maximum contact readings on Liner 01-111-L of 30 millirem per hour. The state inspector at the disposal site found 70 millirem per hour which was greater than instrument tolerance of the two surveys instruments used to perform the shipment survey. The apparent cause of the dose rate difference was that the health physics technician did not perform a comprehensive survey of the package.

Analysis. The team determined that the licensee's failure to properly determine the maximum radiation dose rate on a disposal container is a performance deficiency. The finding is more than minor because it affected the Public Radiation Safety cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain and is associated with the cornerstone attribute of program and process. The finding involved an occurrence in the licensee's radioactive material transportation program that was contrary to NRC regulations. When processed through the Public Radiation Safety Significance Determination Process the finding was determined to be of very low safety significance because radiation limits were not exceeded, there was no breach of package during transit, there was no certificate of compliance issue, the finding was a low level burial ground nonconformance; however, access to the burial ground was not denied, and the waste was not under classified.

Enforcement. 10 CFR 20.2006(b) requires any licensee shipping radioactive waste intended for disposal to document the information required on NRC Uniform Low-Level Radioactive Waste Manifest in accordance with Appendix G of 10 CFR Part 20. 10 CFR 20, Appendix G, Section I.C.5, states, in part, that the shipper of radioactive waste shall provide on the uniform manifest and the disposal container the maximum radiation level at the surface of each disposal container. However, on December 3, 2001, the licensee was informed by the burial site that a radioactive material shipment did not have the maximum dose rate on the disposal container or manifest. Because the failure to determine the maximum dose rate on a shipment disposal container was of very low safety significance and has been entered into the station's corrective action program as Problem Evaluation Request 201-2696, this violation is being treated as a non-cited violation, consistent with Section VI.A of the NRC Enforcement Policy: NCV 050-397/0312-01, Failure to determine the maximum dose rate on the exterior of a disposal container.

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

a. Inspection Scope

The team conducted an in-office review of the licensee's annual reports, self-assessments, and corrective action documents. Onsite, the team interviewed members of the licensee's staff responsible for implementing the radiological environmental, meteorological monitoring, and radioactive material control programs. The team observed the following activities and equipment with respect to the Updated Safety Analysis Report (USAR), Offsite Dose Calculation Manual (ODCM), and Technical Specification requirements:

- Collection of airborne particulate and charcoal samples, and preparation for shipment
- Primary and back-up meteorological instrumentation at the meteorological tower and data displays in the control room
- Survey of materials for release from the radiologically controlled area

The following items were reviewed and compared with the USAR, ODCM, and regulatory requirements to determine whether the licensee had an adequate program to verify the impact of radioactive effluent releases to the environment and to ensure that the licensee's surveys and controls were adequate to prevent the inadvertent release of licensed materials into the public domain:

- Implementing procedures for the radiological environmental monitoring program
- Environmental sample analytical results
- Four environmental air sampling stations (1, 21, 23, and 57), four thermoluminescent dosimetry stations (1, 21, 23, and 47) located in Emergency Planning Sector's S, ENE, ESE and N, respectively, and two composite water sampling stations (26-intake and 27-discharge) specified in the ODCM
- Calibration and maintenance records of selected environmental air and composite water sampling equipment
- 2001 and 2002 annual land use census results and changes to the radiological environmental monitoring program
- 2001 and 2002 Annual Radiological Environmental Operating Report
- Vendor interlaboratory comparison program and results
- Implementing procedures for the meteorological monitoring program
- Meteorological instrument operability, reliability, and 2001 and 2002 annual meteorological data recovery
- Procedures, methods, and instruments used to survey, control, and release materials from the radiologically controlled area

- Calibration procedures and records for instruments used to perform radiological surveys prior to material release

- Detection sensitivities and counting parameters of radiation survey instruments used for the release of potentially contaminated materials from the radiologically controlled area

- Criteria used for the unrestricted release of potentially contaminated material from the radiologically controlled area

- Audits and self-assessments related to the radiological environmental, meteorological monitoring, and radioactive material control programs performed since the last inspection

- Summary of corrective action documents written since the last inspection and selected documents involving radiological environmental monitoring, meteorological monitoring, and release of radioactive material programs

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.

4OA6 Management Meetings

Exit Meeting Summary

On September 18, 2003, the team presented the inspection results to Mr. J. V. Parrish, Chief Executive Officer, and other members of his staff who acknowledged the findings. The team confirmed that proprietary information was not provided or examined during the inspection.

4OA7 Licensee-Identified Violations

The following findings of very low safety significance were identified by the licensee as violations of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as NCVs.

- Technical Specification 5.4.1.a requires written procedures be established, implemented, and maintained covering control of radioactivity. Section 4.4 of Procedure 11.2.15.7, "Release of Material From Radiologically Controlled Areas," Revision 14, stated, in part, that material can be unconditionally released from the radiologically controlled areas if there is no detectable activity identified. On May 30, 2001, and April 3, 2003, the licensee identified a total of two examples in which detectable contamination was found outside the radiologically controlled area. These events are described in the licensee's corrective action program as Problem Event Requests 201-1019 and 203-1099, respectively. Because public exposure associated with each item was less than 5 millirem and there were not more than 5 occurrences, this violation is of very low safety significance.

- 10 CFR 50.54(q) requires a licensee to follow their emergency plan. Table 2-1 of the licensee's Emergency Plan, Revision 35, required a health physics technician and a chemistry technician on shift at all times to satisfy the minimum staffing requirements of the Emergency Response Organization. Section 2.8 of the licensee's Emergency Response Qualification Directory, Revision 4, required self-contained breathing apparatus training for the above emergency response positions. However, on April 16, 2002, and September 25, 2002, the licensee identified two examples in which a chemistry technician and a health physics technician, respectively, were assigned Emergency Response Organization duties and were not self-contained breathing apparatus qualified. These events are described in the licensee's corrective action program as Problem Event Requests 202-1181 and 202-2698, respectively. Because the finding was a Planning Standard problem, but not a Risk Significant Planning Standard problem or a Planning Standard Function Failure, this violation is of very low safety significance.

ATTACHMENT

PARTIAL LIST OF PERSONS CONTACTED

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J. Parrish, Chief Executive Officer
C. Perino, Manager, Licensing
R. Webring, Vice President, Nuclear Generation

NRC

Z. Dunham, Resident Inspector

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

NONE

Opened and Closed During this Inspection

05000397/2003012-01	NCV	Failure to determine the maximum dose rate on the exterior of a disposal container (Section 2PS2)

Previous Items Closed

NONE

LIST OF DOCUMENTS REVIEWED

Quality Assurance Documents
Quality Department 2nd Quarter 2001 Continuous Monitoring Audit
Quality's Integrated Performance Assessment Report, Revision 1, (January 1 through June 30, 2002)
Quality's Integrated Performance Assessment Report, (July 1 through December 31, 2002)

Inspection Procedure 71121.03

Problem Evaluation Reports
201-1317, 201-1516, 201-1521, 201-2392, 201-2766, 202-1064, 202-1181, 202-1449, 202-2405, 202-2698, 202-3033, 203-0178, 203-1237, 203-1880, 203-2101, and 203-3055

Instrument Procedures

10.24.167	PM CAL/TEST - Eberline Model AMS-3 Beta Air Monitor, Revision 7
11.2.4.5	Whole Body Counts and Daily Checks Using the Renaissance Fastscan, Revision 6
11.2.9.4	Eberline Model RO-2/RO-2A & Bicron RSO-5/RSO-50, Revision 10
11.2.9.8	Eberline Teletector Model 6112, Revision 10
11.2.9.26	Eberline Model ASP-1, Revision 3
11.2.9.33	Ludlum Model 14C, Revision 0
11.2.10.10	Operation & Functional Check of the Nuclear Enterprises Installed Personnel Monitor (IPM) and CM 7A Contamination Monitor, Revision 8
12.13.20	In Plant Air Particulate Monitor Calibration, Revision 9
HPI 0.16	Radiation Protection Portable Instrument Use & Calibration Guidelines, Revision 1
HPI 5.6	Calibration of the Renaissance Fastscan Whole Body Counting System, Revision 2
HPI 7.5	Eberline Model RO-2 Calibration, Revision 8
HPI 7.9	Eberline Model 6112B Teletector Calibration, Revision 7
HPI 7.50	Calibration of the Eberline Model-1 with NRD Neutron Detector, Revision 5
HPI 7.52	Ludlum Model 14C Geiger Counter Calibration With 44-6 GM Detector, Revision 1
HPI 12.61	Use of SAM-9 Small Article Monitor, Revision 7
HPI 12.81	Operation and Calibration of Shepherd Model Mini-89 Irradiator, Revision 0

SCBA Procedures

10.2.62	Breathing Air Compressor Operation, Revision 9
GEN-RPP-05	Respiratory Protection Program Description, Revision 5
GEN-RPP-10	Use of Respiratory Protection Equipment, Revision 2
SWP-EPP-01	Emergency Response Organization and Training, Revision 9

Area Radiation Monitor Surveillances

ISP-ARM-M402	Spent Fuel Storage Pool Area Radiation Monitor Channel Functional Test, Revision 2
ISP-ARM-X302	Spent Fuel Storage Pool Area Radiation Monitor Electronic Channel Calibration, Revision 1
HSP-ARM-X301	Spent Fuel Storage Pool Area Radiation Monitor Radiological Channel Calibration, Revision 0

Self-Assessments

SA-02-014	Radioactive Source Control Program and Associated Records (January 10-25, 2002)
SA-02-053	Respiratory Protection Program (June 24, 2002)

Inspection Procedure 71122.01

Problem Evaluation Reports

201-1303, 201-1558, 201-1861, 201-1862, 201-1974, 201-2258, 201-2894, 202-0595, 202-1287, 202-2479, 202-2929, 202-3229, 203-0811, 203-1409, and 203-2683

Procedures

12.4.21	The Sampling and Determination of Tritium, Revision 14
12.5.4	Particulate and Charcoal Filter Analysis, Revision 15
16.1.1	Reactor Building Effluent Monitor Low Range Electronic Channel Calibration, Revision 11
16.1.2	Reactor Building Effluent Monitor Low Range Radiological Channel Calibration, Revision 6
16.1.3	Reactor Building Effluent Monitor Low Range Channel Functional Test, Revision 5
16.3.1	Radwaste Building Effluent Monitor Low Range Noble Gas Channel Calibration, Revision 6
16.3.3	Radwaste Building Effluent Monitor Low Range Noble Gas Channel Functional Test, Revision 5
16.3.7	Radwaste Building Effluent Monitor Exhaust Flow Rate Channel Calibration, Revision 3
16.3.8	Radwaste Building Effluent Monitor Exhaust Flow Rate Channel Functional Test, Revision 6
16.3.9	Radwaste Building Effluent Monitor Sample Flow Rate Channel Calibration/Channel Functional Test, Revision 6
16.6.1	Turbine Service Water Monitor Channel Calibration, Revision 6
16.6.3	Turbine Service Water Monitor Channel Functional Test, Revision 7
16.9.1	Plant Blowdown Discharge Line Flow Rate Channel Calibration/Channel Functional Test, Revision 8
16.11.6	Weekly Iodine, Particulate, and Tritium Analysis, Revision 5
16.12.1	Liquid Release Dose Calculations, Revision 4
16.12.2	31 Day Air Dose Calculations, Revision 7
16.14.1	Gaseous Monitor Setpoint Calculations, Revision 1
16.14.2	Liquid Monitor Setpoint Calculations, Revision 4

Surveillances

MSP-WMA-B101	Control Room DIV-A Emergency Filtration System HEPA Filtration Test, Revision 3 (4/03/99, 8/16/01)
MSP-WMA-B103	Control Room DIV-A Filtration System - Carbon Adsorber Test, Revision 4 (8/09/01, 5/16/03)
MSP-SGT-B101	Standby Gas Treatment System Unit A HEPA Filter Test, Revision 3 (11/01/01, 9/03/03)
MSP-SGT-B101	Standby Gas Treatment System - Unit A Carbon Adsorber Test (12/15/99, 11/30/01)
CSP-INST-D201	Chemistry Daily Channel and Source Checks, Revision 8
CSP-INST-M201	Chemistry Monthly Source and Channel Checks, Revision 8
CSP-STACK-M201	Stack Monitor Monthly Source and Channel Checks, Revision 4

Self-Assessments and Quality Verifications

AU-CH-02	Chemistry Environmental and Effluents Monitoring Programs (12/10/02 - 1/30/03)
SA-01-082	Radiological Effluent Dose Calculation Program (September - November 2001)

SA-02-095 Cross Check Program - Hot (August 1 through September 12, 2002)

Calculations
92-2 Supply System WNP-2 Hanford Site LADTAP II Input Parameters: Revises Calculation No. 88-3
93-2 Supply System WNP-2 Hanford Site GASPAR II Input Parameters: Replaces Calculation Log 90-2

Miscellaneous
Results of Radiochemistry Cross Check Program Energy Northwest Columbia Generating Station (Second Quarter 2001, Fourth Quarter 2001, Second Quarter 2002, and Fourth Quarter 2002)

Inspection Procedure 71122.02
Quality Assurance Documents
SA-01-052 Adequacy of Radwaste Process Control Program Requirements
SA-02-026 Adequacy of Radioactive Material and Waste Transportation Survey Training
AU-RW-02 Process Control Program Audit
SA-02-062 Radioactive Material Storage Inside the Protected Area

Performance Evaluation Requests
201-1036, 201-2696, 201-2875, and 202-2750

Procedures
CI-9.5 Radioactive Waste Characterization Scaling Factors, Revision 0
SWP-RMP-01 Radioactive Waste Management Program, Revision 1
SWP-RMP-02 Radioactive Waste Process Control Program, Revision 2
PPM 11.2.23.1 Shipping Radioactive Waste and Material, Revision 2
PPM 11.2.23.4 Preparing Radioactive Waste and Material Packages, Revision 17
PPM 11.2.23.14 Sampling of Radioactive Waste Streams, Revision 10

Shipment Packages
2001-49, 2001-67, 2002-10, 2003-30, and 2003-44

Transferee Licenses
0023-07, SNM-1227, WN-I014-1, SC-541, and WN-I019-2

Inspection Procedure 71122.03
Problem Evaluation Requests

Radiological Environmental Monitoring Program
201-2728, 201-2902, 202-0792, 202-1994, 202-3279, and 203-0856

Meteorological Monitoring
201-0753, 201-1749, 202-0328, 203-1820, and 203-2344
Release of Radioactive Material
201-0919, 202-1064, 202-2555, 202-2673, 202-2679, 202-3433, 203-1070, 203-1077, 203-1099, 203-1659, 203-1839, 203-2110, and 203-2385

Procedures

Radiological Environmental Monitoring Program

1.11.1	Radiological Environmental Monitoring Program Implementation Procedure, Revision 9
16.13.2	Annual Radiological Environmental Operating Report, Revision 0
CI 4.12	Airborne Samples Distribution, Collection, and Shipping, Revision 2
CI 4.19	Drinking, Discharge and River Water Sample Collection, Revision 1

Meteorological Monitoring

CI 5.1	Meteorological Data Processing, Revision 0
CI 5.1	Meteorological Data Validation, Revision 0

Release of Radioactive Material

1.11.12	Removal of Liquids from the RCA, Revision 9
11.2.15.7	Release of Materials from the RCA, Revision 14
11.2.15.13	Control of Personnel Skin and Clothing Contamination, Revision 2

Calibration and Maintenance Records

Radiological Environmental Monitoring Program
Air Sample Pump Serial Number 9, Calibration Number 60963
Air Sample Pump Serial Number 40, Calibration Number 60959
Air Sample Pump Serial Number 57, Calibration Number 60958
Composite Water Sampler Number 29, Calibration Number 21188-79

Meteorological Monitoring
Wind Speed/Direction Channel Calibration 33’ and 245’ (8/20/03)
Meteorology Temperature Monitoring Instrumentation (8/18/03)

Columbia Generating Station
NRC Inspection Report No. 50-397/2003-012
INSPECTION PERIOD - September 15-18, 2003

D. Carter (4640)
Cornerstone: Public Radiation Safety

PIM SELF NCV PRS September 18, 2003 71122.02

Failure to determine the maximum dose rate on the exterior of a disposal container

- Green. A self-revealing non-cited violation of 10 CFR 20.2006(b) was reviewed by the team because the licensee failed to provide the maximum dose rate on a uniform manifest and disposal container. On December 3, 2001, the licensee made a shipment of radioactive waste to a burial site that had radiation levels which were approximately 230 percent higher than those indicated on the disposal container and manifest.

  The finding was more than minor because it was associated with the Public Radiation Safety cornerstone attribute (Program and Process) and affected the associated cornerstone objective. The finding involved an occurrence in the licensee's radioactive material transportation program that is contrary to NRC regulations. When processed through the Public Radiation Safety Significance Determination Process the finding was determined to be of very low safety significance because radiation limits were not exceeded, there was no breach of package during transit, there was no certificate of compliance issue, the finding was a low level burial ground nonconformance; however, access to the burial ground was not denied, and the waste was not under classified (Section 2PS2).