



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064**

January 6, 2000

Randal K. Edington, Vice President - Operations
River Bend Station
Entergy Operations, Inc.
P.O. Box 220
St. Francisville, Louisiana 70775

SUBJECT: NRC INSPECTION REPORT NO. 50-458/99-16

Dear Mr. Edington:

This refers to the inspection conducted on December 6-9, 1999, at the River Bend Station facility and to the telephone conversations with Mr. Dwight Mims on December 16, 1999, and with Messrs. David Lorfing, Davey Wells, and Mike Davis on January 4, 2000. The purpose of the inspection was to review the programs for solid radioactive waste management and transportation of radioactive materials. The enclosed report presents the results of this inspection.

Overall, the programs reviewed were implemented properly. However, based on the results of this inspection, the NRC has determined that a Severity Level IV violation of NRC requirements occurred. This violation is being treated as a noncited violation (NCV), consistent with Section VII.B.1.a of the Enforcement Policy. This NCV is described in the subject inspection report. If you contest the violation or severity level of this NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011, the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the River Bend Station facility.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response, if requested, will be placed in the NRC Public Document Room (PDR).

Entergy Operations, Inc.

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Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

/RA/

Gail M. Good, Chief
Plant Support Branch
Division of Reactor Safety

Docket No.: 50-458
License No.: NPF-47

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NRC Inspection Report No.
50-458/99-16

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E-Mail report to NRR Event Tracking System (IPAS)
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E-Mail notification of issuance of all documents to Nancy Holbrook (NBH).

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.: 50-458
License No.: NPF-47
Report No.: 50-458/99-16
Licensee: Entergy Operations, Inc.
Facility: River Bend Station
Location: 5485 U.S. Highway 61
St. Francisville, Louisiana
Dates: December 6-9, 1999
Inspector(s): Larry Ricketson, P.E., Senior Radiation Specialist
Plant Support Branch
Approved By: Gail M. Good, Chief, Plant Support Branch
Division of Reactor Safety
Attachment: Supplemental Information

EXECUTIVE SUMMARY

River Bend Station NRC Inspection Report No. 50-458/99-16

The NRC conducted an inspection to review the solid radioactive waste management and radioactive material transportation programs. Areas reviewed included: the solid radioactive waste management program, radioactive material transportation program, facilities and equipment, procedures and documentation, staff knowledge and performance, staff training and qualifications, and quality assurance activities.

Plant Support

- The licensee implemented a good solid radioactive waste management program. Radioactive material was correctly stored and controlled. Radioactive waste was correctly sampled, classified, and stabilized for burial. Waste manifests were prepared in accordance with regulatory requirements (Section R1.1).
- Based on radioactive waste shipments on December 7 and 8, 1999, the licensee demonstrated a good program for packaging and shipping radioactive materials and radioactive waste. Shipments were correctly categorized, packaged, and surveyed. Associated hazards were correctly communicated through shipping documentation, driver briefings, package marking, labeling, and vehicle placarding (Section R1.2).
- A violation associated with the transferral of radioactive material was identified. On five occasions since September 1997, the licensee failed to verify that a transferee's byproduct material license authorized receipt of the type, form, and quantity of byproduct material to be transferred, in accordance with 10 CFR 30.41(c). This Severity Level IV violation is being treated as a noncited violation, consistent with Section VII.B.1.a. of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Condition Report 99-1948 (Section R1.2).
- The individual primarily responsible for the use of waste classification and transportation software possessed a good knowledge of radioactive waste classification requirements, waste classification and transportation computer software usage, and radioactive material transportation regulations. Workers received the proper training for the tasks they performed (Section R4 and R5).
- There was good oversight of the solid radioactive waste management and radioactive material transportation programs. The audit scope was comprehensive and the audit team included members with practical experience (Section R7).
- The radiation protection practices implemented in support of the radioactive waste shipment on December 7, 1999, were good. However, as a result of questions raised by the inspector, the licensee identified examples in which workers failed to meet management expectations when they did not log off the controlled area access computer at the end of their work shifts (Section R8).

Report Details

IV. Plant Support

R1 Radiological Protection and Chemistry Controls

R1.1 Implementation of the Solid Radioactive Waste Program

a. Inspection Scope (86750)

The inspector interviewed licensee personnel and reviewed the following program elements:

- Waste storage
- Waste stream sample results
- 10 CFR Part 61 waste classification
- Waste shipment manifests

b. Observations and Findings

Waste Storage

During tours of the radiological controlled area, the inspector confirmed that radioactive waste was stored in accordance with commitments in Chapter 11.4 of the Final Safety Analysis Report.

Waste Stream Sampling

The inspector reviewed waste stream sampling results and determined that the licensee completed the sampling and analyses at the required intervals. Analyses of waste stream samples were performed by an independent, vendor laboratory. The licensee updated its computer software correctly to include appropriate scaling factors for radionuclides that were difficult to identify.

Waste Classification

The inspector reviewed the licensee's radioanalysis results of samples from the December 7 and 8, 1999, waste shipments and confirmed through independent calculations of select radionuclides that the waste shipments were properly classified in accordance with 10 CFR 61.55.

Manifests

The inspector confirmed through random reviews of shipping documentation that the licensee prepared manifests that included the information required by 10 CFR Part 20, Appendix G.

c. Conclusions

The licensee implemented a good solid radioactive waste management program. Radioactive material was correctly stored and controlled. Radioactive waste was correctly sampled, classified, and stabilized for burial. Waste manifests were prepared in accordance with regulatory requirements.

R1.2 Transportation Activities

a. Inspection Scope (86750)

The licensee prepared and shipped radioactive waste on December 7 and 8, 1999. The inspector observed portions of the shipment preparation and reviewed the corresponding shipping records. The following items were observed or reviewed:

- Packaging
- Radiation and contamination surveys of packages and vehicles
- Shipping paper documentation
- Package marking and labeling
- Vehicle placarding
- Driver instructions
- Emergency response information
- Transferee licenses

b. Observations and Findings

Packaging

The inspector reviewed shipping documents and confirmed that the licensee categorized the radioactive shipments correctly and chose appropriate packaging for the shipment category and total activity. Shipping records documented that the activity within shipments of low specific activity did not exceed the conveyance activity limits of 49 CFR 173.427, Table 9.

Radiation Surveys

Radiation surveys were conducted to ensure external radiation and contamination levels were within the allowable limits of 49 CFR 173.441 and 173.443.

Shipping Papers

The inspector confirmed that shipping papers included the information required by 49 CFR 172.200 - 172.205.

Package Marking and Labeling

The inspector confirmed that packages were properly marked, in accordance with 49 CFR 172.300-338, and labeled, in accordance with 49 CFR 172.400-450.

Placarding

The inspector confirmed that transport vehicles were properly placarded in accordance with 49 CFR 172.504 and 172.506.

Radioactive Material Transfers

10 CFR 30.41(c) states that, before transferring byproduct material to a specific licensee of the Commission, the licensee transferring the material shall verify that the transferee's license authorizes the receipt of the type, form, and quantity of byproduct material to be transferred. 10 CFR 30.41(d) lists the means of verification.

The inspector reviewed the licensee's shipping log and noted a radioactive material shipment made on June 23, 1999. The inspector asked how the licensee verified that the transferee was authorized to receive the type, form, and quantity of byproduct material transferred. A licensee representative produced a file which contained a copy of the transferee's byproduct material license. The inspector noted that the byproduct material license expired November 30, 1994. The file also contained a letter from the applicable agreement state dated October 16, 1995, that stated that renewal of the transferee's license was pending.

On December 8, 1999, the inspector spoke with a representative of the transferee and determined that the transferee's license was renewed September 23, 1996. This indicated that the licensee had not properly verified the status of the transferee's license at the time of shipment, because, if it had, the licensee would have had a copy of the September 23, 1996, license renewal (Amendment 84) in the license file.

Additionally, the most recent amendment of the transferee's license possessed by the licensee was Amendment 49. According to the transferee, the latest license amendment was Amendment 147.

A representative of the transferee reviewed a facsimile of the June 23, 1999, shipping papers and certified that the transferee was licensed to receive the type, form, and amounts of byproduct materials transferred.

The inspector asked if there were additional shipments to the same transferee. Licensee representatives determined that four previous byproduct material shipments were made to the same company since the previous NRC inspection in September 1997.

The inspector identified the failure to verify that the transferee's license authorized the type, form, and quantity of byproduct material to be transferred as a violation of 10 CFR 30.41(c). This Severity Level IV violation is being treated as a noncited violation, consistent with Section VII.B.1.a. of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Condition Report 99-1948 (50-458/9916-01).

c. Conclusions

Based on radioactive waste shipments on December 7 and 8, 1999, the licensee demonstrated a good program for packaging and shipping radioactive materials and radioactive waste. Shipments were correctly categorized, packaged, and surveyed. Associated hazards were correctly communicated through shipping documentation, driver briefings, package marking, labeling, and vehicle placarding.

A violation associated with the transferral of radioactive material was identified. On five occasions since September 1997, the licensee failed to verify that a transferee's byproduct material license authorized receipt of the type, form, and quantity of byproduct material to be transferred, in accordance with 10 CFR 30.41(c). This Severity Level IV violation is being treated as a noncited violation, consistent with Section VII.B.1.a. of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Condition Report 99-1948.

R2 Status of Radiological Protection and Chemistry Facilities and Equipment

The inspector toured the radioactive material and radioactive waste storage areas. The areas were as described in Chapter 11.4 of the Final Safety Analysis Report.

R4 Staff Knowledge and Performance in Radiological Protection and Chemistry

The individual primarily responsible for the use of waste classification and transportation software possessed a good knowledge of radioactive waste classification requirements, waste classification and transportation computer software usage, and radioactive material transportation regulations.

R5 Staff Training and Qualification

The inspector reviewed the qualifications of the individuals supporting the radioactive waste shipments of December 7 and 8, 1999, and determined that the individuals had received the proper training for the tasks they performed.

R7 Quality Assurance in Radiological Protection and Chemistry Activities

a. Inspection Scope (86750)

The inspector interviewed licensee personnel and reviewed the following items:

- Quality assurance audits and checklists
- Quality assurance surveillances
- Problem identification documentation

b. Observations and findings

The 1996 audit team identified numerous problems in the area of radwaste management and transportation. This audit was evaluated during NRC Inspection

50-458/97-03. Since that inspection, the licensee conducted two audits of solid radioactive waste management and transportation activities. The audit teams included technical specialists from other utilities. Together, the audits were a comprehensive review of program requirements.

The 1997 audit identified problems in shipping documentation. The findings were properly placed into the licensee's corrective action program. The audit team concluded that solid radioactive waste and radioactive material transportation program performance had neither improved or declined since the previous audit.

The 1998 audit reviewed areas that were not reviewed during the 1997 audit and corrective actions that addressed the 1996 findings. The 1998 audit identified no significant problems and the audit team concluded that there was improvement in the program.

c. Conclusions

There was good oversight of the solid radioactive waste management and radioactive material transportation programs. The audit scope was comprehensive and the audit team included members with practical experience.

R8 Miscellaneous Radiation Protection and Chemistry Issues

a. Inspection Scope (86750)

The inspector observed radiation protection activities associated with the radioactive waste shipment on December 7, 1999, and review associated radiation protection records.

b. Observations and findings

The radioactive waste shipment was prepared in the low level radioactive waste storage building. The area was properly posted and controlled to prevent unauthorized personnel access. Ladders to the top of the storage vaults were correctly posted to warn personnel of high radiation areas.

The radiation protection supervisor and radiation protection specialist conducted a comprehensive pre-job briefing to ensure that the other workers understood the radiological hazards and the job assignments. During the waste movement and shipment preparation, a radiation protection technician performed radiation surveys properly and evaluated contamination levels on the shipping cask and radiation levels around the waste container. The inspector verified that radiation detection instruments used by the radiation protection technician were within allowable calibration intervals. The five workers accrued a low collective radiation dose (32 millirems as measured by electronic, alarming dosimeters) during the preparation of the radioactive waste shipment.

To verify that workers involved with the radioactive waste shipment on December 7, 1999, used the correct radiation work permit, the inspector reviewed an access control computer printout that documented the users of Radiation Work Permit 99-0004, Task 03. The printout listed all of the workers except the radiation protection technician who provided support.

After reviewing the situation, licensee representatives concluded that the radiation protection technician failed to meet management expectations by not logging off the access control system on December 7. With the licensee's current computer setup, individuals who had not logged off the computer system were not included in the computer query results.

The radiation protection technician was not scheduled to work the following day. Therefore, licensee representatives contacted the radiation protection technician at home, confirmed that the individual had not logged off the access control computer, and determined the technician's dose (as measured by the electronic, alarming dosimeter). Licensee representatives logged the radiation protection technician off of the access control system and entered the electronic, alarming dosimeter results, manually.

No specific procedural requirements were violated. However, because the radiation protection technician failed to meet management's expectations, the licensee initiated Condition Report 99-1957 to document a human performance error. The licensee found 32 other examples (out of approximately 100,000 entries), since June 1, 1999, in which individuals failed to log off the access control computer within 15 hours of entry. All eventually logged off the system; thereby capturing the dose measured by their electronic, alarming dosimeters.

On January 4, 2000, licensee representatives stated in a telephone conversation with Region IV representatives that they had initiated actions to address such situations. The actions taken included:

- Reinforcement of management expectations to licensee personnel concerning controlled access area entry and exit
- Notification, by electronic mail, of selected radiation protection personnel whenever workers failed to log off the access control computer within 15 hours of entry
- Modifications to the access control computer program to prevent individuals from logging off after 15 hours without the involvement of radiation protection personnel
- Implementation of a temporary instruction addressing radiation protection response to the above situations
- Discussion in the licensee's management report of the number of individuals in each department who had failed to log off the controlled area access computer

The inspector concluded that the licensee's actions should prevent similar occurrences.

c. Conclusions

The radiation protection practices implemented in support of the radioactive waste shipment on December 7, 1999, were good. However, as a result of questions raised by the inspector, the licensee identified examples in which workers failed to meet management expectations when they did not log off the controlled area access computer at the end of their work shifts.

V. Management Meetings

X1 Exit Meeting Summary

The inspector presented the inspection results to members of licensee management at an exit meeting on December 9, 1999. The licensee acknowledged the findings presented. No proprietary information was identified.

ATTACHMENT

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

- A. Carter, Radiation Protection Technician
- L. Dautel, Radiation Protection Specialist
- D. Deal, Radiation Protection Supervisor
- C. Fantacci, Radiation Protection Specialist
- J. George, Decontamination Specialist
- D. Health, Radiation Protection Supervisor
- J. Holmes, Technical Support Manager
- D. Mims, General Manager, Plant Operations
- D. Myers, Licensing Specialist
- C. Robinson, Decontamination Specialist
- D. Wells, Radiation Protection Superintendent

NRC

- T. Pruett, Senior Resident Inspector
- N. Garrett, Resident Inspector

INSPECTION PROCEDURES USED

86750 Solid Radioactive Waste Management and Transportation of Radioactive Materials

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-458/9916-01 NCV Failure to verify transferee's authorization, in violation of 10 CFR 30.41(c) (Section R1.2)

Closed

50-458/9916-01 NCV Failure to verify transferee's authorization, in violation of 10 CFR 30.41(c) (Section R1.2)

Discussed

None

LIST OF DOCUMENTS REVIEWED

Procedures

ADM-0095 Radwaste Processing Control Program, Revision 0
RSP-0200 Radiation Work Permits, Revision 17
RSP-0217 Access Control, Revision 7
RWS-0206 Radwaste Scaling Factors Program, Revision 8
RWS-0207 Radwaste Shipping Procedure, Revision 13
RWS-0304 Radioactive Waste Handling and Control, Revision 10
RWS-0304 Radioactive Waste Handling and Control, Revision 11
RWS-0321 Operation of the Radwaste Shipping Computer Software, Revision 4

Radiation Work Permits

99-0001
99-0004

Radiation Work Permit Access Record for 99-0004