

ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Inspection Report: 50-528/95-17
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Licenses: NPF-41
NPF-51
NPF-74

Licensee: Arizona Public Service Company
P.O. Box 53999
Phoenix, Arizona

Facility Name: Palo Verde Nuclear Generating Station, Units 1, 2, and 3

Inspection At: Wintersburg, Arizona

Inspection Conducted: August 28 through September 1, 1995

Inspector: L. T. Ricketson, P.E., Senior Radiation Specialist
Facilities Inspection Programs Branch

Approved: B. Murray, Chief, Facilities Inspection
Programs Branch

9-15-95
Date

Inspection Summary

Areas Inspected (Units 1, 2, and 3): Routine, announced inspection of the licensee's programs for solid radioactive waste management and transportation of radioactive materials, including: audits and appraisals; changes; training and qualifications; implementation of the solid radioactive waste program; and shipping of low level radioactive waste for disposal and transportation of other radioactive materials.

Results (Units 1, 2, and 3):

- Thorough audits, evaluations, and self-assessments provided strong management oversight for the solid radioactive waste management and transportation programs (Section 1.1).
- Personnel involved in the transfer, packaging, and transport of radioactive materials and waste were well qualified and trained. The licensee identified during an audit that some individuals responsible



for preparing, reviewing, and approving the procedures used in preparation of shipments had not received necessary training (Section 1.3).

- An effective solid waste management program was implemented (Section 1.4).
- A safe and effective transportation program was in place (Section 1.5).

Summary of Inspection Findings:

- Violation 529/9507-01 was closed (Section 2).

Attachment:

- Attachment - Persons Contacted and Exit Meeting



DETAILS

1 SOLID RADIOACTIVE WASTE MANAGEMENT AND TRANSPORTATION OF RADIOACTIVE MATERIALS (86750)

The licensee's program was inspected to determine compliance with Technical Specifications 6.5 and 6.8, the requirements of 10 CFR Parts 20 and 71, and Department of Transportation Regulations 49 CFR Parts 171 through 178; and agreement with the commitments of Chapter 11 and 12 of the Final Safety Analysis Report.

1.1 Audits and Appraisals

The inspector reviewed audits, evaluations, and self-assessments to evaluate the licensee's effectiveness at identifying and correcting problems.

Nuclear Assurance Plant Support Audit 95-14 of radwaste activities was conducted August 8-28, 1995. An audit of this area is conducted every 24 months in accordance with Technical Specification 6.5.3.5.j. Because the audit was completed just before this inspection, the audit report had not been issued.

The audit team included an off-site technical specialist. The inspector reviewed the visiting auditor's resume and noted that the individual was well qualified to evaluate solid radwaste and transportation activities. Licensee representatives furnished copies of the audit checklists and summaries of findings for the inspector's review. The inspector also reviewed the audit scoping matrix and determined that the audit was comprehensive in its review of solid radioactive waste management and transportation activities.

As a result of the audit, six Condition Report/Disposition Requests (CRDR) were initiated (CRDR 9-5-Q374 and CRDRs 9-5-Q383 through 9-5-386). The audit team found housekeeping in the radwaste area in need of improvement and some individuals had not received requalification training as required. Problems were also identified related to the waste minimization program and maintenance personnel. Overall, the audit concluded that programs and processes established for the minimization, processing, storage, and shipping of radioactive waste were effective. The inspector concluded that the audit was very thorough and effective in identifying areas in which the programs could be improved. The radiation protection organization had not yet received a copy of the audit report. Thus, responses to the findings or the CRDRs had not been prepared.

The inspector reviewed selected Nuclear Assurance Evaluation Reports pertaining to the area of inspection. The reports were based on observations of activities in progress or existing plant conditions. The evaluations were conducted frequently and covered diverse areas, providing good insight to management on daily operations related solid radioactive waste management and transportation activities. The selected evaluations identified areas of potential improvement related to housekeeping concerns in the high level storage area, high integrity container rigging, and personnel training. The radiation protection organization responded properly to the findings.



The radiation protection organization performed self-assessments over a wide range of areas within the program. A portion of these self-assessments involved the periodic review of shipping papers by radiation protection representatives not normally involved with the transportation program. The inspector reviewed the results of such reviews and determined that this portion of the program was a good enhancement to ensure that the required shipping documentation was prepared for all shipments of radioactive material or waste.

Conclusion

Through the use of an exceptionally thorough audit, good evaluation reports, and occasional self-assessments, the licensee implemented a strong management oversight program for the solid radioactive waste management and transportation programs.

1.2 Changes

The inspector interviewed licensee personnel to determine if there had been major changes, since the last inspection, in organization, personnel, facilities, equipment, programs, and procedures.

There were no major changes to the solid radioactive waste or transportation program. The re-engineering effort was completed and some radiation protection personnel were replaced in this portion of the program with utility workers, but the number of staff remained at approximately the same level.

The new interim low level waste storage building was completed and the licensee would soon begin transferring waste to the building for storage.

1.3 Training and Qualifications

The inspector reviewed training records, interviewed personnel, and reviewed program assessments to determine if the licensee had provided initial and periodic training in NRC and Department of Transportation requirements to those employees involved in the transfer, packaging, and transport of radioactive material and waste.

The Audit 95-14 identified that a number of individuals involved in the transportation and shipping program did not receive training as required by NRC Bulletin 79-19. Specifically, these individuals prepared, reviewed, or approved certain procedures pertaining to transportation and shipping. CRDR 9-5-Q386 was initiated to document the situation and ensure an evaluation of the need of corrective actions was performed. Because the audit had just been completed, the response from the radiation protection organization had not yet been prepared, but the finding appeared valid. The inspector's review of training records of selected individuals involved in transportation and shipping activities did not result in the identification of additional individuals failing to receive training.



Conclusion

Personnel involved in the transfer, packaging, and transport of radioactive materials and waste were qualified and trained periodically, as required. The licensee had identified during an audit that some individuals responsible for preparing, reviewing, and approving the procedures used in preparation of shipments had not received necessary training.

1.4 Implementation of the Solid Radioactive Waste Program

The inspector reviewed the licensee's reference materials related to NRC and Department of Transportation requirements, instructions and operating procedures, waste classification documentation, and waste stream sampling results to assess the licensee's effectiveness in implementing the solid radioactive waste program.

The licensee's waste streams included spent resins, filter cartridges, concentrates, and dry active waste. No solidification was performed. Waste was dewatered and stored. Dry active waste was shipped to an off-site vendor for volume reduction and returned to the licensee for storage. The inspector verified that waste streams, if active, were sampled annually. Classification of waste was performed with a computer code commonly used in the nuclear industry. The computer code data base was routinely updated with the latest waste stream sampling results. No problems related to waste stream sampling or waste classification were identified.

The volume of waste generated by the licensee has generally declined over the past 5 years. There was a small increase in 1994 because additional waste was generated as a result of a steam generator tube rupture. The licensee's waste minimization program appeared to perform well and, during tours of all units, the inspector identified no problems. However, radioactive materials control personnel identified some examples of various chemicals that had been disposed in the radioactive trash. This was not in keeping with the licensee's waste minimization program, and CRDR 9-5-383 was initiated by Nuclear Assurance personnel to document the finding. Radioactive material control personnel were working with maintenance personnel to implement corrective actions and prevent recurrence. No regulatory issues were involved.

Because the licensee had not yet started moving items to the new interim low level waste storage building, a large number of containers of waste or contaminated items were stored in the yards of the units. However, the storage areas were well kept and properly posted and controlled. The licensee's means of tracking and accounting for these items generally worked well. Housekeeping within the radwaste buildings in each unit was less impressive and could have been improved by simple cleaning. Housekeeping in the dry active waste processing and storage facility was better.

NRC Inspection Report No. 50-528/95-14; 50-529/95-14; 50-530/95-14 detailed an event occurring on July 21, 1995, in which a high integrity container (HIC) of spent resin was dropped while being moved. The HIC, which had contact radiation levels as high as 100 rems per hour fell approximately seven feet without apparent damage. Licensee representatives stated that an engineering



evaluation will be performed on the HIC to determine if there was damage which was not immediately apparent. Licensee representatives also stated that until the evaluation is completed the HIC would remain in the storage shield.

Conclusion

An effective solid waste management program was implemented.

1.5 Shipping of LLRW for Disposal and Transportation of Other Radioactive Materials

The inspector reviewed implementing procedures and shipping documentation and interviewed shipping personnel to determine if shipments made by the licensee were in compliance with NRC and DOT regulations.

Implementing procedures for this area of the program provided appropriate guidance. The inspector reviewed radiation and contamination surveys of packages and vehicles, shipping paper documentation, shipping notifications, emergency response information, and radioactive materials licenses of consignees. The inspector noted that the telephone number of the alternate emergency contact person was incorrect. No other problems were identified.

The licensee had made 119 shipments of radioactive material and 16 radwaste shipments. These were conducted without incident. The licensee had shipped no Class B or C waste since before the previous inspection. The waste shipments consisted of dry active waste being shipped to a vendor for volume reduction. No shipments were sent for burial.

Conclusion

A safe and effective transportation program was in place.

2 FOLLOWUP (92904)

(Closed) Violation 529/9507-01: Failure to Post a High Contamination Area

On a tour of the containment building during a refueling outage, inspectors noted water on the floor of the 80-foot elevation. The water was dripping from a check valve. Licensee personnel were alerted and a radiation protection technician collected smear samples and determined that the contamination levels were as high as 150,000 disintegrations per minute per 100 square centimeters. The area was immediately posted as a high contamination area.

In response, the licensee initiated CRDR 2-5-0165 and conducted an investigation. As a result of the investigation, the licensee took the following corrective actions.

Night Order 95-003 was initiated to communicate management's expectations of radiation protection technicians performing surveys, tours and inspections of plant areas, and personal accountability. Radiation protection supervisors discussed the expectations with all members of the radiation protection staff.



The violation and management expectations to correct the violation were discussed as part of the second quarter Radiation Protection Technician Continuing Training Program



ATTACHMENT

1 PERSONS CONTACTED

1.1 Licensee Personnel

- *R. Bouquot, Section Leader, Nuclear Assurance
- *M. Fladager, Supervisor, Radiation Protection Support Services
- *J. Gaffney, Department Leader, Radiation Protection Operations
- R. Hazelwood, Engineer, Nuclear Regulatory Affairs
- *R. Henry, Site Representative, Salt River Project
- *V. Huntsman, Manager, Radiation Protection Support Services
- *A. Krainik, Department Leader, Nuclear Regulatory Affairs
- *D. Larkin, Senior Engineer, Nuclear Regulatory Affairs
- *W. Montecour, Senior Representative, Owner Services
- *M. Shea, Director, Radiation Protection
- *J. Steward, Manager, Radiation Protection Technical Services

1.2 NRC Personnel

- *K. Johnston, Senior Resident Inspector
- D. Garcia, Resident Inspector

*Denotes personnel that attended the exit meeting. In addition to the personnel listed, the inspector contacted other personnel during this inspection period.

2 EXIT MEETING

An exit meeting was conducted on September 1, 1995. During this meeting, the inspector reviewed the scope and findings of the report. The licensee did not express a position on the inspection findings documented in this report. The licensee did not identify as proprietary, any information provided to, or reviewed by the inspector.

