



**Entergy Operations, Inc.**  
River Bend Station  
5485 U.S. Highway 61N  
St. Francisville, LA 70775  
Tel 225 381 4157  
Fax 225 635 5068  
dlorfin@entergy.com

**David N. Lorfing**  
Manager-Licensing

March 8, 2007

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

Subject: Licensee Event Report 50-458 / 07-001-00  
River Bend Station – Unit 1  
Docket No. 50-458  
License No. NPF-47

File Nos. G9.5, G9.25.1.3

RBG-46663  
RBF1-07-0037

Ladies and Gentlemen:

In accordance with 10CFR50.73, enclosed is the subject Licensee Event Report.  
This document contains no commitments.

Sincerely,

  
David N. Lorfing  
Manager – Licensing

DNL/dhw  
Enclosure

IE22

Licensee Event Report 50-458 / 07-001-00  
March 8, 2007  
RBG-46663  
RBF1-07-0037  
Page 2 of 2

cc: U. S. Nuclear Regulatory Commission  
Region IV  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011

NRC Sr. Resident Inspector  
P. O. Box 1050  
St. Francisville, LA 70775

INPO Records Center  
E-Mail

Mr. Jim Calloway  
Public Utility Commission of Texas  
1701 N. Congress Ave.  
Austin, TX 78711-3326

Mr. Jeff Meyers  
Louisiana Department of Environmental Quality  
Office of Environmental Compliance  
P.O. Box 4312  
Baton Rouge, LA 70821-4312

## LICENSEE EVENT REPORT (LER)

(See reverse for required number of  
digits/characters for each block)

Estimated burden per response to comply with this mandatory collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

## 1. FACILITY NAME

River Bend Station – Unit 1

## 2. DOCKET NUMBER

05000-458

## 3. PAGE

1 of 3

## 4. TITLE

Special Nuclear Material Inventory Error

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
02	06	2007	2007	- 001 -	00	03	08	2007	FACILITY NAME	DOCKET NUMBER 05000
									FACILITY NAME	DOCKET NUMBER 05000

## 9. OPERATING MODE

1

## 11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: (Check all that apply)

- |  |   |   |  |
|--|---|---|--|
| <input checked="" type="checkbox"/> 20.2201(b) | <input type="checkbox"/> 20.2203(a)(3)(i)   | <input type="checkbox"/> 50.73(a)(2)(i)(C)  | <input type="checkbox"/> 50.73(a)(2)(vii)        |
| <input type="checkbox"/> 20.2201(d)            | <input type="checkbox"/> 20.2203(a)(3)(ii)  | <input type="checkbox"/> 50.73(a)(2)(ii)(A) | <input type="checkbox"/> 50.73(a)(2)(viii)(A)    |
| <input type="checkbox"/> 20.2203(a)(1)         | <input type="checkbox"/> 20.2203(a)(4)      | <input type="checkbox"/> 50.73(a)(2)(ii)(B) | <input type="checkbox"/> 50.73(a)(2)(viii)(B)    |
| <input type="checkbox"/> 20.2203(a)(2)(i)      | <input type="checkbox"/> 50.36(c)(1)(i)(A)  | <input type="checkbox"/> 50.73(a)(2)(iii)   | <input type="checkbox"/> 50.73(a)(2)(ix)(A)      |
| <input type="checkbox"/> 20.2203(a)(2)(ii)     | <input type="checkbox"/> 50.36(c)(1)(ii)(A) | <input type="checkbox"/> 50.73(a)(2)(iv)(A) | <input type="checkbox"/> 50.73(a)(2)(x)          |
| <input type="checkbox"/> 20.2203(a)(2)(iii)    | <input type="checkbox"/> 50.36(c)(2)        | <input type="checkbox"/> 50.73(a)(2)(v)(A)  | <input type="checkbox"/> 73.71(a)(4)             |
| <input type="checkbox"/> 20.2203(a)(2)(iv)     | <input type="checkbox"/> 50.46(a)(3)(ii)    | <input type="checkbox"/> 50.73(a)(2)(v)(B)  | <input type="checkbox"/> 73.71(a)(5)             |
| <input type="checkbox"/> 20.2203(a)(2)(v)      | <input type="checkbox"/> 50.73(a)(2)(i)(A)  | <input type="checkbox"/> 50.73(a)(2)(v)(C)  | <input type="checkbox"/> OTHER                   |
| <input type="checkbox"/> 20.2203(a)(2)(vi)     | <input type="checkbox"/> 50.73(a)(2)(i)(B)  | <input type="checkbox"/> 50.73(a)(2)(v)(D)  | Specify in Abstract below<br>or in NRC Form 366A |

## 10. POWER LEVEL

100

## 12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME

David N. Lorfing, Manager – Licensing

TELEPHONE NUMBER (Include Area Code)

225-381-4157

## 13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

## 14. SUPPLEMENTAL REPORT EXPECTED

☐ YES (If yes, complete 15. EXPECTED SUBMISSION DATE)☒ NO15. EXPECTED  
SUBMISSION  
DATE

MONTH DAY YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On February 6, 2007, at 6:15 p.m. CST, the determination was made that a non-irradiated traversing incore probe (TIP) was not in its expected storage location. According to the special nuclear material inventory records, the TIP was stored in a container in the radioactive waste building on the plant site. During an inspection of the container, the TIP could not be found. A subsequent investigation concluded that the TIP was likely shipped to the licensed disposal facility at Barnwell, SC in November 2000. A non-irradiated TIP typically contains approximately 0.75 milligrams of uranium-235, and has a contact dose reading of less than 0.5 millirem per hour. While the investigation indicates that the TIP was likely shipped to a licensed disposal facility, this condition is being conservatively reported in accordance with 10CFR20.2201(a)(1)(ii) as a loss of licensed material of a quantity greater than ten times the quantity specified in Appendix C of that part.

LICENSEE EVENT REPORT (LER)  
FAILURE CONTINUATION

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
River Bend Station – Unit 1	05000-458	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2    OF    3
		2007	-    001	-    00	

## REPORTED CONDITION

During an inventory of non-fuel special nuclear material (SNM), it was found that traversing incore probe (TIP) no. TJVA6-788 was not in its expected location. Storage records indicated that the material was in a sealed container in the radioactive waste building. While the investigation indicates that the TIP was likely shipped to a licensed disposal facility, this condition is being conservatively reported in accordance with 10CFR20.2201(a)(1)(ii) as a loss of licensed material of a quantity greater than ten times the quantity specified in Appendix C of that part.

TIP TJVA6-788 was requisitioned from the site warehouse to replace a failed probe on March 13, 1997. During pre-installation checks, the new TIP failed a voltage check and was deemed unusable. The new TIP was moved to the source storage room in the Radiation Protection shop. On March 20, 1997, the new TIP was moved to the SNM storage area of the radioactive waste building.

On November 16, 2000, reactor engineers completed an inventory of SNM in the radioactive waste building storage area in preparation for shipping activities. Approximately twenty SNM items were sealed in drums to be inserted into transport containers. During this activity, the non-SNM parts (i.e., cables, connectors, etc.) of the TIP that failed in March 1997 were mistakenly identified as TIP TJVA6-788, based on the description and date on the radioactive materials tag, and were sealed in a drum. This drum was subsequently excluded from the shipment, and remained in the radioactive waste building. A review of annual SNM inventories conducted since 2000 confirmed that the drum remained sealed.

On February 6, 2007, preparations were being made for another SNM disposal shipment. An inventory of the drum that had been sealed in November 2000 found that TIP TJVA6-788 was not inside. An investigation of this issue was conducted. Based on that investigation, it is believed that TIP TJVA6-788 was shipped to the licensed disposal facility at Barnwell, SC, in November 2000.

## DESCRIPTION OF LICENSED MATERIAL

TIP TJVA6-788 was originally received at the station in 1984. Specific data for that probe is not available, but certification data for a typical TIP was obtained from the current vendor. The material contained in a TIP is uranium oxide, with a total mass of approximately 0.9 milligrams. Of that quantity, approximately 0.75 milligrams is the isotope uranium-235. The total activity in a TIP is approximately 0.05 microcuries.

**LICENSEE EVENT REPORT (LER)**  
FAILURE CONTINUATION

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
River Bend Station – Unit 1	05000-458	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 3
		2007	- 001	- 00	

**CORRECTIVE ACTIONS TO PREVENT RECURRENCE**

Procedures for control of SNM will be revised to address:

- labeling / tagging of failed SNM items, specifically to include the item serial numbers,
- conduct of annual inventories, and,
- methods of positive verification of presence of SNM.

These actions are being tracked in the station's corrective action program.

**SAFETY SIGNIFICANCE**

TIP TJVA6-788 had never been put into service, and thus had never been irradiated. The contact dose reading for a non-irradiated TIP is less than 0.5 millirem per hour. As the TIP was likely contained within the controlled waste process stream, it is reasonable to conclude that no exposure occurred in any unrestricted areas as a result of this event. Given the item's low activity and dose reading, its contribution to the dose received by any radiation workers involved in the waste handling process was very low.