

ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Inspection Report: 50-313/96-014
50-368/96-014

Licenses: DPR-51
NPF-6

Licensee: Entergy Operations, Inc.
1448 S.R. 333
Russellville, Arkansas

Facility Name: Arkansas Nuclear One, Units 1 and 2

Inspection At: Russellville, Arkansas

Inspection Conducted: February 26-29, 1996

Inspector: Thomas H. Andrews, Radiation Specialist, Plant Support Branch
Division of Reactor Safety

Approved: Blaine Murray
Blaine Murray, Plant Support Branch Chief
Division of Reactor Safety

3/13/96
Date

Inspection Summary

Areas Inspected (Units 1 and 2): Routine, announced inspection of the following areas: audits and appraisals; changes; training and qualification of personnel; implementation of the solid radioactive waste program; shipping of low level radioactive waste for disposal; transportation of other radioactive material, and a review of the Updated Final Safety Analysis Report.

Observations (Units 1 and 2):

Plant Support

- Very good audits and assessments of the solid radioactive waste and transportation programs were performed (Section 2.1).
- Personnel performing duties associated with the management, handling, processing, packaging, and transporting of solid radioactive waste and other radioactive materials were well trained (Section 2.3).

- The licensee maintained current copies of regulations, licenses, certificates of compliance, and procedures available for personnel. The solid radioactive waste program was well implemented with clear procedural guidance and management oversight (Section 2.4).
- The licensee had implemented good procedures for the handling and transport of radioactive materials and radioactive waste (Section 2.5).
- The licensee continued to aggressively develop methods to address the problems associated with the service air system contamination (Section 3).
- A minor discrepancy between the Units 1 and 2 descriptions of a shared component contained in the Updated Final Safety Analysis Report was identified and discussed with the licensee (Section 5).

Summary of Inspection Findings:

- Violation 313/9410-04; 368/9410-04 was closed (Section 4).

Attachment:

- Attachment - Persons Contacted and Exit Meeting

DETAILS

1 PLANT STATUS

During the inspection period, Unit 1 operated at 100 percent power and Unit 2 operated at 98 percent power. There were no plant occurrences that affected the outcome of this inspection.

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

2.1 Audits and Appraisals

The inspector reviewed the following quality assurance documents:

- Quality Assurance Audit Report QAP-1-94 "Radwaste Management."
- Quality Assurance Surveillance Report SR-94-013, "Radioactive Material Controls at Radwaste."
- Quality Assurance Surveillance Report SR-94-021, "Condition Report CR-C-93-0120 Effectiveness Review."
- Quality Assurance Surveillance Report SR-94-027, "Anti-C Laundry Handling and Monitoring Activities."
- Quality Assurance Surveillance Report SR-94-035, "Resin Transfer/Processing Activities."
- Quality Assurance Surveillance Report 040-94, "Radwaste Shipment," and
- Quality Assurance Surveillance Report 95-025, "Radioactive Material Labelling and Tagging."

These assessments of the licensee's program were performed by qualified personnel. Concerns and recommendations were addressed through the use of condition reports, when applicable. The inspector reviewed selected condition reports and determined that management's review and followup were timely and adequately addressed the issues identified.

Approximately 2 percent of the shipments of radioactive materials/radioactive wastes were subject to quality assurance surveillances or inspections. Because there had not been problems identified associated with these types of shipments, the licensee determined that the level of inspection was adequate. The licensee indicated that the number of shipments subject to quality assurance surveillances would increase significantly after April 1, 1996, to review the result of the changes in 10 CFR 71 and 49 CFR.

2.2 Changes

There were no significant changes made to the organization associated with the solid radioactive waste management program or transportation of radioactive materials processes since the last inspection. The licensee was in the process of making procedure changes to address the revisions in 10 CFR Part 49 that take affect April 1, 1996. According to the licensee, approved procedures would be in place prior to April 1, 1996.

2.3 Training and Qualification of Personnel

The inspector reviewed training records for personnel who were responsible for processing, testing, storage, and shipping of low level radioactive wastes and transportation of other radioactive materials. The inspector also reviewed training requirements to ensure that periodic retraining in the Department of Transportation and NRC requirements, and waste burial license requirements. This training was conducted every 2 years in accordance with the licensee's commitments to IE Bulletin 79-19 and Information Notice 92-72 and in accordance with Subpart H of 49 CFR 172.

Discussions with personnel that directly performed duties associated with packaging, transfer, storage, and transportation of radioactive materials and radioactive wastes demonstrated that they were well informed regarding industry events and upcoming regulatory changes. Based on the lesson plan for the previous training cycle, the inspector determined that the training adequately addressed topics outlined in IE Bulletin 79-19 and Information Notice 92-72.

2.4 Implementation of the Solid Radioactive Waste Program

The inspector verified that the licensee had current copies of Department of Transportation and NRC regulations, as well as, copies of state regulations associated with the low level radioactive waste transportation, processing, and disposal. The licensee had the updated version of the Department of Transportation regulations that are to be implemented April 1, 1996. Work was in process to revise the procedures to reflect these changes. The inspector discussed the potential changes with the licensee and determined that the licensee was very knowledgeable about the associated changes.

Current copies of approved procedures were readily available to individuals who process, prepare for shipping, and transport radioactive materials / radioactive waste. The licensee had designated specific individuals who were allowed to approve shipments of radioactive materials/radioactive waste.

The licensee had current copies of licenses for receivers of shipments of radioactive materials and radioactive wastes. Certificates of compliance were provided for all of the applicable waste packages.

The inspector reviewed documentation packages for selected shipments made since the last inspection in this area. A mixture of radioactive material, low-specific activity, and dry-active waste shipments were reviewed. The inspector confirmed that these shipments were properly classified in accordance with 10 CFR 61. Documentation was provided to demonstrate that waste stability requirements were satisfied.

During the review of shipping documentation, the inspector reviewed the waste classification and stability requirements determination process contained in the licensee's procedures. These were in accordance with NRC regulations. The determination of scaling factors for isotopes that were not readily detectable were properly determined on a regular basis for each identified waste stream. From the review of licensee's procedures and shipping documentation, the inspector determined that these scaling factors were applied properly.

2.5 Shipping of Low Level Radioactive Waste for Disposal, and Transportation of Other Radioactive Material

The inspector reviewed shipping records on file for selected shipments since the previous inspection in this area. Selected shipments included radioactive materials, samples sent offsite for analysis, dry active waste shipments, and low specific activity waste shipments. The packages were selected from the licensee's files for shipments during 1994, 1995, and 1996. Calculations associated with waste classification, stability requirements, and labeling requirements were verified.

The licensee maintained records of all radioactive waste and materials shipments as required. The records included all shipping documentation, radiation surveys, and required notification data. No problems were identified.

The inspector observed a shipment of radioactive materials to another nuclear power plant. The inspector verified documentation associated with this shipment was consistent with regulations and with the licensee's procedures. The inspector observed the surveying of the packages, loading of the vehicle, and briefing of the driver associated with the shipment.

The inspector reviewed the storage of radioactive materials and radioactive waste in the low level waste storage building and in the alternate radwaste storage facility. During these tours, the inspector observed good material conditions in these areas, and did not identify concerns. The inspector reviewed controls used to transport materials from the individual units to these areas and determined that the procedures contained adequate guidance to ensure safe transport of these materials.

3 Service Air Contamination Followup (83750)

The Unit 1 service air system was contaminated during transfer of spent resin in September 1995. At that time, the licensee developed a flushing plan to remove as much of the radioactive contamination as possible. Following this, the licensee increased the sampling frequency in an attempt to detect remaining contamination.

One area that was not available for flushing was the cross-connect line between Units 1 and 2. The licensee used sensitive radiation detection equipment to characterize the location of contamination in this line. The licensee established a monitoring process to detect migration of this contamination.

Following the recent discovery of contamination from one of the service air connections, the licensee began developing additional measures to address the problem of contamination that was remaining in the system. A method of scrubbing the inside of the service air lines using a brush on stiff cable was under review. The licensee indicated that this would be used to scrub sections of the service air lines where the problem areas are located. Flushing of these lines after the scrubbing process should minimize the amount of material that can break loose and be blown out of the service air system.

The licensee was developing a plan where they sampled the condensation blown out of service air lines. Because there had not been contamination detected in air sampling, the licensee suspected that the contamination remaining in the line is more likely to be transmitted in water that collects in the lines. The inspector discussed these plans and determined that the licensee was continuing to respond to this condition in an adequate manner.

4 FOLLOW-UP - PLANT SUPPORT (92904)

(Closed) Violation 313/9410-04; 368/9410-04: Unlabelled Radioactive Material Containers

On December 30 and 31, 1994, a number of illegible or missing radioactive material tags on items located in the low level radwaste building and in the radiological controlled area of the Unit 2 auxiliary building were identified by NRC inspectors. The licensee is required by 10 CFR Part 20.1904(a) to ensure each container of licensed material bears a durable, clearly visible label to identify the material as radioactive.

The inspector reviewed actions taken by the licensee as a result of this violation. The licensee initiated a self-review process where supervisors were assigned the responsibility to routinely tour areas of the plant specifically looking for labelling discrepancies. Additionally, a quarterly review of materials by technicians was initiated. From these reviews and surveillances, the inspector determined that while labelling problems were

still being identified, the number and frequency of items identified had been substantially reduced. Because of the licensee's aggressive self-checking process, these types of discrepancies are now being identified by the licensee and addressed in a timely manner. Based upon these observations, this violation is being closed.

5 REVIEW OF UPDATED FINAL SAFETY ANALYSIS REPORT COMMITMENTS

A recent discovery of a licensee operating their facility in a manner contrary to the Updated Final Safety Analysis Report description highlighted the need for a special focused review that compares plant practices, procedures and/or parameters to the Updated Final Safety Analysis Report description. While performing the inspections discussed in this report, the inspector reviewed the applicable portions of the Updated Final Safety Analysis Report that related to the areas inspected. The following inconsistencies were noted between the wording of the Updated Final Safety Analysis Report and the plant practices, procedures, and/or parameters observed by the inspectors.

Section 11.1.3.3.8 of the Unit 1 Updated Final Safety Analysis Report contained the following statement, "Sample stream concentrations of up to 10^{-4} pCi/cc of gaseous radioiodine and particulate can be monitored by use of filters and grab samples." Section 11.5.6 of the Unit 2 Updated Final Safety Analysis Report contained the statement, "Sample stream concentrations of up to 10^{-4} μ Ci/cc of gaseous radioiodine and particulate can be monitored by use of filters and grab samples." This instrument was a shared component between Units 1 and 2, therefore, the text should have been the same. The licensee determined that the Unit 1 value was correct. The licensee stated that a change to the Unit 2 Updated Final Safety Analysis Report will be prepared to correct this item. Because of the minor nature of these items, no further discussion was needed in this report.

The following sections of the Updated Final Safety Analysis Report were reviewed as part of this inspection:

Unit 1	11.3.3	Solid Radioactive Waste Program
Unit 2	11.5	Solid Radioactive Waste Program

ATTACHMENT

PERSONS CONTACTED AND EXIT MEETING

1 PERSONS CONTACTED

1.1 Licensee Personnel

B. Allen, Manager, Unit 1 Maintenance
J. Bacquet, Health Physics Supervisor
R. Bement, Manager, Radiation Protection/Chemistry
B. Bishop, Radwaste Supervisor
T. Chilcoat, Health Physics Supervisor
S. Cotton, Manager, Training/Emergency Planning
D. Deal, ALARA Supervisor
R. Eddington, Unit 1 Plant Manager
R. Espolt, Manager, Events Analysis
D. Mims, Director, Nuclear Safety
S. Pyle, Licensing Specialist
M. Ruder, Assessment Specialist
J. Smith, Health Physics Operations Superintendent
D. Snellings, Superintendent, Radiation Protection Technical Support
R. Starkey, Health Physics Supervisor
D. Wagner, Quality Assurance Supervisor
L. Waldinger, General Manager, Plant Operations

1.2 NRC Personnel

K. Kennedy, Senior Resident Inspector
M. Shannon, Radiation Specialist

The above individuals attended the exit meeting. In addition to the personnel listed above, the inspector contacted other personnel during this inspection period.

2 EXIT MEETING

An exit meeting was conducted on February 29, 1996. 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.