



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
61 FORSYTH STREET, SW, SUITE 23T85  
ATLANTA, GEORGIA 30303-8931

October 8, 2009

Gregory Smith, Chief Operating Officer  
and Chief Nuclear Officer  
National Enrichment Facility  
P.O. Box 1789  
Eunice, NM 88231

**SUBJECT: NRC INSPECTION REPORT NO. 70-3103/2009-006 AND NOTICE OF VIOLATION**

Dear Mr. Smith:

During the period from August 10 through 13, 2009, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection associated with the construction activities of the Louisiana Energy Services, L.L.C., National Enrichment Facility (LES NEF). The purpose of the inspection was to evaluate quality assurance program implementation and construction activities. The enclosed inspection report, which documents the inspection results, was discussed with you and other members of your staff on August 13, 2009, and September 8, 2009.

Based on the results of this inspection, the NRC has determined that two (2) Severity Level IV violations of NRC requirements occurred. These violations were evaluated in accordance with the NRC Enforcement Policy. The current Enforcement Policy is available on the NRC's Web site at [www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html](http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html). These violations are cited in the enclosed Notice of Violation (Notice), and the circumstances surrounding them are described in the subject inspection report. The violations are being cited in the Notice because they were identified by the NRC.

You are required to respond to this letter and should follow the instructions specified in the enclosed notice when preparing your response. The guidance from NRC Information Notice 96-28, "Suggested Guidance Relating to Development and Implementation of Corrective Action," is available on the NRC's Web Site and may be helpful. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements. If you contest these violations or their significance, you should provide a written 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: (1) the Regional Administrator, Region II; and (2) the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," this document may be accessed through the NRC's public electronic reading room, Agency-Wide Document Access and Management System (ADAMS) on the internet at <http://www.nrc.gov/reading-rm/adams.html>.

Should you have any questions concerning this letter, please contact me at (404) 562-4647.

Sincerely,

**/RA/**

James H. Moorman III, Chief  
Construction Inspection Branch 3  
Division of Construction Inspection

Docket No.: 70-3103  
License No.: SNM-2010

Enclosures: 1. Notice of Violation  
2. NRC Inspection Report 70-3103/2009-006 w/attachments

cc w/encls: (See next page)

Should you have any questions concerning this letter, please contact me at (404) 562-4647.

Sincerely,

**/RA/**

James H. Moorman III, Chief  
 Construction Inspection Branch 3  
 Division of Construction Inspection

Docket No.: 70-3103  
 License No.: SNM-2010

- Enclosures: 1. Notice of Violation  
 2. NRC Inspection Report 70-3103/2009-006 w//attachments

cc w/encls: (See next page)

PUBLICLY AVAILABLE     
  NON-PUBLICLY AVAILABLE     
  SENSITIVE     
  NON-SENSITIVE  
 ADAMS:  Yes   
 ACCESSION NUMBER: ML092820188     
  SUNSI REVIEW COMPLETE

OFFICE	RII:DCI	RII:DCP	RII:DCI				
SIGNATURE	JOC	DAS	JB				
NAME	J. Calle	D. Seymour	J. Blake				
DATE	10/06/2009	10/06/2009	10/06/2009				
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

cc w/encls:

Steve Cowne, Quality and Regulatory  
Affairs Director  
National Enrichment Facility  
P.O. Box 1789  
Eunice, NM 88231

Daniel F. Stenger, Counsel  
Hogan & Hartson  
555 13th Street, NW  
Washington, DC 20004

John Parker, Chief  
Radiation Control Bureau  
Field Operations Division  
Environment Department  
Harold S. Runnels Building  
1190 St. Francis Drive, Room S 2100  
P. O. Box 26110  
Santa Fe, NM 87502

Richard A. Ratliff, PE, LMP  
Radiation Program Officer  
Bureau of Radiation Control  
Department of State Health Services  
Division for Regulatory Services  
1100 West 49th Street  
Austin, TX 78756-3189

Alton Dunn, Mayor of Jal  
P.O. Box Drawer 340  
Jal, NM 88252

John Goldstein, Deputy Secretary  
New Mexico Department of Environment  
Office of the Secretary  
1190 St. Francis Drive  
P. O. Box 26110  
Sante Fe, NM 87502-0157

Matt White, Mayor  
City of Eunice  
P.O. Box 147/1106 Ave J  
Eunice, NM 88231

Gary Don Reagan, Mayor  
City of Hobbs  
200 E. Broadway  
Hobbs, NM 88240

Gary Schubert, Chairman  
Lea County Commissioners  
100 North Main  
Lovington, NM 88260

cc email distribution w/encls:

Reinhard Hinterreither, President  
National Enrichment Facility  
Electronic Mail Distribution

Brenda Brooks, Director  
Community Affairs and Government  
Relations  
National Enrichment Facility  
Electronic Mail Distribution

Steve Cowne, Quality & Regulatory  
Affairs Director  
National Enrichment Facility  
Electronic Mail Distribution

Daniel F. Stenger, Counsel  
Hogan & Hartson  
555 13<sup>th</sup> Street, NW  
Washington DC 20004

Letter to Gregory Smith from James H. Moorman III dated October 8, 2009

SUBJECT: NRC INSPECTION REPORT NO. 70-3103/2009-006

DISTRIBUTION w/encls:

B. Smith, NMSS

T. Naquin, NMSS

R. Croteau, RII

T. Gody, RII

D. Seymour, RII

J. Moorman, RII

C. Ogle, RII

C. Taylor, RII

J. Calle, RII

PUBLIC

## NOTICE OF VIOLATION

Louisiana Energy Services, L.L.C.  
Eunice, N.M.

Docket No. 70-3103  
License No. SNM-2010

During a Nuclear Regulatory Commission (NRC) inspection conducted on August 10 - 13, 2009, violations of NRC requirements were identified.

In accordance with the NRC Enforcement Policy, the violations are listed below:

- A. 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 (QAPD), dated March 5, 2009, and supplements thereto.

Section 18 of the LES NEF QAPD states, in part, that "internal or external audits shall be scheduled at a frequency commensurate with the status and importance of the work. Internal or external audits shall be scheduled to begin as early in the life of the work as practical and shall be scheduled to continue at intervals consistent with the schedule for accomplishing the work. As a minimum internal audits of LES QA Level 1 and QA Graded Level 1 activities shall be performed at least once per year or at least once during the life of the activity, which ever is shorter."

LES implementing procedure, QA-3-2000-01, Quality Assurance Audit, Revision 2, Section 5.1.2, states "at a minimum, QAP (Quality Assurance Plan) shall schedule audits for: a. During design and construction, and preoperational phase: 1. One QA audit every 12 months for the following activities, to the extent there is relevant ongoing work, or at least once during the life of (the) activity, whichever is shorter: Configuration Management, Design Bases Control, Startup Test Program, Training and Qualification of Personnel, Procedures, Corrective Action Program/Incident Investigation, Records Management, and QA Organization."

Contrary to the above, as of August 13, 2009, internal audits of LES QA Level 1 activities were not performed once every 12 months as required by the LES NEF QAPD and QA-3-2000-01. Specifically, audits were not scheduled or performed in the areas of Startup Test Program and Records Management.

### **This is a Severity Level (SL) IV Violation (Supplement II)**

- B. 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 (QAPD), dated March 5, 2009, and supplements thereto.

Section 3 of the LES NEF QAPD states, in part, that "Changes to final designs, field changes, modifications to the operating facility and nonconforming items dispositioned as "use-as-is" or "repair," as described in Section 15, Nonconforming Items, shall have a

documented justification for use and are subject to the same design control measures and reviews as those applied to the original design. Design control measures for changes shall include provisions to determine that the design analyses for the item are still valid. When a design change is approved other than revision to the affected design documents, field changes shall be incorporated into affected design documents when such incorporation is appropriate. LES design information transmitted across interfaces shall be documented and procedurally controlled.”

Contrary to the above, changes to final designs and field changes did not have documented justification for use and were not subjected to the same design control measures and reviews as those applied to the original design as evidenced by the following examples:

(1.) Design control measures for changes made did not include provisions to determine that the design analyses for the item were still valid. Specifically, from May 2 through June 19, 2009, the licensee failed to implement design control measures commensurate with those applied to the original design in evaluating discrepancies between several engineering change requests referenced in the formal stop work order issued on April 28, 2009, and the parent design documents associated with Separations Building Module (SBM) 1001.

(2.) Changes to final designs and field changes were not subjected to the same design control measures and reviews as those applied to the original design. Prior to July 12, 2008, the licensee had failed to maintain adequate design and document control for activities that impacted the quality of completed QL-1 construction. Discrepancies between the critical document sets at controlled distribution points, the engineering change request (ECR) database, and the Electronic Data Management System (EDMS) resulted in the construction of QL-1 structures not in accordance with approved design.

(3.) Changes to final designs and field changes did not have documented justification for use and were not subjected to the same design control measures and reviews as those applied to the original design. As of April 6, 2009, the licensee had begun the procurement, fabrication, installation and testing of structures, systems and components associated with Items Relied on For Safety (IROFS) 41 via the commercial grade dedication process without the applicable commercial grade dedication (CGD) procedure and associated CGD plan in place.

**This is a Severity Level IV violation (Supplement II)**

Pursuant to the provisions of 10 CFR 2.201, Louisiana Energy Services, LLC is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555, with a copies to the Chief, Technical Support Group, Division of Fuel Cycle Safety and Safeguards, NMSS, and the Regional Administrator, Region II, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation;" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved.

Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an Order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web Site at <http://www.nrc.gov/reading-rm/adams/html> to the extent possible, it should not include any personal privacy, proprietary, classified, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withhold and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days. Dated at Atlanta, Georgia, this 8<sup>th</sup> day of October, 2009.

**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION II**

Docket: 70-3103

License: SNM-2010

Report: 70-3103/2009-006

Licensee: Louisiana Energy Services, L.L.C.

Inspection Dates: August 10 - 13, 2009

Inspectors: J. Calle, Senior (Sr.) Construction Inspector, Construction Inspection Branch 3 (CIB3), Division of Construction Inspection (DCI), Region II (RII)  
J. Blake, Sr. Program Inspector, CIB3, DCI, RII  
B. Burgess, Sr. Project Manager, Construction Projects Branch 2 (CPB2), Division of Construction Projects (DCP), RII

Accompanying Personnel: D. Seymour, Branch Chief, Construction Projects Branch 1 (CPB1), DCP  
C. Taylor, Sr. Project Inspector, CPB1, DCP, RII  
J. Kent, Construction Inspector, Trainee, Construction Inspection Branch 1 (CIB1), DCI, RII  
N. Karlovich, Construction Inspector, Trainee, CIB1, DCI, RII  
D. Arroyo, Quality Assurance Engineer, Office of Nuclear Materials Safety and Safeguards (NMSS)

Approved: James H. Moorman III, Chief, CIB3, DCI, RII

## EXECUTIVE SUMMARY

Louisiana Energy Services, L.L.C., National Enrichment Facility (LES NEF)  
Nuclear Regulatory Commission (NRC) Inspection Report 70-3103/2009-006

This report covers an announced inspection of LES NEF in the area of quality assurance program development and implementation as well as design and document control. The inspection included the observation and evaluation of selected aspects of the licensee's Quality Assurance (QA) Program and related construction activities.

### **Quality Assurance: Program Development and Implementation (Inspection Procedure (IP) 88106)**

The inspectors evaluated the QA program at LES including the changes implemented by LES after terminating Washington Group International (WGI) as the primary constructor and Nuclear Technology Solutions (NTS) as the primary design engineering organization. The inspectors reviewed procedures, held discussions with QA representatives concerning the organizational structure and roles and responsibilities of QA personnel, and observed QA activities in the field.

One Severity Level (SL) IV violation of Basic Requirement 18 of American Society of Mechanical Engineers (ASME) NQA-1-1994, Quality Assurance Requirements for Nuclear Facility Applications, and Section 18 of the licensee Quality Assurance Program Description (QAPD) was identified for failure to perform audits of records management and the startup test program annually. This was identified as Violation (VIO) 70-3103/2009-006-001 (Section 2.0).

VIO 70-3103/2008-003-003, Failure to Authenticate and Validate QA Records was reviewed and closed (Section 2.0).

### **Quality Assurance: Design and Document Control (IP 88107)**

The inspectors reviewed portions of the LES design control program to determine if the program effectively controls procedures used to implement the design at LES, including design input controls, processes, verifications, change controls, interface controls, and identified deviations from specified standards.

One SL IV violation of Basic Requirement 3 of NQA-1 and Section 3 of the licensee QAPD was identified for failure to control design change activities. This was identified as VIO 70-3103/2009-006-002. Unresolved Item (URI) 70-3103/2008-003-001, Failure to Control Engineering Change Requests for QL-1 Construction Activities, and URI 70-3103/2009-002-002, Commercial Grade Dedication of Items and Services Associated with Items Relied on for Safety (IROFS) 41 were reviewed and closed to VIO 70-3103/2009-006-002 (Section 3.0).

### **Attachment:**

Persons Contacted  
Inspection Procedures Used  
List of Items Opened, Closed, and Discussed  
List of Acronyms Used  
List of Documents Reviewed

## REPORT DETAILS

### 1.0 Summary of Site Activities

The licensee continued to perform ongoing concrete, structural steel, and welding activities at Louisiana Energy Services, L.L.C., National Enrichment Facility (LES NEF.)

### 2.0 Quality Assurance: Program Development and Implementation (IP 88106)

#### a. Scope and Observations

The inspectors evaluated the Quality Assurance (QA) program at LES including the changes implemented by LES after terminating Washington Group International (WGI) as the primary constructor and Nuclear Technology Solutions (NTS) as the primary design engineering organization. The inspectors reviewed procedures, held discussions with QA representatives concerning the organizational structure and roles and responsibilities of QA personnel, and observed QA activities in the field. The inspectors also followed up on URI 70-3103/2009-003-005, Audits of Various Site Programs.

In general, the inspectors identified that the procedures used by LES were transferred in general form from the old WGI and NTS procedures, and updated as appropriate to reflect any recent construction or organizational changes. In evaluating these changes to procedures, the inspectors were able to assess in some context all 18 criteria of 10 CFR 50, Appendix B and all 18 basic requirements of American Society of Mechanical Engineers (ASME) NQA-1-1994, Quality Assurance Requirements for Nuclear Facility Applications. In general, the procedures reviewed for the various Quality Assurance Level 1 (QL-1) activities that are conducted at LES appeared appropriate for their applications.

During discussions concerning the organization, the inspectors were informed that when LES took over the QA activities formerly conducted by WGI, they increased the number of quality control (QC) inspectors significantly, and added a responsibility to conduct surveillances along with the conduction of required, QC hold-point inspections. The inspectors were also informed that LES decided to increase the visibility of QA/QC personnel to the workers in the field by issuing new "American Flag" hard hats.

To review QA work activities, the inspectors reviewed a report of qualifications for the QC inspectors; reports of QA/QC surveillance activities; reviewed the LES program for control and calibration of measuring and test equipment (M&TE); and observed QA/QC activities in the field.

Since April 1, 2009, when LES officially took control of QA/QC, the QA organization had conducted 161 reported surveillances (106 external and 55 internal) of conditions and activities, at vendor facilities and on site, affecting personnel safety and quality construction. The inspectors reviewed 18 surveillance reports as a sample of this QA activity.

Inspectors reviewed LES procedure QA-3-1000-02 Revision 0, Calibration and Control of Measuring and Test Equipment (M&TE), to determine compliance with Appendix B, Criteria XII. The QC M&TE custodian was interviewed. At the time of the inspection, the control requirements included the requirement that the individual QC inspectors check

out required equipment on a daily basis and maintain possession of the equipment in their individual tool kits when not in use. No onsite calibration is performed.

The inspectors made two (2) inspection tours of site construction areas and activities. Construction and inspection activities were observed in the UF-6 clean room, and mini-halls 2A, 2B, and 1B, as well as general areas inside the Separations Building Module (SBM). Inspectors observed QL-1 concrete anchor bolt installation activities in several areas of the SBM, QL-1 Support Welding for mini-hall 2B, and QL-1 thread inspection for the FLOMELS installed in mini-hall 1B. During the inspection tours, the inspectors reviewed the condition and use of work packages for the QL-1 work involved, the storage facilities for daily use drawings in the SBM work spaces, and also observed that the rebar was stored properly in a QL-1 storage hold area adjacent to the buildings. The inspectors determined that QC presence was established in the areas observed.

The inspectors evaluated the scheduling and performance of audits for QL-1 activities. During this inspection, the inspector reviewed the schedule of audits and all of the documented audits performed over the last calendar year. Special Nuclear Material License No. 2010 required the licensee to conduct audits of authorized activities in accordance with the approved QAPD, dated March 5, 2009. Section 18 of the LES NEF QAPD implements the requirements of Criterion 18, of 10 CFR 50, Appendix B, and the commitment to Basic Requirement 18 of NQA-1-1994. Section 18 of the QAPD states, in part, that "internal or external audits shall be scheduled at a frequency commensurate with the status and importance of the work. Internal or external audits shall be scheduled to begin as early in the life of the work as practical and shall be scheduled to continue at intervals consistent with the schedule for accomplishing the work. As a minimum, internal audits of LES QA Level 1 and QA Graded Level 1 activities shall be performed a least once per year or at least once during the life of the activity, which ever is shorter."

LES Implementing procedure, QA-3-2000-01, Quality Assurance Audit, Revision 2, Section 5.1.2, states "at a minimum, QAP (Quality Assurance Plan) shall schedule audits for: a. During design and construction, and preoperational phase: 1. One QA audit every 12 months for the following activities, to the extent there is relevant ongoing work, or at least once during the life of (the) activity, whichever is shorter: Configuration Management, Design bases control, Startup Test Program, Training and qualification of personnel, Procedures, Corrective Action Program/Incident Investigation, Records Management, and QA Organization."

Contrary to Section 18 of the QAPD, as of August 13, 2009, annual internal audits had not been conducted within the past 12 months, as applicable, specifically in the areas of Startup Test Program and Records Management. Consequently, important work activities were not reviewed for adequacy at a frequency commensurate with their importance to safety.

URI 70-3103/2009-003-005, Audits of Various Site Programs, is closed.

b. Conclusion

One SL IV violation was identified for failure to perform audits of records management and the startup test program annually as required by Basic Requirement 18 of NQA-1

and Section 18 of the QAPD. This was identified as VIO 70-3103/2009-006-001.

c. Follow-up of Previously Identified Items

The inspectors reviewed licensee activities to restore compliance with NRC regulations, for VIO 70-3103/2008-003-003, Failure to Authenticate and Validate QA Records.

The inspectors reviewed the evaluation for CR-2008-1968 and the prescribed corrective actions. The inspectors determined that the corrective actions were adequate. Licensee corrective actions included training for functional area managers and records management staff on validating quality records as well as quality records management. In addition, RM-3-2000-01, Records Management Procedure, was revised to clearly specify quality records validation. The inspectors conducted an independent review of various quality records and determined that the records were adequately maintained and managed. The inspectors also reviewed the licensee's reply to the violation and determined that the licensee had appropriately restored compliance with NRC regulations and the conditions of their license. Based on this review the violation is closed.

**3.0 Quality Assurance: Design and Document Control (IP 88107)**

a. Scope and Observations

The inspectors reviewed portions of the LES design control program to determine if the program effectively controlled procedures used to implement the design at LES, including design input controls, processes, verifications, change controls, interface controls, and identified deviations from specified standards. This inspection also reviewed the quality controls that were used to procure QL-1 parts, components and systems. The inspectors reviewed licensee actions associated with Unresolved Item (URI) 2008-003-001, Failure to Control Engineering Change Requests (ECRs) for Quality Assurance Level-1 (QL-1) Construction Activities. The inspectors also followed up on URI 70-3103/2009-002-002, Commercial Grade Dedication of Items and Services Associated with IROFS 41.

The inspectors held discussions with licensee personnel and reviewed various condition report (CR) evaluations including those for 2006-0073, 2007-065, 2007-079, 2007-124, 2008-1909, 2008-1933, 2008-1983, 2008-2053, 2008-2764, 2008-3103, 2009-0847, and 2009-1119. The inspectors also reviewed the LES memorandum discussing the assessment of the corrective actions performed in response to CR-2008-1933 dated May 12, 2009. CR-2008-1933 identified discrepancies between controlled drawings, the Documentum database and the ECR database.

On April 28, 2009, as a result of the continued identification of problems with posting ECRs to design documents in the field, the licensee issued a formal stop work order to address this significant condition adverse to quality problem. This stop work order addressed problems identified at all of the satellite document control stations that contained QL-1 or QL-1 graded documents and condition report 2009-1119-CR was issued. In their stop work document, dated April 28, 2009, the licensee stated that over thirty instances were identified where ECRs were not posted to controlled design documents. Additional issues were determined to exist where there were discrepancies

between Documentum and the controlled drawing sets. Over ninety issues have been identified at this time. Further, the stop work document provided a list of eight corrective actions identified as "the minimum corrective actions necessary to re-initiate work." The minimum corrective actions included determining the apparent cause of the deficiency, implementing interim corrective actions, identifying corrective actions necessary to preclude recurrence, and reviewing items already built or installed to determine if any construction has occurred outside of the approved change.

Based on the number of problems identified with design documents, the licensee initiated a root cause assessment and took immediate compensatory actions. Prior to completing the root cause assessment, the licensee assessed work activities that could be allowed to continue and processed a number of exemptions to the formal stop work. In processing the exemptions, the licensee relied on the results of an apparent cause evaluation completed for CR-2009-0847 and incorporated this evaluation into the root cause for CR-2009-1119. CR-2009-0847 was generated on March 29, 2009, before the stop work order was issued, when additional problems were identified with ECRs posted to design documents. The apparent cause evaluation completed for CR-2009-0847 determined two apparent causes, the first dealing with a failure to follow all the steps in the process established for the processing of documents to the field, and the second addressed the human error caused by inexperience and an individual in the in-training process.

The inspectors identified that the licensee had issued approximately 12 exemptions to the stop work order to allow for the continuation of construction activities for a number of buildings currently under construction, including QL-1 activities. The stop work order was lifted on May 15, 2009. The stop work was lifted before the root cause assessment was completed and before reviewing items already built or installed to determine if any construction has occurred outside of the approved change. Completion of the root cause assessment was needed to determine the actions to preclude recurrence. Consequently, as a result of not implementing corrective actions to preclude recurrence, two additional CR's, 2009-1772 and 2009-1778, were written that identified continued problems with design changes to design control documents. This sequence of events led the inspectors to the identification of the following violation:

The license requires, in part, that the licensee shall conduct authorized activities at the LES NEF in accordance with statements, representations, and conditions in the approved QAPD, dated March 5, 2009, and supplements thereto.

Section 3 of the LES NEF QAPD states, in part, that "The elements of the LES QA Program described in this section and associated QA procedures implement the requirements of Criterion 3, Design Control, of 10 CFR 50, Appendix B, and the commitments to Basic Criterion 3 and Supplement 3S-1 of NQA-1-1994 as revised by NQA-1a-1995 Addenda." Section 3 of the QAPD states, in part, that "Changes to final designs, field changes, modifications to the operating facility and nonconforming items dispositioned as "use-as-is" or "repair," as described in Section 15, Nonconforming Items, shall have documented justification for use and are subject to the same design control measures and reviews as those applied to the original design. Design control measures for changes shall include provisions to determine that the design analyses for the item are still valid. When a design change is approved other than revision to the affected design documents, field changes shall be incorporated into affected design

documents when such incorporation is appropriate. LES design information transmitted across interfaces shall be documented and procedurally controlled.” Contrary to the above, from May 2 through June 19, 2009, the licensee failed to implement design control measures commensurate with those applied to the original design in evaluating discrepancies between several engineering change requests and the parent design documents associated with Separations Building Module (SBM) 1001.

The measures that were taken did not include verification that the design analyses for the structure, system or component were still valid. The identified design discrepancies resulted in the issuance of a formal stop work order on April 28, 2009. However, the licensee authorized continued design and construction activities prior to implementing the required design control measures and prior to reviewing completed work activities to determine if any construction had occurred outside of approved design. Further, the recurrence of similar design control problems was not precluded as evidenced by the issuance of CR’s 2009-1772 and 2009-1778 on June 15, 2009. This was identified as the first example of VIO 70-3103/2009-006-002.

The inspectors reviewed URI 70-3103/2008-003-001 and determined that prior to July 12, 2008, the licensee failed to maintain adequate design and document control for activities that impacted the quality of completed QL-1 construction. Discrepancies between the critical document sets at controlled distribution points, the engineering change request (ECR) database, and the Electronic Data Management System (EDMS) resulted in the construction of QL-1 structures not in accordance with approved design. Because this issue indicates that changes to final designs and field changes were not subjected to the same design control measures and reviews as those applied to the original design, it is identified as the second example of VIO 70-3103/2009-006-002.

The inspectors reviewed URI 70-3103/2009-002-002 and determined that as of April 6, 2009, the licensee had begun the procurement, fabrication, installation and testing of structures, systems and components associated with Items Relied on For Safety (IROFS) 41 via the commercial grade dedication process without the applicable commercial grade dedication (CGD) procedure and associated CGD plan in place. Because this issue indicates that changes to final designs and field changes did not have documented justification for use and were not subjected to the same design control measures and reviews as those applied to the original design, it is identified as the third example of VIO 70-3103/2009-006-002.

URI 70-3103/2008-003-001 and URI 70-3103/2009-002-002 are incorporated into VIO 70-3103/2009-006-002 and are closed.

b. Conclusions

One SL IV violation of Basic Requirement 3 of NQA-1 and Section 3 of the QAPD was identified for failure to implement design control change measures commensurate with those applied to the original design. This was identified as VIO 70-3103/2009-006-002.

4.0 Exit Meeting

The team presented the inspection results at the conclusion of the inspection on August 13, 2009. The lead inspector described the areas inspected and discussed the inspection results in detail with licensee staff, which included Mr. Gregory Smith, Chief

Operating Officer and Chief Nuclear Officer. A second telephone exit was conducted on September 8, 2009, to inform the licensee of changes to the findings discussed during the exit meeting on August 13, 2009. Although proprietary documents and processes were reviewed during this inspection, the proprietary nature of these documents or processes was not included in this report.

## SUPPLEMENTAL INFORMATION

### 1. List of Persons Contacted

#### Louisiana Energy Services, L.L.C., National Enrichment Facility (LES NEF):

P. Berry, Engineering Manager  
T. Braudt, Licensing Engineer  
K. Cleveringa, QC Inspector  
R. Cornett, QC Inspector  
S. Cowne, Quality and Regulatory Affairs Manager  
D. Dotson, Licensing Manager  
C. Glover, QC Inspector  
T. Jackson, QC Foreman  
P. Kiser, Engineering  
D. Lakin, Performance Assessment Manager  
P. MacCasland, Licensing Engineer  
J. Marchi, QA Supervisor  
K. Neil, Supervisor, Procedure Development  
G. Sergent, QA Director (Acting)  
D. Sexton, VP of Engineering  
E. Schulte, Construction Manager  
B. Siemers, QC M&TE custodian  
C. Sist, QC Inspector  
G. Smith, Chief Operating Officer and Chief Nuclear Officer  
O. Torres, QC Supervisor  
R. Whitford, QA Specialist

### 2. Inspection Procedures Used

IP 88106      Quality Assurance: Program Development and Implementation  
IP 88107      Quality Assurance: Design and Document Control

### 3. List of Items Opened, Closed, and Discussed

<u>Item Number</u>	<u>Status</u>	<u>Description</u>
70-3103/2008-003-001	Closed	URI: Failure to Control Engineering Change Requests for QL-1 Construction Activities (Section 3.0)
07-3103/2008-003-003	Closed	NOV: Failure to Authenticate and Validate QA Records (Section 2.0)
70-3103/2009-002-002	Closed	URI: Commercial Grade Dedication of Items and Services Associated with IROFS 41(Section 3.0)
70-3103/2009-003-005	Closed	URI: Audits of Various Site Programs (Section 2.0)

70-3103/2009-006-001	Opened	NOV: Failure to Perform QA Audits (Section 2.0)
70-3103/2009-006-002	Opened	NOV: Failure to Implement Design Control Measures (Section3.0)

4. List of Acronyms Used

CFR	Code of Federal Regulations
CGD	Commercial Grade Dedication
CR	Condition Report
ECR	Engineering Change Request
EDMS	Electronic Document Management System
IROFS	Items Relied On For Safety
IP	Inspection Procedure
LES	Louisiana Energy Services
LLC	Limited Liability Company
M&TE	measuring and test equipment
NCR	Non Conformance Report
NEF	National Enrichment Facility
NQA-1	Quality Assurance Requirements for Nuclear Facility Applications
NRC	Nuclear Regulatory Commission
NTS	Nuclear Technology Solutions, LLP
QA	Quality Assurance
QAP	Quality Assurance Plan
QAPD	Quality Assurance Program Description
QC	Quality Control
QL	Quality Level
RII	Region 2
SBM	Separations Building Module
SCAQ	Significant Condition Adverse to Quality
SL	Severity Level
URI	Unresolved Item
VIO	Violation
WGI	Washington Group International

5. Records and Documents Reviewed

Procedures

AD-3-1000-01, Requirements for Procedures, Rev. 4  
AD-3-1000-08, Stop Work, Rev. 4  
CA-3-1000-01, Performance Improvement Program. Rev. 9  
EG-2-2000-01, Configuration Management, Rev. 1  
EG-3-1100-01, Engineering Organization Role and Responsibilities, Rev. 3  
EG-3-2100-01, Configuration Change, Rev. 7  
EG-3-2100-12, Owner Acceptance Review Documentation Management, Rev. 3  
EG-3-4100-01, Design Change Requests, Rev. 2  
EG-3-4100-05, Engineering Change Request, Rev. 6  
EG-3-6000-01, Construction Work Plans, Rev. 3  
EG-3-6000-02, Control of Special Processes, Rev. 1  
EG-3-7000-01, Review and Acceptance of Supplier Information, Rev. 5  
LS-3-1000-04, 10CFR70.72(c) Evaluations for Proposed Changes, Rev. 4

QA-3-1000-01, QA Evaluation of Nuclear Industry Assessment Committee (NIAC)  
Assessment Reports, Rev. 0  
QA-3-1000-02, Calibration and Control of Measuring and Test Equipment, Rev. 0  
QA-3-2000-01, Quality Assurance Audit, Rev. 2  
QA-3-2000-03, Training, Qualification, and Certification of QA Personnel, Rev. 2  
QA-3-2000-07, Quality Assurance Surveillance, Rev. 1  
QA-3-3000-02, QC Inspector Training and Qualification, Rev. 2  
RM-3-3000-01, Control of Documents, Rev. 4

Audits/Surveillances

2007-003  
2008-1864  
2008-2294-Int-Aud  
2009-A-01-004  
2009-A-03-020  
2009-A-04-021  
2009-A-05-023  
2009-A-05-024  
2009-A-05-033  
2009-A-05-036  
2009-A-05-037  
2009-A-06-044  
2009-A-06-048  
2009-S-02-006  
2009-S-03-010  
2009-S-03-027  
2009-S-04-048  
2009-S-05-051  
2009-S-05-054  
2009-S-05-058  
2009-S-06074  
2009-S-06-096  
2009-S-06-100  
2009-S-06-103  
2009-S-06-110  
2009-S-06-128  
2009-S-07-150  
2009-S-07-166  
2009-S-07-176  
2009-S-I-04-049  
2009-S-I-04-050

LES Condition Reports

2006-73  
2007-65  
2007-79  
2007-124  
2008-83  
2008-1909  
2008-1933  
2008-1955

2008-1968  
2008-2047  
2008-2053  
2008-2486  
2008-2492  
2008-2501  
2008-2504  
2008-2764  
2008-3101  
2008-3102  
2008-3103  
2008-3104  
2008-3105  
2008-3106  
2008-3109  
2008-3110  
2008-3111  
2008-3112  
2008-3113  
2008-3120  
2008-3121  
2008-3637  
2009-0847  
2009-1119  
2009-1287  
2009-1412  
2009-1444  
2009-1662  
2009-1731  
2009-1761  
2009-1772  
2009-1778  
2009-2399  
2009-2452  
2009-2453  
2009-2519  
2009-2598  
2009-2599  
2009-2600  
2009-2601  
2009-2604

Stop Work Exemptions

2009-1119-0-3-0-3EJS-09-001  
2009-1119-0-3-0-4EJS-09-002  
2009-1119-0-3-0-5EJS-09-003  
2009-1119-0-3-0-6EJS-09-004  
2009-1119-0-3-0-7ESJ-09-002  
2009-1119-0-3-0-8MWB-09-001  
2009-1119-0-3-0-9MWB-09-002  
2009-1119-0-3-0-10MWB-09-003

2009-1119-0-3-0-11MWB-09-004  
2009-1119-0-3-0-12MWB-09-006  
2009-1119-0-3-0-13MWB-09-007  
2009-1119-0-3-0-14MWB-09-010  
2009-1119-0-3-0-15MWB-09-011  
2009-1119-0-3-0-16MWB-09-012  
2009-1119-0-3-0-17MWB-09-0013  
2009-1119-0-3-0-18MWB-09-0014  
2009-1119-0-3-0-19MWB-09-0015  
2009-1119-0-3-0-20MWB-09-0016  
2009-1119-0-3-0-21MWB-09-017  
2009-1119-0-3-0-22SLC-09-001  
2009-1119-0-3-0-23TDF-09-030  
2009-1119-0-3-0-24TDF-09-033  
2009-1119-0-3-0-25TDF-09-034

Engineering Change Requests

ECR-4030

ECR-4062

ECR-4127

ECR-4144

Additional Documents

Copy of Certification Log for QC personnel

QA Organization Chart

QAPD Revision 19d

LES Position Paper: NRC Potential Violation of Criterion 16: Corrective Action

LES Stop Work Memo dated 4/28/09

LES Stop Work Memo, QA-09-0151, dated May 15, 2009

LES Stop Work Memo, QA-09-0154, dated May 15, 2009

Root Cause Evaluation, 2009-1119, Rev. 0

Root Cause Evaluation, 2009-1119, Rev. 1

EG-DCR-2008-014

CC-EG-2009-0030, Rev. 1

CC-EG-2009-0082, Rev.