



AUG 08 2008  
NEF-08-00190-NRC

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Office of Nuclear Material Safety and Safeguards  
U. S. Nuclear Regulatory Commission  
11555 Rockville Pike  
Rockville, MD 20852

Louisiana Energy Services  
National Enrichment Facility  
NRC Docket Number: 70-3103

Subject: Reply to Notice of Violation 70-3103/2008-002-001

Reference: Letter from Deborah A. Seymour, NRC, to Gregory Smith, NEF, dated July 10, 2008 transmitting NRC Inspection Report No. 70-3103/2008-002 and Notice of Violation

The referenced letter transmitted the results of your inspection of the implementation of the National Enrichment Facility (NEF) Quality Assurance Program and associated construction activities. The inspection resulted in issuance of Notice of Violation 70-3103/2008-002-001 for failure to follow NQA-1-1994, basic requirement 5, during installation of reinforcement steel.


The described failure to follow NQA-1 and subsequent internal investigations of the circumstances and conditions resulted in a delay of concrete placement. Condition Reports 2008-CR-826, 2008-CR-828, and LES Nonconformance Report NCR-28683-162 were written to address the issue.

The specific activity cited in the Notice of Violation was addressed through our corrective action program and root cause evaluation process. The associated corrective actions to restore compliance have been completed and are described in Attachment 1 to this letter. Corrective actions to address the root cause are also identified in Attachment 1.

A Reply to the Notice of Violation is attached to this letter, and addresses the Reason for the Violation, Corrective Steps Taken and Results Achieved, Corrective Steps That Will Be Taken to Avoid Further Violations, and the Date When Full Compliance Will Be Achieved.

If you have any questions please contact Stephen Cowne, Quality and Regulatory Affairs Director at 505.394.5253.

Sincerely,

  
Gregory OD Smith  
Chief Nuclear Officer and Chief Operating Officer

IE07

Attachment: Reply to Notice of Violation Report 70-3103/2008-002-001

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**Attachment 1**

**Louisiana Energy Services / National Enrichment Facility (LES/NEF)**

**REPLY TO NOTICE OF VIOLATION (NOV) 70-3103/2008-002-01**

**Restatement of Violation:**

During an NRC inspection conducted on April 21 through 24, 2008, a Severity Level IV violation of Nuclear Regulatory Commission (NRC) requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

“Special Nuclear Material License No. 2010 requires, in part, that the licensee shall conduct authorized activities at the Louisiana Energy Services, National Enrichment Facility (LES NEF) in accordance with statements, representations, and conditions in the approved Quality Assurance Program Description, dated November 12, 2007.

The LES NEF Quality Assurance Program Description States, “...the LES Quality Assurance Program conforms to the criteria established in Title 10 of the Code of Federal Regulations 10 CFR 50, Appendix B, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants.” The criteria in 10 CFR 50, Appendix B, are met by LES’ implementation of the American Society of Mechanical Engineers Requirements for Nuclear Facilities,” including supplements as revised by the American Society of Mechanical Engineers (ASME) NQA-1a-1995 Addenda.

NQA-1 Basic Requirement 5, “Instructions, Procedures, and Drawings,” requires that activities affecting quality be prescribed by and performed in accordance with documented instructions, procedures, or drawings appropriate to the circumstances.

Contrary to the above, on April 21, 2008, LES NEF failed to perform activities affecting quality in accordance with documented instruction, procedures, or drawings appropriate to the circumstances in that, during construction activities, LES NEF positioned steel reinforcements that were not in accordance with Nuclear Technology Solutions, LLC (NTS) drawing 114489-1001-C-CON-005-02-3 and American Concrete Institute (ACI) Code 349-06. This resulted in the steel reinforcements being improperly positioned.”

**I. Reason for the Violation:**

The reasons for this violation were:

- a) the failure to properly implement design and installation specification requirements in procedures or work plans;
- b) the failure to provide clear, complete and unambiguous design information to Construction; and
- c) the failure of Construction to obtain clarification of unclear or apparently conflicting design information

The improper installation of reinforcing steel was documented and dispositioned in Condition Reports 2008-CR-826 and 2008-CR-828, and Nonconformance Report NCR-28683-162. To address the broader implications raised by this issue a Root Cause Team was formed. A root cause was identified and programmatic corrective actions developed and scheduled. The Executive Summary of that root cause states:

“Decisions made in 2007 with respect to the structure and level of detail to be included in work plans failed to fully take into account the level of experience of the technical and craft workforce that would be required to execute the plan under the requirements of the first major new construction under a Combined Operating License from the NRC. Site specific procedures used for work planning and execution were adapted from those that had been used successfully in steam generator replacement projects at operating nuclear facilities without taking fully into account the difference in the culture, skill and experience of the craft and technical support staff at the NEF.”

## **II. Corrective Steps That Have Been Taken and the Results Achieved:**

a) For the improperly installed reinforcing steel documented by 2008-CR-828 and NCR-28683-162, the corrective action taken to restore compliance is described below:

Following the discovery of the improperly positioned reinforcing steel on April 23, 2008 Engineering Change Request ECR-1407 was initiated on April 23, 2008 by Field Engineering to obtain resolution of the issue. The scheduled placement of concrete was postponed pending resolution of the issue.

The response to ECR-1407 confirmed that wall dowels and reinforcing steel associated with the planned placement were not in conformance with the Nuclear Technology Solutions (NTS) design intent. The wall dowels located along A-line, E-line, and 15-line of Roof Slab Sections 5 & 6 had all been placed lower, relative to the roof slab, than intended by NTS (the height of the wall dowels were fixed as part of the wall placements which had occurred earlier).

Field Engineering and Quality Control (QC) initiated NCR-28683-162 on April 25, 2008 to disposition the height of the wall dowels placed along A-line, E-line, and 15-line associated with Roof Slab Sections 5 & 6. A Condition Report (2008-CR-828) was written on April 25, 2008 to track NCR-28683-162.

NCR-28683-162 was reviewed and dispositioned by NTS as “use as is” on April 26, 2008. In support of this disposition NTS issued a revision (Rev 02) to calculation 114489-C-1009 “Design of Roof Slab & Steel Framing for the SBM 1001, 1003, & 1005” on April 28, 2008 that analyzed the as-built dowel locations to be acceptable.

b) For the extra reinforcing steel installed perpendicular to grid line “A” documented by 2008-CR-826, the corrective action taken to restore compliance, upon recognition by Field Engineering and Quality Control that the perpendicular steel was not required by the design, was to remove the unnecessary rebar and thus not include it in the concrete placement.

### **III. Corrective Steps That Will Be Taken To Avoid Further Violations:**

LES will develop and implement a program to improve quality culture among facility employees (LES), Contractors and Subcontractors. A detailed breakdown of this program follows:

1. LES will develop and document a set of quality principles (beyond just regulatory requirements) that meet the facility's needs by August 28, 2008.
2. LES will expand guidance in Project Specific Procedures (PSPs) which describe management controls, work activities, and work performance requirements for construction. This expanded guidance will include checklists for key attributes, work plan preparation, a review process for work plans and PSPs undergoing revision, and a training and qualification program for personnel charged with writing PSPs and work plans. This expanded guidance will be completed by October 15, 2008.
3. LES will develop and implement a facility wide procedure that implements a process by which the project team (construction and design) performs a constructability review and readiness review for work packages prior to the release of the work package to the field for implementation. The procedure will be developed and implemented by October 15, 2008.
4. LES will implement and communicate the quality principles defined above by one or more of the following methods: senior management communiqué, General Employee Training, pre-job safety briefs, observation program, or employee recognition program by November 15, 2008.
5. LES will develop metrics to enforce/monitor the implementation of the quality principle program by November 15, 2008.

### **IV. Date When Full Compliance Will Be Achieved:**

For the improperly installed reinforcing steel documented by 2008-CR-828 and NCR-28683-162, full compliance was achieved with the disposition of NCR-28683-162 on April 26, 2008 which concluded that the improperly positioned reinforcing steel condition was acceptable to "use as is".

For the extra reinforcing steel installed perpendicular to grid line "A" documented by 2008-CR-826, full compliance was achieved when the unnecessary reinforcing steel was removed on April 23, 2008.