



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

March 16, 2007

Randall K. Edington
Senior Vice President, Nuclear
Mail Station 7602
Arizona Public Service Company
P.O. Box 52034
Phoenix, AZ 85072-2034

SUBJECT: PALO VERDE NUCLEAR GENERATING STATION - NRC RADIATION SAFETY
TEAM INSPECTION REPORT 05000528/2007010, 05000529/2007010, AND
05000530/2007010

Dear Mr. Edington:

On February 22, 2007, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Palo Verde Nuclear Generating Station. The enclosed report documents the inspection findings, which were discussed at the conclusion of the on site inspection on February 2, 2007, with Mr. C. Eubanks, Vice President, Nuclear Operations, and other members of your staff. An additional telephonic exit was held on February 22, 2007, with Mr. J. Gaffney, Director, Radiation Protection after we had reviewed the additional information that your staff provided.

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 inspection report documents one self-revealing, noncited violation of very low safety significance (Green). However, because the finding was of very low safety significance and it was entered into your corrective action program, the NRC is treating this finding as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy. Additionally, one licensee-identified violation which was determined to be of very low safety significance is listed in this report. If you contest any noncited violation in this report, 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 76011-4005; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington DC 20555-001; and the NRC Resident Inspector at the Palo Verde Generating Station.

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/

Michael P. Shannon, Chief
Plant Support Branch
Division of Reactor Safety

Dockets: 50-528, 50-529, 50-530
Licenses: NPF-41, NPF-51, NPF-74

Enclosure:
NRC Inspection Report 05000528/2007010; 05000529/2007010; 05000530/2007010
w/attachment: Supplemental Information

cc w/enclosure:
Steve Olea
Arizona Corporation Commission
1200 W. Washington Street
Phoenix, AZ 85007

Douglas K. Porter, Senior Counsel
Southern California Edison Company
Law Department, Generation Resources
P.O. Box 800
Rosemead, CA 91770

Chairman
Maricopa County Board of Supervisors
301 W. Jefferson, 10th Floor
Phoenix, AZ 85003

Arizona Public Service Company

-3-

Aubrey V. Godwin, Director
Arizona Radiation Regulatory Agency
4814 South 40 Street
Phoenix, AZ 85040

Scott Bauer, Acting General Manager
Regulatory Affairs and
Performance Improvement
Palo Verde Nuclear Generating Station
Mail Station 7636
P.O. Box 52034
Phoenix, AZ 85072-2034

Jeffrey T. Weikert
Assistant General Counsel
El Paso Electric Company
Mail Location 167
123 W. Mills
El Paso, TX 79901

John W. Schumann
Los Angeles Department of Water & Power
Southern California Public Power Authority
P.O. Box 51111, Room 1255-C
Los Angeles, CA 90051-0100

John Taylor
Public Service Company of New Mexico
2401 Aztec NE, MS Z110
Albuquerque, NM 87107-4224

Geoffrey M. Cook
Southern California Edison Company
5000 Pacific Coast Hwy, Bldg. N50
San Clemente, CA 92672

Robert Henry
Salt River Project
6504 East Thomas Road
Scottsdale, AZ 85251

Brian Almon
Public Utility Commission
William B. Travis Building
P.O. Box 13326
1701 North Congress Avenue
Austin, TX 78701-3326

Arizona Public Service Company

-4-

Karen O'Regan
Environmental Program Manager
City of Phoenix
Office of Environmental Programs
200 West Washington Street
Phoenix, AZ 85003

Matthew Benac
Assistant Vice President
Nuclear & Generation Services
El Paso Electric Company
340 East Palm Lane, Suite 310
Phoenix, AZ 85004

Electronic distribution by RIV:
 Regional Administrator (**BSM1**)
 DRP Director (**ATH**)
 DRS Director (**DDC**)
 DRS Deputy Director (**RJC1**)
 Senior Resident Inspector (**GXW2**)
 Branch Chief, DRP/D (**RLN1**)
 Senior Project Engineer, DRP/D (**GEW**)
 Team Leader, DRP/TSS (**MAS3**)
 RITS Coordinator (**MSH3**)
 DRS STA (**DAP**)
 V. Dricks, PAO (**VLD**)
 D. Cullison, OEDO RIV Coordinator (**DGC**)
ROPreports
 PV Site Secretary (**PRC**)

SUNSI Review Completed: GLG ADAMS: Yes No Initials: GLG
 Publicly Available Non-Publicly Available Sensitive Non-Sensitive

PSB/CHP	PSB/SHP	PSB/HP	PSB/HP	PSB/HP
GLGuerra(lar)	LTRicketson	DLStearns	BDBaca	BKTharakan
/RA/	GLGuerra for	/RA/	/RA/	/RA/
3/13/07	3/14/07	3/13/07	3/14/07	3/13/07
C:PSB	DRP/PBD	C:PSB		
MPShannon	RLNease	MPShannon		
/RA/	/RA/	/RA/		
3/15/07	3/16/07	3/16/07		

OFFICIAL RECORD COPY

T=Telephone

E=E-mail

F=Fax

**U.S. NUCLEAR REGULATORY COMMISSION
REGION IV**

Dockets: 50-528, 50-529, 50-530
Licenses: NPF-41, NPF-51, NPF-74
Report: 05000528/2007010, 05000529/2007010, 05000530/2007010
Licensee: Arizona Public Service Company
Facility: Palo Verde Nuclear Generating Station, Units 1, 2, and 3
Location: 5951 S. Wintersburg
Tonopah, Arizona
Dates: January 29 through February 22, 2007
Inspectors: Gilbert Guerra, C.H.P., Health Physicist, Plant Support Branch
Larry Ricketson, P.E., Senior Health Physicist, Plant Support Branch
Bernadette Baca, Health Physicist, Plant Support Branch
Binesh Tharakan, C.H.P, Health Physicist, Plant Support Branch
Donald Stearns, Health Physicist, Plant Support Branch
Approved By: Michael P. Shannon, Chief
Plant Support Branch
Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000528/2007010, 05000529/2007010, 05000530/2007010; 1/29/07 - 2/22/07; Palo Verde Nuclear Generating Station Units 1, 2, and 3; Radiation Safety Team Inspection; Radioactive Material Control Program

The report covers an on site inspection by a team of five region-based health physics inspectors. A finding of very low safety significance (Green) was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609, "Significance Determination Process". Findings for which the Significance Determination Process 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, noncited violation of Technical Specification 5.4.1 was reviewed regarding the failure to control the release of radioactive material. On February 2, 2006, the licensee was notified by another site that equipment received was labeled as radioactive material. Specifically, five items, with a maximum activity of 280 counts per minute, were inappropriately released from the radiologically controlled area and subsequently the protected area. The licensee's corrective actions include evaluating and implementing changes to the material release program and processes.

The finding is greater than minor because it was associated with the Public Radiation Safety cornerstone attribute of human performance and affected the associated cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation. Using the Public Radiation Safety Significance Determination Process, the team determined that the finding had very low safety significance because: (1) it was a radioactive material control finding, (2) it was not a transportation finding, (3) it did not result in public dose greater than 0.005 rem, and (4) the number of occurrences was not greater than five. In addition, this finding had a human performance cross-cutting aspect associated with work practices because the licensee failed to ensure supervisory and management oversight of work activities, including contractors (Section 2PS3).

B. Licensee-Identified Violations

A violation of very low safety significance, which was identified by the licensee has been reviewed by the team. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. The violation and corrective actions is listed in Section 4OA7 of this report.

REPORT DETAILS

2. RADIATION SAFETY

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

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 (SCBA) 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 counting equipment and radiation detection instruments utilized for personnel and material release from the radiologically controlled area
- Self-assessments, audits, and licensee event reports
- 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 SCBA air bottles to and from the control room and operations support center during emergency conditions, status of SCBA 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 SCBA units

The team completed 9 of the required 9 samples.

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 are maintained so that radiological releases are properly mitigated, monitored, and evaluated with respect to public exposure. The team used the requirements in 10 CFR Part 20, 10 CFR Part 50 Appendices A and I, 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:

- Radiological effluent release reports since the last inspection, changes to the Offsite Dose Calculation Manual, radiation monitor setpoint calculation methodology, anomalous sampling results, effluent radiological occurrence performance indicator incidents, program for identifying contaminated spills and leakage and the licensee's process for control and assessment, self-assessments, audits, and licensee event reports
- Gaseous and liquid release system component configurations
- Routine processing, sample collection, sample analysis, and release of radioactive liquid and gaseous effluent; and radioactive liquid and gaseous effluent release permits and dose projections to members of the public
- The licensee's understanding of the location and construction of underground pipes and tanks and storage pools that contain radioactive contaminated liquids; the technical bases for onsite monitoring, the licensee's capabilities of detecting spills or leaks and identifying groundwater radiological contamination both on site and beyond the owner-controlled area
- Changes made by the licensee to the Offsite Dose Calculation Manual, the liquid or gaseous radioactive waste system design, procedures, or operation since the last inspection
- Monthly, quarterly, and annual dose calculations
- Surveillance test results involving air cleaning systems and stack or vent flow rates
- Instrument calibrations of discharge effluent radiation monitors and flow measurement devices, effluent monitoring system modifications, effluent radiation monitor alarm setpoint values, and counting room instrumentation calibration and quality control
- Interlaboratory comparison program results

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

Either because the conditions did not exist or an event had not occurred, no opportunities were available to review the following items:

- Abnormal releases

The team completed 11 of the required 11 samples.

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 radionuclides
- Shipping records for nonexcepted package shipments
- Licensee event reports, special reports, audits, state agency reports, self-assessments and corrective action reports performed since the last inspection

Either because the conditions did not exist or an event had not occurred, no opportunities were available to review the following items:

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

The team completed 6 of the required 6 samples.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

This area was inspected to ensure that the REMP 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
- 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, and interlaboratory comparison program results
- Locations where the licensee monitors potentially contaminated material leaving the radiological controlled 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, and corrective action reports performed since the last inspection

The team completed 10 of the required 10 samples.

b. Findings

Introduction. A self-revealing, noncited violation of Technical Specification 5.4.1 was reviewed regarding the failure to control the release of radioactive material. The violation had very low safety significance.

Description. On February 2, 2006, the licensee was notified by another site that equipment received was labeled as radioactive material. The licensee's investigation determined that two sealand containers used during the Unit 1 refueling outage were not consistently controlled for the storage and release of radioactive material. Specifically, five items, with a maximum activity of 280 counts per minute, were inappropriately released from the radiologically controlled area and subsequently the protected area. The licensee's corrective actions included evaluating and implementing changes to their material release program and processes.

Analysis. The failure to control the release of radioactive material is a performance deficiency. The finding is greater than minor because it was associated with the Public Radiation Safety cornerstone attribute of human performance and affected the associated cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation. Using the Public Radiation Safety Significance Determination Process, the team determined the finding had very low safety significance because: (1) it was a radioactive material control finding, (2) it was not a transportation finding, (3) it did not result in public dose greater than 0.005 rem, and (4) the number of occurrences was not greater than five. In addition, this finding had a human performance cross-cutting aspect associated with work practices because the licensee failed to ensure supervisory and management oversight of work activities, including contractors.

Enforcement. Technical Specification 5.4.1 states, in part, that written procedures shall be established, implemented, and maintained which cover applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Section 7(e) of the regulatory guide requires procedures for radiation surveys which would limit personnel exposure and materials released into the environment. Procedure 75RP-9RP09, "Release of Vehicles, Equipment, and Material from Radiological Controlled Areas," Section 3.1.2 states, in part, that all liquid and solid materials that have the potential for being contaminated with radioactive material must be evaluated by radiation protection prior to being unconditionally released. Section 3.2 of the same procedure states, in part, that tools, equipment, and material exiting the radiological controlled areas shall be evaluated for the presence of radioactive material by a qualified individual and that each item which is to be unconditionally released by survey shall be evaluated against the criteria listed in Appendix B, "PVNGS Limits for Unconditional Release by Survey." Appendix B provides a limit of "no detectable" activity for tools, material, and equipment. Contrary to the technical specification, the licensee unconditionally released radioactive material from the radiological controlled areas. Because this finding is of very low safety significance and has been entered into the licensee's corrective action program (Condition Report/Disposition Request (CRDR) 2866065), this violation is being treated as a noncited violation, consistent with

Section VI.A of the NRC Enforcement Policy: NCV 05000528; 529; 530/2007010-01, Failure to control the release of radioactive material.

4. OTHER ACTIVITIES

4OA2 Problem Identification and Resolution

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. However, the team noted in reviewing prior public radiation safety inspections a trend with regard to radioactive material control issues. Specifically, in NRC Inspection Report 50-528; 529; 530/2003-008 four examples were identified; in NRC Inspection Report 50-528; 529; 530/2005-009 three examples were identified; and in this report another three examples were identified in Sections 2PS3 and 4OA7. In reviewing the corrective action documents related to these examples the team noted poor documentation in recording the corrective actions taken and that corrective actions were not effective in preventing similar occurrences. Additionally, the causes of some of the previous radioactive material control issues were related to the conduct of inadequate surveys for items released and the failure to control radioactive material in accordance with approved site procedures. Inadequate surveys and the failure to control radioactive material are the causes of the findings in Sections 2PS3 and 4OA7 of this report supporting that past corrective actions were narrowly focused and did not preclude reoccurrence.

4OA6 Management Meetings

Exit Meeting Summary

On February 2, 2007, the team debriefed the inspection results with Mr. C. Eubanks, Vice President, Nuclear Operations, and other members of the staff who acknowledged the findings. The team confirmed that proprietary information was not provided or examined during the inspection.

On February 22, 2007, a telephonic exit was held with Mr. J. Gaffney, Director, Radiation Protection and Mr. S. Bauer, Acting General Manager, Regulatory Affairs, and other members of the staff who acknowledged the findings.

4OA7 Licensee-Identified Violations

The following finding of very low significance was identified by the licensee and is a violation of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600 for being dispositioned as a noncited violation.

- Two examples of a Technical Specification 5.4.1 violation were reviewed by the team. Technical Specification 5.4.1 states, in part, that written procedures shall be established, implemented, and maintained, which cover applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Section 7(e) of the regulatory guide requires procedures for radiation surveys which would limit personnel exposure and materials released into the environment. Procedure 75RP-9RP09, "Release of Vehicles, Equipment, and Material from Radiological Controlled Areas (RCA)," Section 3.1.2 states, in part, that all liquid and solid materials that have the potential for being contaminated with radioactive material must be evaluated by radiation protection prior to being unconditionally released. In addition, Appendix B of the same procedure provides a limit of "no detectable" activity for tools, material, and equipment. The first example involved a contract welding superintendent removing equipment on a forklift from the RCA yard. The radiation protection technician who performed the release of the forklift did not inspect and survey the entire forklift and only surveyed the tires and forks. This event was documented in the licensee's corrective action program as CRDR 2932821. The second example involved the inadvertent release of radioactive material from the Unit 1 RCA and protected area. Two tool monitors experienced light leaks, which caused detector failures and the unconditional release of radioactive material. The licensee identified and recovered eleven items contaminated with radioactive material. Of the eleven items released, five remained within the protected area and six were found outside the protected area. This event was documented in the licensee's corrective action program as CRDR 2853883. The finding was determined to be of very low safety significance because: (1) it was a radioactive material control finding, (2) it was not a transportation finding, (3) it did not result in public dose greater than 0.005 rem, and (4) the number of occurrences was not greater than five.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

S. Bauer, Acting General Manager, Regulatory Affairs
B. Bement, Vice President, Nuclear Operations
C. Bonhoff, Radiological Material Control Section Leader, Radiation Protection
W. Carr, Senior Chemistry Technician, Chemistry Technical Support
R. Cauley, Senior Chemistry Technician, Chemistry Technical Support
M. Debolt, Technician, Operations Computer Support
T. Dickinson, Shipping Senior Technician, Radiation Protection
C. Eubanks, Vice President, Nuclear Operations
M. Fladager, Radiological Services Department Leader, Radiation Protection
D. Fuller, Unit Section Leader, Chemistry
J. Gaffney, Director, Radiation Protection
T. Gray, Department Leader, Radiological Support Services
D. Hautala, Senior Engineer, Regulatory Affairs
S. Kanter, Technical Management Assistant, Radiation Protection Operations
J. McDonnel, Department Leader, Radiation Protection Operations
G. Morrill, Technician, Chemistry
R. Moxon, Senior Program Advisor, Fire Department
T. Phillips, Engineer, Operations Computer Support
C. Podgurski, Section Leader, Dosimetry
J. Rhodes, Technician, Dosimetry
R. Routolo, Section Leader, Radiation Protection
J. Tutora, Technician, Operations Computer Support
C. Wandell, Consulting Engineer, Design Engineering

NRC

G. Warnick, Senior Resident Inspector
J. Melfi, Resident Inspector

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Opened and Closed During this Inspection

5000528; 529; 530/2007010-01	NCV	Failure to control the release of radioactive material. (Section 2PS3)
------------------------------	-----	--

Previous Items Closed

None

LIST OF DOCUMENTS REVIEWED

Section 2OS3: Radiation Monitoring Instrumentation and Protective Equipment (71121.03)

Audits and Self-Assessments

SA 2776051, Audit Report 06-012, Radiation Safety

Work Orders

STWO 02696096, STWO 02751242, STWO 02818867, WO# 2907193

Corrective Action Documents

2773732, 2773944, 2777735, 2777862, 2781870, 2783404, 2790916, 2796047, 2798550, 2802906, 2810483, 2812271, 2831180, 2841901, 2846187, 2950487

Procedures

74ST-9SQ21 Radiation Monitoring Calibration Test for Baseline Process Monitors, Revision 14
74ST-9SQ23 Radiation Monitoring Calibration Test for New Scope Area Monitors, Revision 9
74ST-9SQ26 Radiation Monitoring Calibration Test for RU-143
75DP-0RP01 RP Program Overview, Revision 6
75RP-0RP15 RP Administration, Revision 1
75RP-9EQ04 Calibration of Neutron Dose Rate Instruments, Revision 6
75RP-9EQ07 Operation of Condenser R-Meters, Revision 4
75RP-9EQ08 Operation and Verification of the Shepherd Panoramic Irradiator, Revision 6
75RP-9EQ13 Canberra Whole Body Counting System Calibration, Revision 4
75RP-9EQ16 Calibration, Response Check, and Troubleshooting of the Eberline PCM-1B Monitor, Revision 5
75RP-9EQ17 Calibration of Micro R-Meters, Revision 5
75RP-9EQ18 Calibration of Portable Count Rate Instrumentation, Revision 6
75Rp-9EQ19 Operation and Verification of the Shepherd Model 89 Calibrator, Revision 4
75RP-9EQ20 Calibration of Portable Gamma and Beta-Gamma Dose Rate Instruments, Revision 8
75RP-9MC01 Control of Radiation Protection Instrumentation, Revision 17
75RP-9RP23 Merlin Gerin Tool Monitor Operation and Calibration, Revision 7
01DP-0IS08 PVNGS Respiratory Protection Equipment Usage, Revision 12
01DP-0IS09 Respiratory Fit Testing, Revision 10
01DP-0IS10 RVNGS Respiratory Protection Program, Revision 5

Miscellaneous

Fastscan 1 Calibration Record, 235-02065-CCE, dated August 10, 2006
Fastscan 2 Calibration Record, 218-02072-CCE, dated August 25, 2006
ThermoAnalytical Inc. Source Calibration Certificates; 9717, 9718, 9719, 9720

Section 2PS1: Radioactive Gaseous & Liquid Effluent Treatment & Monitoring Systems (71122.01)

Audits and Self-Assessments

Radiation Safety Audit 2006-012 (Gaseous Effluent Treatment and Monitoring Section)

Corrective Action Documents

2824859, 2827746, 2842547, 2866593, 2881443, 2951371, 2952828

Procedures

74RM-9EF20 Gaseous Radioactive Release Permits and Offsite Dose Assessment, Revision 14
74RM-9EF60 RMS Sample Collection, Revision 25
74CH-9XC50 Operation of the Gamma Spectrometry System, Revision 14
33DP-0AP01 NATS Testing Program, Revision 1
33ST-9HF01 Surveillance Testing for the Aux/Fuel Building Nuclear Air Treatment System, Revision 10
33ST-9HF03 Carbon Analysis for the Aux/Fuel Building Nuclear Air Treatment System, Revision 5
33ST-9HJ02 Surveillance Testing of the Control Room Nuclear Air Treatment System, Revision 9
33ST-9HJ03 Carbon Analysis for the Control Room Essential Nuclear Air Treatment System, Revision 7

Release Permits

20063057 - Waste Gas Decay Tank A
20071014 - Fuel Building Ventilation
20072012 - Non-Standard Containment Purge

Miscellaneous

2004 and 2005 Annual Radiological Effluent Reports
2004 and 2005 Interlaboratory Comparison Results
2006 Effluent counting laboratory quality control records

Section 2PS2: Radioactive Material Processing and Transportation (71122.02)

Procedures

76DP-0RP01 Radwaste Management Program Overview, Revision 3
76DP-0RP03 Radwaste Process Control Program, Revision 6
76DP-0RP04 Receipt and Shipment of Radioactive Material, Revision 4
76RP-0RW03 Waste Stream Sampling and Database Maintenance, Revision 1
76DP-0RW05 Packaging and Classification of Radioactive Waste, Revision 3
76RP-0RW06 Packaging of Radioactive Material, Revision 2
76RP-0RW07 Shipping Radioactive Material, Revision 8
76RP-0RW10 Handling and Storage of Radioactively Contaminated Chemical Waste and Mixed Waste, Revision 0

Corrective Action Documents

2794626, 2808875, 2823535, 2827493, 2835326, 2846688, 2849429, 2901485, 2906659, 2911448, 2924941, 2925011, 2938683, 2947302, 2952719, 2958428,

Audits and Assessments

Radiation Safety Audit 2006-012, November 19, 2006

Shipment Packages

05-SH-004, 05-SH-032, 05-SH-037, 05-SH-065, 05-SH-096, 05-SH-097, 05-SH-098,
06-SH-088, 05-RW-001, 05-RW-005, 06-RW-008, and 06-RW-025

Miscellaneous

2004 Annual Radioactive Effluent Release Report, April 15, 2005
2005 Annual Radioactive Effluent Release Report, April 21, 2006
2005-2006 Radioactive Waste Stream Analyses

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

Audits and Assessments

Radiation Safety Audit 2006-012

Procedures

74DP-0CH01 Laboratory Analytical Controls, Revision 9
74DP-0CH02 Laboratory Analytical Control Performance, Revision 19
74DP-9CY08 Radiological Monitoring Program, Revision 15
74RM-0EN02 Radiological Environmental Air Sampling, Revision 18
74RM-0EN03 Radiological Environmental Sampling, Revision 24
74RM-0EN05 Environmental TLD Exchange/Reporting, Revision 13
74RM-0EN07 Land Use Census, Revision 12
74RM-0EN09 Quarterly Radiological Environmental Sample Analysis Verification, Revision 8
74RM-0EN10 Weekly Radiological Environmental Sample Collection Verification, Revision 13
75DP-0RP04 Radiological Reports, Revision 8
75RP-9RP09 Release of Vehicles, Equipment, and Material from Radiological Controlled Areas, Revision 26
75RP-9RP15 Control and Storage of Radioactive Material and Radioactive Wastes, Revision 18

Corrective Action Documents

2612126, 2619162, 2749492, 2772684, 2778074, 2785615, 2791090, 2802976, 2814016,
2815509, 2829230, 2835326, 2846092, 2846138, 2846688, 2853883, 2854245, 2866065,
2866593, 2894572, 2901485, 2906659, 2913664, 2913936, 2925011, 2932821, 2938657,
2938683, 2947302, 2957554, 2958428

Calibrations

WO#2792899 Meteorological System Calibration
WO#2792901 Meteorological System Calibration

Miscellaneous

2004 and 2005 Annual Radiological Environmental Operating Reports
Calibration and verification records for environmental high purity germanium detectors, liquid scintillation, and gas flow proportional counter
Offsite Dose Calculation Manual Palo Verde Nuclear Generating Station Units 1, 2 and 3, Revision 21
Quality Control records for environmental counting equipment
REMP Air Sampling Siting Evaluation dated June 2002