

ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

Docket No.: 50-458  
License No.: NPF-47  
Report No.: 50-458/96-11  
Licensee: Entergy Operations, Inc.  
Facility: River Bend Station  
Location: 5485 U.S. Highway 61  
St. Francisville, Louisiana  
Dates: May 20-23, 1996  
Inspector: Thomas H. Andrews Jr., Radiation Specialist  
Approved By: Blaine Murray, Chief, Plant Support Branch  
Division of Reactor Safety

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

EXECUTIVE SUMMARY

River Bend Station  
NRC Inspection Report 50-458/96-11

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

- The licensee's program to minimize the amount of waste produced was very good. This contributed to and benefited from good housekeeping within the radiological controlled area (Section R1).
- The licensee's procedure was generic to radioactive waste/material shipping and required a high degree of skill and knowledge to execute it correctly. The licensee made a commitment that personnel who executed this procedure would meet a minimum set of training requirements (Section R3.1).
- The licensee's documentation of shipments was consistent with regulations. Current  $A_1$  and  $A_2$  values were being used to characterize shipments in accordance with Department of Transportation and NRC transportation regulations (Section R3.2)
- The licensee had conducted training on the changes to the Department of Transportation and NRC regulations for the individual designated as the primary shipping contact and other support personnel (Section R3.5).
- The licensee's quality assurance organization received no training regarding the transfer, packaging and transport activities associated with radioactive wastes and materials. This was reflected by the lack of meaningful surveillance in this area. Given the complexity of the regulations for the transport of radioactive waste and materials, this was identified as an area where additional licensee attention was warranted (Section R7).

## Report Details

### Summary of Plant Status

The plant operated at full power during the entire inspection period. There were no operational occurrences that impacted this inspection.

## IV. Plant Support

### R1 Radiological Protection and Chemistry (RP&C) Controls

#### a. Inspection Scope (86750)

The inspector toured the radiological controlled area to observe conditions within the facility and to observe the licensee's process for handling and minimizing radioactive wastes.

#### b. Observations and Findings

The inspector observed good housekeeping throughout the radiological controlled area. Areas were typically clean and free from materials that produce or become radioactive waste. The licensee's effort to prevent people from bringing unnecessary materials into the radiological controlled area was considered to be a contributing factor to the licensee's good housekeeping.

The inspector noted that the licensee had reduced their radioactive waste volume goal in 1995, and subsequently met the goal by only producing one half of the goal volume. The licensee subsequently reduced the radioactive waste volume goal for 1996, with allowance for the refueling outage during the first quarter. At the time of this inspection, the licensee was achieving this goal.

During tours of the radwaste building, the inspector observed a large number of drums containing various types of materials awaiting shipment to a waste processing facility. The inspector questioned the licensee regarding their program for tracking this inventory of drums. The licensee demonstrated their program for identifying, tracking, and locating the filled drums that were in the radwaste building, awaiting shipment.

The inspector asked how drums were tracked that were "in process." The licensee responded that the drums were not tracked until they were turned over to the radwaste organization for shipment. The licensee indicated that the process for tracking drums brought into the radiological controlled area would be reviewed to see if additional controls were needed. The inspector noted that there had not been a problem with drums being "lost in process."

During a routine NRC inspection at Millstone, inspectors found that the Unit 1 radwaste facility equipment was significantly degraded, especially vessels and piping in the facility. In general, a lack of continuing and preventive maintenance appeared to have allowed several systems and components to significantly degrade, in some instances creating unnecessary adverse radiological conditions. This information was presented in NRC Information Notice 96-14, "Degradation of Radwaste Facility Equipment at Millstone Nuclear Power Station, Unit 1." The inspector conducted a detailed tour of the radwaste building at River Bend and did not identify degraded conditions similar to those discussed in NRC Information Notice 96-14.

c. Conclusion

The licensee's program to minimize the amount of waste produced was very good. This contributed to and benefited from good housekeeping within the radiological controlled area.

R2 **Status of RP&C Facilities and Equipment**

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 inspectors verified that the UFSAR wording was consistent with the observed plant practices, procedures and/or parameters.

R3 **RP&C Procedures and Documentation**

R3.1 Radwaste Shipping Procedure (TI 2515/123)

a. Inspection Scope

The inspector reviewed the licensee's Radwaste Shipping Procedure RWS-0207, Revision 10 to verify compliance with the revised Department of Transportation and NRC regulations.

b. Observations and Findings

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: document compliance using a checklist, and 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. As an example, one of the steps stated "Determine DOT & waste classification IAW 49 CFR 173 and 10 CFR 61." No quantitative or qualitative guidance was provided by the procedure as to how this would be implemented. This was left to the skill and knowledge of the individual performing the steps within the procedure.

During the course of discussion of the procedure with the licensee, the inspector was informed that checklists provided additional "guidance" that would help the user interpret the regulations. The inspector identified a concern because the checklists were not part of the procedure and did not appear to be subject to the document control process when changes were needed. As such, the checklists could be changed without independent review or management concurrence. The licensee stated that this would be investigated to see if the checklist needed to be formalized in some manner.

Given the complexity of the regulations, the inspector attempted to identify the qualification requirements the licensee imposed upon personnel who were to execute this procedure. The licensee did not have specific training requirements for this activity. The licensee reviewed the radwaste shipping procedure and identified the following as "baseline" training for personnel:

- Training on the current Department of Transportation and NRC regulations associated with the transportation of radioactive materials.
- Hazardous material training as described in 49 CFR 172, Subpart H.
- Training on shipping requirements for mixed waste, and
- Training on the computer program used to generate the manifest and shipping papers.

The inspector determined that this training had been performed by the licensee, and that the individual designated to certify shipments of radioactive wastes and materials for shipment had received this training. However, the licensee did not have a program in place to ensure that other personnel executing the procedure would have the training listed above. Therefore, the licensee committed during the exit meeting that individuals executing the radwaste shipping procedure would, as a minimum, satisfy these four training requirements.

c. Conclusion

The licensee's procedure was generic to radioactive waste/material shipping and required a high degree of skill and knowledge to execute it correctly. The licensee made a commitment to ensure personnel that executed this procedure met a minimum set of training requirements.

R3.2 Shipping Documentation (TI 2515/133)

a. Inspection Scope

The inspector reviewed shipping documentation for shipments of radioactive waste and materials made from the facility since new Department of Transportation and NRC regulations became effective on April 1, 1996.

b. Observations and Findings

The licensee provided copies of shipping documentation for shipments made since April 1, 1996. The inspector reviewed selected packages to ensure that the documentation contained the required information for the type of shipment. There were no problems identified.

The inspector discussed the use of SI units with the licensee. The regulations require the use of SI units on isotopic activities and radiation levels beginning April 1, 1997. The licensee stated that they will continue to use standard units (curies and rem) until this date.

The inspector reviewed data tables entered into the licensee's computer program to generate shipping papers and manifests. A spot check of the data confirmed that the new  $A_1$  and  $A_2$  values had been entered and were being used.

The inspector reviewed scaling factors used to account for isotopes that were not easily detected. The licensee was in the process of performing a new scaling factor analysis for the various waste streams in the plant. The samples had been collected and were in the process of being prepared for shipment for analysis. The inspector discussed the process used, and did not identify areas of concern.

c. Conclusion

The licensee's documentation of shipments was consistent with regulations. Current  $A_1$  and  $A_2$  values were being used to characterize shipments in accordance with Department of Transportation and NRC regulations.

R5 **Staff Training and Qualification**

a. Inspection Scope (TI 2515/133)

The inspector reviewed training materials, course outline, attendance lists, and the results of tests taken by students related to training on the changes to the Department of Transportation and NRC regulations.

b. Observations and Findings

A contractor conducted a training course on the changes to the Department of Transportation and NRC regulations for selected personnel in the four Entergy Operations, Inc. site organizations. The course was attended by designated shippers from each site as well as training personnel. A subsequent course was developed by the licensee for training technicians and support personnel.

The information presented in the contractor course was very detailed. It discussed the hazards associated with the various classes of shipments, regulations associated with shipping, and provided examples for the students to demonstrate proper methods of shipping radioactive wastes and materials.

The course developed by the licensee was not as detailed as the course provided by the contractor and provided a more generalized discussion of topics. This course was developed for radiation protection technicians and support personnel. The inspector determined that this was sufficient for this audience. Test results from the licensee training course indicated that the course was challenging. The inspector noted that there had been instances where people had not successfully passed the test on the first attempt. A second test was permitted, and in all cases where a second test was used, it was successfully completed.

c. Conclusion

The licensee had conducted training on the changes to the Department of Transportation and NRC regulations for the individual designated as the primary shipping contact and other support personnel.

R7 **Quality Assurance in RP&C Activities**

a. Inspection Scope (86750)

The inspector reviewed the last licensee audit of the radwaste program and subsequent surveillance of the radwaste program. Specifically, the inspector reviewed:

Audit 94-10-1-PCON/RWMP, October 21, 1996  
Quality Assurance Surveillance Report 509004, August 29, 1995  
Quality Assurance Surveillance Report 512005, December 20, 1995

Quality Assurance Surveillance Report 601044, January 29, 1996  
Quality Assurance Surveillance Report 601045, January 29, 1996  
Quality Assurance Surveillance Report 602001, February 1, 1996  
Quality Assurance Surveillance Report 602006, February 14, 1996

b. Observations and Findings

The 1994 audit covered a basic scope of activities to demonstrate compliance with procedures and regulations in place at that time. The licensee provided a copy of the audit plan used to conduct this audit. The audit reviewed the following areas:

- Training and qualification of radwaste personnel.
- Procedures for implementing the radwaste program, Record retention.
- Corrective actions, and
- Radioactive waste segregation program

The inspector noted that the 1994 audit was performed during a period when waste shipments were not being made because of closure of the low-level burial site. Therefore, the scope of the 1994 audit was adequate by not addressing transportation of radioactive wastes/materials. Shipments of radioactive waste resumed in mid 1995. The next scheduled audit was September 1996.

Review of the surveillance performed since the 1994 audit identified potential areas of weakness in the quality assurance program for radioactive waste activities. The surveillance topics could be summarized in the following areas:

- housekeeping.
- radiological controls (surveys and postings).
- release of radioactive materials from the radiological controlled area, and
- tagging and labeling of materials within the radiological controlled area

In IE Bulletin 79-20, dated August 10, 1979, the NRC informed licensees that they were expected to "establish and implement a management-controlled audit function of all transfer, packaging and transport activities to provide assurance that personnel, instructions and procedures, and process and transport equipment are functioning to ensure safety and compliance with regulatory requirements." No written reply to this bulletin was required, but licensees were informed that

their continuing response would be reviewed during future inspections. Notably missing from the above list of surveillance activities was a review of transfer, packaging and transport activities.

The inspector discussed the qualifications of personnel within the quality assurance organization as related to radwaste processing and transportation activities. The licensee stated that technical expertise in transportation activities was externally available and could be brought in to support audits on an as-needed basis. The inspector reviewed the qualifications of personnel involved in the 1994 audit and confirmed that there was an individual identified who had this expertise. It was noted that use of outside expertise required good coordination efforts and that many surveillance opportunities could be missed.

c. Conclusion

The licensee's quality assurance organization received no training regarding the transfer, packaging and transport activities associated with radioactive wastes and materials. This was reflected by the lack of meaningful surveillance in this area. Given the complexity of the regulations for the transport of radioactive waste and materials, this was identified as an area where additional licensee attention was warranted.

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 May 23, 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

L. Ballard, Quality Specialist, Quality Assurance  
M. Dietrich, Director, Quality Programs  
J. Dimmette, General Manager, Plant Operations  
W. Fountain, Technical Specialist, Licensing  
W. Hardy, Supervisor, Radiation Control  
R. King, Director, Nuclear Safety and Regulatory Affairs  
W. Odell, Superintendent, Radiation Control  
K. Ray, Radwaste Shift Specialist, Radiation Control  
D. Wells, Supervisor, Radiation Control

NRC

D. Proulx, Resident Inspector  
W. Smith, 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

IAW    In accordance with  
PDR    Public Document Room  
RP&C   Radiological Protection and Chemistry  
SI     System International  
TI     Temporary Instruction  
UFSAR Updated Final Safety Analysis Report