ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.:	50-382
License No.:	NPF-38
Report No.:	50-382/96-17
Licensee:	Entergy Operations, Inc.
Facility:	Waterford Steam Electric Station, Unit 3
Location:	Hwy. 18 Killona, Louisiana
Dates:	July 22-26, 1996
Inspector:	Thomas H. Andrews Jr., Radiation Specialist
Approved By:	Blaine Murray, Chief, Plant Support Branch

ATTACHMENT:

Attachment: Partial List of Persons Contacted
List of Inspection Procedures Used
List of Items Opened, Closed, and Discussed
List of Acronyms Used

EXECUTIVE SUMMARY

Waterford Steam Electric Station, Unit 3
NRC Inspection Report 50-382/96-17

This routine, announced inspection focused upon the licensee's programs for solid radioactive waste management and transportation of radioactive materials. Emphasis was placed on changes to the licensee's programs resulting from the revision of Department of Transportation and NRC Transportation Regulations.

Plant Support

- Programmatic controls and procedures for shipment of radioactive material/waste were adequate (Section R1.1).

- The procedure for shipping low specific activity materials was consistent with regulatory requirements. The process for shipping surface contaminated objects needed additional guidance pertaining to assessing contamination levels on inaccessible surfaces (Section R3.1).

- Personnel directly involved in the transportation of radioactive material/waste were adequately trained (Section R5.1).

Report Details

Summary of Plant Status

Waterford 3 was shut down throughout the inspection period. The outage was required to replace a reactor coolant pump seal and a reactor coolant pump seal heat exchanger. There were no operational occurrences that impacted the results of this inspection.

III. Engineering

E2 Engineering Support of Facilities and Equipment

E2.1 Updated Final Safety Analysis Report Review

A recent discovery of a licensee operating their facility in a manner contrary to the Updated Final Safety Analysis Report (UFSAR) description highlighted the need for a special focused review that compares plant practices, procedures and/or parameters to the UFSAR descriptions. While performing the inspections discussed in this report, the inspectors reviewed the applicable portions of the UFSAR that related to the areas inspected. The inspector verified that the UFSAR wording was consistent with the observed plant practices, procedures and/or parameters.

IV. Plant Support

R1 Radiological Protection and Chemistry (RP&C) Controls

R1.1 Implementation of Solid Radioactive Waste Program (86750)

a. Inspection Scope

The inspector reviewed licensee copies of regulations, certificate of compliance for waste packages, and shipping documents to ensure that the licensee had maintained the latest copies on file. The inspector reviewed the procedure used for shipping of radioactive waste/materials and the process for determining and applying scaling factors to quantify the concentration of hard-to-measure radionuclides in materials or for classification of wastes.

b. Observations and Findings

The inspector verified that the licensee had up-to-date copies of Department of Transportation, NRC and the competent state authority regulations and up-to-date copies of the licenses of all facilities to which the licensee ships radioactive materials or wastes. This was consistent with the licensee's commitments to I E Bulletin 79-19

The inspector verified that the licensee had provided management approved, detailed instructions and operating procedures for the transfer, packaging and transport of low-level radioactive waste. The licensee's procedure for the shipment of radioactive waste and materials was developed by a peer group of the Entergy Operations, Inc. utilities. The single procedure replaced multiple procedures within the licensee's radwaste program.

The procedure consisted of two steps: (1) document compliance using a checklist; and, (2) ship radioactive waste or material in accordance with the flow chart within the procedure. The inspector determined that the steps within the flow chart addressed classification, packaging, shipping papers, labeling, and placarding required by regulations.

The flow chart contained generic instructions for shipment of radioactive waste and materials. The same flow chart could be used for limited quantity shipments, low specific activity shipments, type "B" waste shipments, etc. The checklist contained additional guidance that directed the user to applicable portions of regulations.

The licensee identified, in writing, those individuals authorized to certify shipments of radioactive wastes/materials in accordance with Section II of Appendix F to 10 CFR Part 20.

The inspector verified that the licensee used updated and audited procedures when scaling factors were needed to quantify the concentration of hard-to-measure radionuclides in materials or to classify wastes. The inspector confirmed that this information had been incorporated into the computer program used to prepare shipping papers. The program was set-up to implement the "95% rule" for listing radionuclides on shipping papers in accordance with 49 CFR 173.433.

c. Conclusion

Programmatic controls and procedures for shipment of radioactive material/waste were adequate.

R3 RP&C Procedures and Documentation

R3.1 Transportation of Low Specific Activity (LSA) Materials and Surface Contaminated Objects (SCO) (2515/133)

a. Inspection Scope

The inspector reviewed the licensee procedures which specifically addressed the processing and packaging of LSA material and SCO. Documentation for shipments was reviewed to verify compliance with the revised Department of Transportation regulations.

b. Observations and Findings

The inspector observed that the licensee had not made shipments of materials classified as SCO. The licensee stated that they were currently segregating materials that could potentially be considered as SCO for later processing. This material was being retained since the procedure did not address how the assessment of contaminated surfaces for inaccessible areas was to be accomplished. The licensee indicated that they had not resolved how this process was to be performed in compliance with the revised regulations. The licensee stated that this issue would be resolved prior to shipping SCO.

The licensee's procedure referenced the requirements for a leaching test for LSA-III material (49 CFR 173.468 and 10 CFR 71.77 specify a leach test required to demonstrate that LSA-III material is relatively insoluble as required by its definition). The licensee stated that they did not envision the need for this test since the types of waste/materials shipped were not considered to be insoluble.

The various types of shipping packages that were acceptable for shipping LSA and SCO were listed in the procedure. The inspector compared these with those listed in the regulations and confirmed the accuracy of the licensee's procedure. The licensee used a computer code (MICROSHIELD) to determine the unshielded dose rate at 3 meters to assess the activity limit for waste packages.

The inspector discussed the conveyance limits listed in the Department of Transportation regulations with the licensee. The procedure did not specifically address this limit. The licensee stated that they would review the need for adding this to the procedure.

The inspector reviewed the analysis of the licensee waste streams which could be shipped as LSA material. The licensee had entered this information into the computer program used to generate shipping documents. The inspector verified that the waste stream scaling factor information used for shipments was accurately reflected on the shipping documents. The program ensured that the isotopes listed on the documents satisfied the "95% rule."

c. Conclusion

The procedure for shipping LSA materials was consistent with regulatory requirements. The process for shipping SCO needed additional guidance pertaining to assessing contamination levels on inaccessible surfaces.

R3.2 Use of International System of Units (SI) (2515/133)

a. Inspection Scope

The regulations for use of SI units are scheduled to be effective on April 1, 1997. The inspector discussed the use of SI units for shipments with the licensee.

b. Observations and Findings

The licensee had not changed the program or procedures to use SI units. According to the licensee, this change would be made on April 1, 1997, in accordance with the regulations.

c. Conclusion

The licensee was aware of the requirement to use SI units when shipping radioactive material after March 31, 1997. Plans were in place to revise procedures appropriately.

R3.3 Expansion of the Radionuclide List and Changes in Radionuclide Limits (2515/133)

The inspector reviewed the licensee's use of the radionuclide table of A_1/A_2 values to assure that packages did not exceed their allowable radioactivities. The inspector verified that computer codes were updated to include the use of the new values, as necessary. This information was incorporated into implementation of the "95% rule" for listing radionuclides on shipping papers.

R5 Staff Training and Qualification

R5.1 Training and Qualification of Personnel (2515/133)

a. Inspection Scope

The inspector reviewed the training, knowledge, and performance of radwaste workers and supervisors in the transportation area, to determine the changes and updates implemented in response to the new regulations.

b. Observations and Findings

The individuals listed as designated shippers and their supervisor had attended training regarding the revised regulations. This training was provided by a vendor. This training also satisfied the 49 CFR Part 172.

Subpart H, requirement that each hazmat employer provide initial and periodic training to its hazmat employees.

Other workers not directly involved in the transportation of radioactive material/waste received a form of hazmat training during general employee training. This training covered the hazards of radioactive materials, contamination, etc. However, this training did not specifically address the processing and packaging of LSA material and SCO for transportation, the preparation and review of shipping papers and labels, the functions where SI units are required, or the requisite special controls over the shipment of fissile material. The licensee stated that the average employee did not require this level of detail for the safe conduct of their jobs. However, the licensee added that there may be some benefit to adding more detail to the radioactive waste minimization portion of the training to include a general discussion of these topics.

The inspector reviewed the training records for the designated shippers to determine that they were qualified per the licensee's procedure. The licensee had a training qualification procedure that listed courses required for radwaste personnel. These courses were consistent with the courses described in the licensee's UFSAR. The inspector determined that the required courses, or their equivalent, had been completed by the designated shippers.

For contract or vendor employees not specifically covered by the licensee's radiation protection program, NRC Generic Letter 95-09, "Monitoring and Training of Shippers and Carriers of Radioactive Materials," states that licensees can accept training received by carriers under requirements imposed by the Department of Transportation relative to shipments of radioactive material. The carrier used by the licensee to transport radioactive material/waste had provided a letter certifying the carrier's training program met the Department of Transportation training requirements.

c. Conclusion

Personnel directly involved in the transportation of radioactive material/waste were adequately trained.

V. Management Meetings

X1 Exit Meeting Summary

The inspector presented the inspection results to members of licensee management at the conclusion of the inspection on July 26, 1996. The licensee acknowledged the findings listed.

The inspector asked the licensee whether materials examined during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT

PARTIAL LIST OF PERSONS CONTACTED

Licensee

D. Boan, Specialist, Quality Assurance
D. Landeche, Lead Supervisor, Radiation Protection
S. Landry, Specialist, Radiation Protection (designated shipper)
E. Lemke, Specialist, Licensing
D. Newman, Training Instructor
R. Prados, Senior Engineer, Licensing
D. Reider, Specialist, Quality Assurance
J. White, Radiation Protection Technician (designated shipper)

NRC

L. Keller, Senior Resident Inspector

INSPECTION PROCEDURES USED

IP 86750	Solid Radioactive Waste Management and Transportation of Radioactive Materials
TI 2515/133	Implementation of Revised 49 CFR Parts 100-179 and 10 CFR Part 71

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened	None
Closed	None
Discussed	None

LIST OF ACRONYMS USED

LSA	Low Specific Activity
PDR	Public Document Room
SCO	Surface Contaminated Object
SI	System International
UFSAR	Updated Final Safety Analysis Report