

APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Inspection Report: 50-382/94-17

License: NPF-38

Licensee: Entergy Operations, Inc.
P.O. Box B
Killona, Louisiana

Facility Name: Waterford Steam Electric Station, Unit 3

Inspection At: Taft, Louisiana

Inspection Conducted: July 18-22, 1994

Inspector: Anthony D. Gaines, Radiation Specialist
Facilities Inspection Programs Branch

Approved:

Blaine Murray
B. Murray, Chief, Facilities Inspection
Programs Branch

8/1/94
Date

Inspection Summary

Areas Inspected: Routine, announced inspection of the solid radioactive waste management and radioactive materials transportation programs.

Results:

- Very good audits and surveillances were performed by qualified individuals (Section 1.1).
- There had been no major changes in facilities, equipment, programs, or procedures (Section 1.2).
- The radioactive waste and transportation programs included a well qualified staff (Section 1.3).
- An excellent training program had been implemented for personnel involved in transportation activities. The licensee committed to revise a training procedure in order to satisfy their response to NRC Bulletin 79-19 (Section 1.3).
- Good implementing procedures were maintained for the radioactive waste management program (Section 1.4).

- Onsite radioactive waste in storage was shipped in anticipation of the closure of the offsite burial site (Section 1.4).
- Radioactive waste was properly classified, characterized, and prepared for shipment (Section 1.5).
- Individuals responsible for transportation of radioactive waste were knowledgeable of the regulatory requirements and burial site license conditions (Section 1.6).

Attachment:

- Attachment - Persons Contacted and Exit Meeting

DETAILS

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

The inspector reviewed the licensee's radioactive material transportation program to determine agreement with the commitments made in response to NRC Bulletin 79-19; compliance with the requirements of 10 CFR Parts 20, 30, and 71; and 49 CFR Parts 171 through 189. The inspector also reviewed the licensee's program for processing, control, and onsite storage of solid radioactive waste for agreement with the commitments in Chapter 11.4 of the Final Safety Analysis Report and compliance with the requirements in Technical Specification 6.8; and 10 CFR 61.55 and 61.56.

1.1 Audits and Appraisals

The audit frequency for the solid radioactive waste and transportation programs was biennial. Therefore, there had not been a comprehensive audit performed since the last inspection of this area in June 1993 which reviewed the audit performed March 5 through April 7, 1993. However, there were other specialized audits of plant wide programs that were performed that included areas in the solid radioactive waste and transportation of materials programs. The inspector reviewed the following: a draft audit report of an audit conducted May 9 through July 5, 1994, titled "Performance, Training, and Qualifications," which included a review of radwaste personnel training; an audit conducted June 29 through August 31, 1993, titled "Procedure Revision Process/Instructions, Procedures, and Drawings," which included a review of the Radwaste Department's methods for revising procedures; and an audit conducted February 11 through May 9, 1994, titled "Computer Codes and Software," which included a review of the vendor supplied computer program Radman that the Radwaste Department used for transportation purposes. The audits reviewed were very good and pertinent items were included in the licensee's self-assessment program. Corrective actions for audit findings were appropriate and timely.

Surveillance reports of quality assurance activities performed since the last inspection of the solid radioactive waste and transportation programs in June 1993 were reviewed for scope, thoroughness of program evaluation, and timely followup of identified deficiencies. The inspector reviewed the quality assurance surveillances performed during the period June 1993 through July 1994 in the areas related to the performance of the solid radioactive waste and transportation programs. Comprehensive quality assurance surveillances were performed by qualified individuals to evaluate program activities and provided a means for periodic management oversight. The surveillances did not indicate any adverse findings.

The licensee used a vendor to conduct radiochemical analysis required in 10 CFR Part 61. The inspector noted that the vendor was on the licensee's Qualified Suppliers List. The licensee used an audit performed by another utility in March 1993 to maintain the vendor on the qualified list. The inspector noted that the licensee had reviewed the audit of the vendor for appropriateness to their program. Also, the licensee's personnel performed a

vendor audit of the company that distributes and supports the Radman computer program used by the Radwaste Department to ship radioactive waste. The vendor audit was performed March 30-31, 1993, and identified pertinent findings and observations. The licensee tracked the findings and observations to ensure that appropriate corrective actions were taken by the vendor.

The inspector reviewed selected Condition Reports that pertained to the solid radioactive waste and transportation programs. The inspector noted that they were handled appropriately, and corrective actions had been taken. The responses to corrective actions were noted to be timely, except for one. The inspector asked about the timeliness of the response and was informed that the reason that the response did not appear to be timely was that the scope of the corrective actions was increased part way through the originally allotted response time, which caused the response to be overdue.

1.2 Changes

The inspector reviewed the organization, management controls, staffing, and the assignment of solid radioactive waste and transportation program responsibilities for changes. The inspector noted that there had been no major changes in facilities, equipment, programs, and procedures that would have adversely affected the solid radioactive waste management and transportation of radioactive materials programs since the last inspection.

The inspector noted that only minor organizational changes had been made to the program. The changes in the Radwaste Department included the upgrading of a deconner position to that of a health physics technician position. This was a very good change that added some technical depth to the department. It was also noted at the time of the inspection that the position was vacant. The individual that occupied the position accepted a promotion at another Entergy plant. The licensee was reviewing the vacancy to determine whether the position would be filled.

Only minor changes to procedures were noted. The majority of the changes were in response to the title of the head of the Radwaste Department changing from Radwaste Supervisor to Radwaste Foreman.

1.3 Training and Qualifications

The inspector reviewed the training and qualification programs for personnel responsible for implementing the solid radioactive waste and transportation of radioactive materials programs. The licensee has established a good training program. The inspector discussed radioactive waste training and lesson plans with the radioactive waste instructor. The qualifications of the instructor were reviewed and found to be appropriate. The instructor had recently attended a vendor's radioactive waste and shipping course for training personnel.

The inspector reviewed initial and continuing training provided to radioactive waste personnel and noted that it was appropriate. The inspector noted that all of the radwaste personnel had attended a vendor taught transportation

training course and met the licensee's required qualifications. The Radwaste Foreman had attended appropriate training within the last year.

The instructor mentioned to the inspector that for 1994, the licensee planned to have the Radwaste Foreman and designated personnel attend a vendor transportation course and a Radman computer course, instead of providing the training to all radwaste personnel as had been the practice in the past. The inspector noted that most of the personnel that had taken the vendor course annually were decon personnel, who were not directly responsible for the shipping and transportation of radioactive waste. A review of the licensee's response dated June 16, 1983, to NRC Bulletin 79-19, "Packaging of Low-Level Radioactive Waste for Transport and Burial," stated that training and periodic retraining of radwaste personnel involved in the transfer, packaging, and transport of radioactive materials would be accomplished in accordance with Radwaste Procedure RW-1-410, "Radwaste Personnel Qualifications." The procedure did not require radwaste helpers (decon personnel) to have the type of vendor training that had been provided to them annually. Therefore, the past practice of providing the training to all radwaste personnel was beyond the licensee's commitment to NRC Bulletin 79-19. The procedure specified the positions and the training requirements for each position. The inspector noted that the procedure had been deleted in 1985, and the contents were switched to the licensee's training manual. The inspector reviewed the corresponding procedures in the training manual and noted that the training procedures did not detail, as the previous procedure had, the positions (personnel) which required training in response to NRC Bulletin 79-19. This was discussed with the licensee and, before the exit meeting, the licensee revised the procedure for initial training of radwaste personnel to indicate the positions that required the training in response to NRC Bulletin 79-19. However, the inspector noted that the procedure for periodic retraining of radwaste personnel had not been revised. This was discussed with the licensee and, at the exit meeting, John Houghtaling, the Technical Services Manager, committed to revise Training Procedure NTC-238, "Radwaste Services Continuing Training," to include the radwaste personnel required to attend periodic training in response to NRC Bulletin 79-19.

1.4 Solid Radioactive Waste Management

The inspector reviewed selected radioactive waste procedures that implemented the licensee's solid radioactive waste management program. The inspector noted that good quality procedures had been established for the processing and disposal of low-level radioactive waste, and the procedures met the requirements of the licensee's Technical Specifications.

The licensee had shipped for burial the majority of radioactive waste onsite before the burial site was closed to them on July 1, 1994. As part of the licensee's long-range radwaste management plan, the licensee had been keeping abreast of the burial site development in their compact and have reviewed their storage capabilities. The licensee estimated that they have approximately 12 to 18 months of onsite space for generated radioactive waste. The licensee's review of the burial site development indicated that their compact may not have a burial site for 5 years or more. Therefore, the licensee had been designing an onsite storage space for the amount of

radioactive waste that they would generate in 5 years with the possibility of future expansions of another 5 years' inventory of radioactive waste. The licensee plans to have the design completed by September 1994, and the building finished by July 1995. The licensee had not completed a 10 CFR 50.59 review or changes to their Final Safety Analysis Report for the building; therefore, these items will be reviewed during a future inspection.

1.5 Radioactive Waste Classification, Waste Characterization, and Shipping Requirements

The inspector reviewed the licensee's radioactive waste procedures and found the licensee's program for classification and characterization of radioactive waste to meet the requirements of 10 CFR Part 61. The licensee and a contractor laboratory performed radiochemical analyses on samples of various radioactive waste types as required in 10 CFR 61.55 and 61.56. The inspector noted that the sample analyses had been completed at the proper frequency. The test sample analyses results were used for determination of radwaste classification and radionuclide composition of the radwaste sources. The licensee performs radionuclide analyses for radionuclide characterization on radioactive waste packaged for shipment and burial and employs correlation factors for characterization of radionuclides not directly identified.

The inspector reviewed selected radioactive waste shipment manifests and shipping papers that accompanied the licensee's shipments of radioactive waste. The inspector determined that the completed manifests complied with the requirements of 10 CFR 20.2006.

1.6 Transportation Activities

The inspector reviewed the licensee's transportation program for shipment of radioactive materials and radioactive waste.

1.6.1 Quality Assurance Program

The licensee had maintained an approved (Approval 0604) quality assurance program in accordance with 10 CFR Part 71, Subpart H, for the transportation of radioactive materials. The approval expires June 30, 1996.

1.6.2 Procurement and Selection of Packages

The licensee used strong-tight containers for the shipment of radioactive waste. Most of the shipments were in sea/land containers which contained uncompacted waste that was shipped to vendors who segregated and repackaged the radioactive waste. Other shipments included laundry shipments in steel containers and shipping casks with spent resin in high integrity containers. The licensee was on the user's list for all NRC and DOT certified packages used. The licensee maintained current documentation on the manufacturer's design testing, maintenance, and the NRC Certificate of Compliance for all radioactive material packages used by the licensee.

1.6.3 Preparation of Packages for Shipment

The inspector verified that the licensee had procedures and checklists for the preparation of radwaste shipments. These procedures provided for visual inspection of the package prior to filling the container, instructions for closing and sealing the container, marking and labeling requirements, and determination of radiation and contamination limits. The licensee used a checklist to assure that the procedures were followed and that packages were properly prepared for shipment in accordance with NRC, DOT, state, and burial site requirements. Discussions with licensee personnel indicated that the individuals involved in the transportation of radioactive waste and materials possessed a good knowledge of the procedures and NRC and DOT regulations pertaining to the preparation of packages for shipment.

1.6.4 Delivery of Completed Packages to Carriers

The inspector verified that the licensee's procedures included the required NRC and DOT regulations. A review of selected records and shipping papers for radioactive waste shipments indicated that the licensee had prepared appropriate manifests and shipping papers in accordance with approved procedures. The shipping papers included the necessary information to comply with regulatory requirements. The licensee only used exclusive use carriers for all radioactive waste shipments and assured that the following items were in accordance with NRC and DOT regulations and station procedures: radiation levels were within required limits, transport vehicles were properly placarded, surface contamination on packages did not exceed requirement levels, and blocks and/or braces were in place to prevent damage or shifting of the load during transit.

The inspector was not able to observe licensee activities involving radioactive materials shipments, because no shipments were performed during the period of the inspection. This was due to the fact that the burial site was closed to the licensee for shipment of radwaste, and the licensee did not have any laundry shipments scheduled for the week.

1.6.5 Records, Reports, and Notifications

The inspector reviewed selected records of radioactive waste shipments made by the licensee during 1994. The licensee's shipments were adequately documented to meet NRC and DOT regulations. 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.

1.7 Conclusions

Very good audits and surveillances were performed by qualified individuals. The audits and surveillances identified pertinent findings and corrective actions for the findings were timely. There had been no major changes in facilities, equipment, programs, or procedures; only minor organizational and procedural changes were made.

The Radwaste Department had an adequate, well-qualified staff to meet staffing requirements. The licensee had maintained an excellent training program for radwaste personnel.

Good implementing procedures had been established for the radioactive waste management program. Radioactive waste was shipped offsite for burial in the first half of 1994 to reduce the onsite inventory.

The low-level radioactive waste disposal program was conducted in accordance with the requirements of 10 CFR 20.2006, 61.55, and 61.56.

The licensee maintained good implementing procedures that addressed waste classification and characterization, selection of packages, preparation of packages, and delivery of the completed packages to the carrier. Individuals responsible for transportation of radioactive waste were knowledgeable of the regulatory requirements and burial site license conditions.

ATTACHMENT

1 PERSONS CONTACTED

1.1 Licensee Personnel

- *D. F. Boan, Quality Assurance Specialist
- *J. Houghtaling, Technical Services Manager
- *D. A. Landeche, Lead Supervisor, Radiation Protection Support
- *S. Landry, Radwaste Foreman
- *R. LeBlanc, Acting Licensing Manager
- *A. S. Lockhart, Quality Assurance Manager
- *R. Prados, Senior Engineer, Licensing
- L. Simon, Senior Engineer, Radiation Protection
- *T. A. Thiesse, Modifications Manager, Plant Modification and Control

1.2 NRC Personnel

E. J. Ford, Senior 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 July 22, 1994. During this meeting, the inspector reviewed the scope and findings of the report. The Technical Services Manager committed to revise a training procedure as discussed in Section 1.3 of this report. The licensee did not identify as proprietary, any information provided to, or reviewed by the inspector.