



Entergy Operations, Inc.
River Bend Station
PO Box 220
St. Francisville, LA 70775

August 5, 1994

U.S. Nuclear Regulatory Commission
Document Control Desk
Mail Stop P1-37
Washington, D.C. 20555

Subject: Reply to a Notice of Violation IR 94-13
River Bend Station - Unit 1/Docket No. 50-458/94-13

File No.: G9.5, G15.4.1

RBG-40785

Gentlemen:

Pursuant 10CFR2.201, please find in Attachment 1 the Entergy Operations, Inc. response to Notice of Violation IR 9413-01. As discussed with your office on July 28, 1994 this information is being submitted after the original due date.

Your inspection indicated that you were concerned because the corrective action for the fuel handling discrepancy cited therein was "non-comprehensive and partially implemented" and that corrective action for an earlier event was not effective. We share your concerns and understand the importance of effective, comprehensive, fully implemented corrective actions. As part of both the Near and Long Term Performance Improvement Plans, comprehensive initiatives have been implemented to provide significant and permanent improvements to the River Bend Station corrective action program. Recent reviews of the program have noted that our program enhancements are being effective and are continuing to improve. In the cited violation, due to personnel error, neither management expectations concerning corrective action nor the intent and philosophy of our corrective action program were satisfied.

With regard to the inspection report, you indicated that corrective actions from an earlier fuel handling violation led to an apparent reduction of procedural verification requirements in our refueling procedures. You concluded that our corrective actions from the previous event "contrast the very intent of corrective action program philosophy." Our review of this event indicates that the River Bend Station fuel

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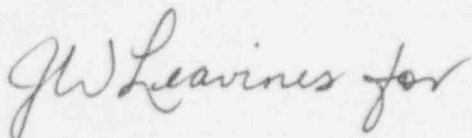
handling procedure changes were appropriate for the violation cited in 458/9029-04. The basis for this conclusion is included as Attachment 2.

As presented in previous management meetings, River Bend Station has implemented comprehensive initiatives to improve the effectiveness of our corrective action program. This program receives continuous management attention through integral management review groups and initiatives which provide feedback to management on program effectiveness. Improvements have been noted and we expect these improvements to continue.

In your inspection report you requested information to clarify personnel qualification requirements for independent verification. River Bend Station qualification requirements are contained in a number of departmental and administrative procedures. The intent of these requirements is to ensure that individuals performing verification tasks have sufficient technical expertise and plant knowledge to adequately implement the station verification program. We are examining these requirements and will provide details regarding our program by September 30, 1994.

Should you have any questions, please contact Mr. T. W. Gates at (504) 381-4866.

Sincerely,

A handwritten signature in cursive script, appearing to read "JW Leavins for".

James J. Fisicaro
Director - Nuclear Safety

JJF/kvm
attachments

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cc: U.S. Nuclear Regulatory Commission
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NRC Resident Inspector
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Mr. Edward T. Baker
U.S. Nuclear Regulatory Commission
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ATTACHMENT 1

REPLY TO NOTICE OF VIOLATION

VIOLATION 458/9413-01

Technical Specification 6.8.1 requires, in part, that written procedures be established, implemented, and maintained covering refueling activities.

Reactor Engineering Procedure REP-0029, "Fuel Movement," Revision 0, requires that fuel movement be performed in accordance with detailed fuel movement instructions approved and supplied by reactor engineering. The instructions are provided in the form of a fuel movement plan which dictates the exact sequence and locations of fuel or core component movement. Reactor Engineering Procedure SMP-COR-6-01, "Fuel Movement Plan," Revision 1, provided the specific plan for the Cycle 5 core loading process. Procedure SMP-COR-6-01 sequentially detailed the components to be relocated, their existing locations and orientations, and their new locations and orientation.

Contrary to the above, on May 5, 1994, Procedure SMP-COR-6-01 was not followed when a contracted fuel handling crew, under the direct supervision of an Entergy senior reactor operator performed Step 682 instead of Step 668. This failure to adhere to the procedure was self-evident when personnel withdrew Irradiated Fuel Assembly LYV284 from Core Location 45-26 and attempted to transfer it to upper Containment Pool Location R-06, which was already occupied.

Reason For The Violation

Entergy Operations, Inc. admits this violation and believes that the root cause of this occurrence was that no second check was required as a backup to the refuel spotter to ensure that the correct step sequence was followed.

On May 5, 1994 a fuel handling crew consisting of a fuel handler, a spotter, and a licensed senior reactor operator (SRO) was moving fuel in accordance with SMP-COR-6-01. While performing step 667, which was the first step on that page of the plan, air currents on the refueling floor caused the page to turn. This was not recognized by the refueling crew and, after completing step 667, they signed off the first step on the subsequent page (step 681). They did not recognize that the procedure page had turned causing the crew to inadvertently skip 14 steps of the movement plan. They recognized that a discrepancy existed when they were not able to complete step 682 as required.

Procedure FHP-0001, "Control of Fuel Handling and Refueling Operations," required that the refueling bridge operator receive permission from both the refueling SRO and spotter prior to performing a fuel handling action. This served as a concurrent verification to ensure that the bundle identified in a given step of the movement plan would be repositioned according to the plan. The spotter was responsible for documenting completion of fuel movement steps on the

movement plan sheet. This process provides an appropriate level of confidence that the fuel movement will be carried out in accordance with the plan provided that the proper step sequence is followed.

There was no procedural requirement or other aid available to backup the spotter to ensure that the correct step sequence was followed. The refueling SRO and the spotter are each required by procedure FHP-0001 to verify that the correct bundle has been identified and that it is in the correct location and proper orientation before it is lowered. If each had also been required to verify that they were performing the correct plan step, this event would not have occurred.

In summary, Entergy Operations believes that the error in the fuel movement sequence would have been identified before the refueling crew initiated step 682 if a procedural requirement had been available to backup the spotter to ensure that the correct step sequence was followed. There were no discrepancies identified during the final core verification.

Corrective Steps That Have Been Taken And The Results Achieved

Appropriate actions were taken to return the bundle to its core location and fuel movement/core alterations were stopped. In addition to complying with the procedural requirement to generate a fuel movement discrepancy form, Condition Report (CR) 94-0521 was initiated to document the event.

Interim corrective actions as specified in the CR included placing a working copy of the fuel movement plan in the control room and assigning a licensed operator to monitor the step-by-step execution of the fuel movement plan. Additionally, the Operations Department's communication policy requirements were implemented for communications between the refueling bridge and the control room. Specifically, refueling bridge personnel were required to identify the fuel movement step just completed and the next step to be performed to the control room operator. Appropriate repeat-backs were also specified.

It was the Operations Department's intention to brief refuel SROs, handlers/spotter, shift superintendents, and contractor supervisory personnel on the event and the interim corrective actions that had been implemented. Although not specifically required, it was intended that cognizant personnel would be briefed as part of the shift turnover process before participating in any fuel movement activities. However, an Operations Department Standing Order was not generated to formally communicate expectations regarding the step-by-step control room verification of the fuel movement plan.

The interim measures were effectively communicated by the briefings and fuel movement proceeded over the period May 5 through 9, 1994, without further incident. The personnel briefings stopped after May 9 because no fuel handling was in progress and the personnel in that particular control room shift rotation had received the required briefing between May 5 and May 9.

In the absence of a standing order, the interim measures were not adequately conveyed to some control room operators responsible for fuel movement step verification during the subsequent fuel shuffle. One Operations shift crew had been in training during this period and was not briefed on CR-94-0521 because they had not participated in any of the previous shift turnover activities. This crew came on shift on May 17 without having been briefed and began participating in fuel movement activities. While Operations shift crew members were aware of the fuel movement error, they were not aware of some of the specific requirements by which they were expected to verify correct step-by-step execution of the fuel movement plan as a backup to the refueling SRO.

When it was discovered that the newly-established step verification process was not being strictly followed, fuel movement was stopped and CR-94-0601 was initiated to address the poorly implemented corrective actions. An Operations Department Standing Order #110 was generated to document the specific performance requirements which resulted from the initial fuel movement error. Prior to participating in fuel movement, reactor operators and SROs were required to read the documentation concerning the initial fuel movement error, the root cause determination, and the corrective actions. The independent core load verification performed after core load completion determined that the core was loaded as described in the fuel movement plan and no discrepancies were identified.

Finally, management expectations regarding implementation of corrective actions have been communicated to the operations department supervisory personnel.

Corrective Steps That Will Be Taken To Avoid Further Violations

A discussion of this event will be incorporated into the operators' refueling training module prior to refueling outage six (RF-6).

REP-0029, "Fuel Movement," will be revised prior to RF-6 to provide for appropriate confirmation of the fuel movement step sequence.

Date When Full Compliance Will Be Achieved

Full compliance was achieved on May 17, 1994, when the required briefings were completed.

ATTACHMENT 2

NRC Inspection Report 94-13 indicates that corrective actions from an earlier fuel handling violation (458/9029-04) led to an apparent reduction of procedural verification requirements in River Bend Station refueling procedures and ultimately concludes that the corrective actions for that event "contrast the very intent of corrective action program philosophy."

Violation 458/9029-04 was cited as a failure to follow procedure because five fuel bundles were misoriented during the fuel movement process. The inspection report further indicated that refueling procedures did not require that this condition be documented. As a result, the inspection report concluded that RBS refueling processes placed undue reliance on the final core loading verification process. As a result of this violation and the discussion in the inspection report, a change was made to the fuel movement procedure that added a fuel movement discrepancy form to administratively control the handling of any fuel handling errors. As a result of this change, any errors are documented and resolved prior to beginning the core verification process. This methodology and other changes effectively eliminated challenges to the final core load verification process during RF5. As a result, Entergy Operations believes that the corrective actions from violation 458/9029-04 were appropriate to reduce challenges to the core load verification process for which they were intended.

The reference in Inspection Report 94-13 to "an apparent reduction of procedural verification requirements in River Bend Station refueling procedures" as a result of the corrective actions for violation 9029-04 appears to refer to a change to the fuel movement procedure which removed an "independent review" signature block. The independent review designation was not intended to require a true independent verification and more appropriately should have been titled "concurrent review." Even though the procedure specified independent review, it would be difficult to implement a truly independent review because of the configuration of the fuel handling bridge and location of the spotter, handler, and SRO.

When the signature block was removed from the fuel movement plan, communication requirements were added to the fuel handling procedures which require verbal concurrence between the spotter and refueling SRO prior to each action taken by the handler (e.g., lift, move). The signature of the handler/spotter for completion of a particular step represents concurrence by two individuals that the correct bundle has been moved to the proper location and is inserted in the proper orientation. This provides the necessary assurance that a given movement step has been correctly completed. Although a signature by the SRO is no longer required, concurrent verification remains in place as previously implemented.

Although an independent verification signature was deleted, Entergy believes the aggregate of all corrective actions completed as a result of the RF-3 experience has effectively reduced challenge to the final core verification process.