

JAN 14 2011

LES-11-00002-NRC

ATTN: Document Control Desk
Office of Nuclear Material Safety and Safeguards
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Louisiana Energy Services, LLC
NRC Docket Number: 70-3103

Subject: Reply to Notice of Violation 70-3103/2010-015

Reference: Letter from Alain Artayet (NRC) to D. Sexton (LES), NRC Inspection Report
No. 70-3103/2010-014 and Notice of Violation, dated December 22, 2010

In response to the referenced NRC Notice of Violation (Notice), URENCO USA (UUSA) herewith provides the enclosed reply (Enclosure). The violations relate to Section 2, Quality Assurance Program and Section 4, Procurement Document Control of UUSA's Quality Assurance Program Description (QAPD).

Pursuant to instructions specified in the Notice, the enclosed UUSA reply (Enclosure) includes for the violation: 1) the reason for the violation; 2) the corrective steps that have been taken and the results achieved; 3) the corrective steps that will be taken; and 4) the date when full compliance will be achieved.

Should there be any questions regarding this submittal, please contact Wyatt Padgett, LES Licensing Manager, at 575-394-5257.

Respectfully,



Stephen R. Cowne for
David E. Sexton
Chief Nuclear Officer and Vice President of Operations

Enclosure: Reply to Notice of Violation 07-3101/2010-015

IE07

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ENCLOSURE

LOUISIANA ENERGY SERVICES/URENCO USA (LES/UUSA)

REPLY TO NOTICE OF VIOLATION (NOTICE) 70-3103/2010-015

Restatement of Violations:

During a Nuclear Regulatory Commission (NRC) inspection conducted on October 4-7, 2010, violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below:

Special Nuclear Material (SNM) License No. 2010 requires, in part, that the licensee shall conduct authorized activities at the Louisiana Energy Services, L.L.C., National Enrichment Facility (LES NEF) in accordance with statements, representations, and conditions in the approved Quality Assurance Program Description (QAPD), dated April 9, 2004, and supplements thereto. The LES NEF QAPD commits to American Society of Mechanical Engineers (ASME) NQA-1-1994, Quality Assurance Requirements for Nuclear facility Applications, including supplements as revised by the ASME NQA-1a-1995 Addenda for implementation of 10 CFR 50 Appendix B.

- A. Section 2, Quality Assurance Program, of the LES NEF QAPD, states in part, that the Quality Assurance (QA) organization is responsible for selected reviews and oversight of Quality Level-1 (QL-1) processes and programs. In particular, the LES NEF QA organization reviews and concurs with the selection of the Items Relied on for Safety (IROFS) and the application of QA requirements to the IROFS, any items which are determined to be essential to the functions of the IROFS, and items required to satisfy regulatory requirements for which QL-1 requirements are applied.*

Contrary to the above, prior to October 4, 2010, the licensee's QA organization failed to conduct the required selected reviews and oversight of the commercial grade dedication (CGD) of IROFS. The licensee's QA organization failed to ensure that the acceptability of several critical characteristics specified for pipeworks and upper steelworks associated with the CGD of cascade components designated as IROFS 41 were adequately verified, as evidenced by the following examples:

- 1. The material strengths of bolts and nuts in the pipeworks and upper steelworks listed as critical characteristic 7a for Cascade 3 were not adequately verified. This finding was identified by the licensee. However, this finding was directly related to their response to Notice of Violation (NOV) 070-3103/2010-013, dated September 20, 2010. Subsequent to the issuance of the letter by the licensee and prior to this inspection, the licensee identified that contrary to their formal response, not all of the required destructive testing of the bolt and nut material had been preformed.*
- 2. Material requirements of fixed clamps using PMI (positive material testing) process listed as critical characteristic 1c for Cascade 3 were not adequately verified.*
- 3. The required volumetric examination of complete joint penetration welds on turnbuckle components in the upper steelworks for Cascades 2 and 3, listed as part of critical characteristic 9, were not performed. This was identified by the*

licensee, but only as a result of conducting the extent of condition evaluation in response to NOV 070-3103/2010-013, dated September 20, 2010.

This is a Severity Level IV violation (Enforcement Policy 6.5.d)

B. Section 4, Procurement Document Control, of the LES NEF QAPD and Basic Requirement 4, Procurement Document Control, of NQA-1-1994, state, in part, that measures shall be established to assure that applicable requirements which are necessary to assure adequate quality, are suitably included or referenced in the documents for procurement of material, equipment, and services. LES NEF procedure PR-3-2000-01, "LES Control of Procurement," Section 5.7.2, states that QL-1 suppliers must be included on the Approved Suppliers List (ASL) for the proper scope of work prior to approving and awarding a procurement contract.

Contrary to the above, prior to October 4, 2010, the licensee had awarded a procurement contract with a QL-1 supplier for a scope of work that was not included on the ASL. Purchase Order 303199 to Broadway Electric Service Corporation, authorized the supplier to define design requirements for commercial grade dedication (CGD) of IROFS 1, 2, 4, and 5 equipment items; whereas, the authorized scope of work specified on the ASL limited work activities to installation, fabrication, and procurement of electrical components. As a result of the procurement contract, the supplier proceeded to develop and implement a CGD plan which failed to specify a critical characteristic necessary to accomplish the safety function of IROFS 1, 2, 4, and 5.

This is a Severity Level IV violation (Enforcement Policy 6.5.d)

UUSA Reply to Violation A:

1) The Reason for the Violation A (Example 1)

During the inspection the week of October 4, 2010, the NRC noted that the date stated for achievement of full compliance in the response to the NOV for Example 4, 8/12/10, was prior to the initiation date of CR 2010-3126. The NRC concluded that as a result the UUSA response to the Notice of Violation 70-3103/2010-013 was incorrect in that the noted full compliance date did not consider the bolt testing issue identified on 9/29/2010.

When responding to the NOV, UUSA stated that it was in full compliance as respects Example 4 on 8/12/10, the latest of the dates the above referenced test results were received. It did not occur to UUSA that the response should be directed to anything other than the specific issues identified in the cited violation for Example 4. A review of the wording of the language of Example 4 of the NOV reveals that it is more generic than the specific examples identified during the inspection.

During the NRC inspection documented in NRC inspection report 70-3103/2010-013, a detailed review of all bolt types for Cascades 1, 2, and 3 was performed to help assure correct bolt sample sizes were identified. Therefore, UUSA was not

expecting to find additional bolt and nut issues during the extent of condition reviews and therefore, UUSA did not recognize the potential for the stated date when full compliance would be achieved was dependent on completion of the extent of condition review.

UUSA had sent the appropriate sample sizes to be tested but the laboratory had sent incomplete test results back. Instead of testing all of the bolts received, they only tested one bolt of each type. This discrepancy in the laboratory test results was not identified during the receipt inspection in May of 2010. The bolts in question had been tested as part of the Cascade 2 dedication. Some of the bolts from the same lot were also used in Cascade 3.

Interviews with those involved in Example 4 of the NOV revealed that upon discovery of the fact that the QL1 lab that tested bolts and nuts for use in Cascade 2 had not tested all of the bolts submitted to the vendor: it did not occur to those involved that this condition was related to Example 4 of the NOV. This connection therefore was not made when CR 2010-3126 was prepared.

2) The Corrective Steps That Have Been Taken and Results Achieved for Violation A (Example 1)

- a. LES letter LES-10-0220-NRC, dated 10/18/2010 was submitted to the NRC providing a correction to the initial Reply to Notice of Violation 70-3103/2010-013. The letter revised the sections for full compliance to remove dates provided and state that UUSA would inform the NRC when full compliance was achieved for violation Examples 1, 2, 3, 4, and 5. In addition, the letter provided formal notification to the NRC of the date for full compliance for Example 4 not being met due to the identification of the additional bolt testing issue documented in CR 2010-3126.
- b. Critical Characteristic Verification Package 3-CCVP-2010-012-USPW-7A, 7B & 8A, documenting completion of 7A requirements for Cascade 3, was completed on 1/5/2011.

3) The Corrective Steps That Will Be Taken for Violation A (Example 1)

- a. UUSA will ensure that dates provided for full compliance include consideration for complete scope of NOV issue(s), including extent of condition as applicable. Scheduled Completion Date: 1/21/2011
- b. Training to be given to personnel preparing and signing NOV Response Letters, including Functional Area Managers, to assure compliance dates take into account the complete scope of NOV issue(s), including extent of condition as applicable. Scheduled Completion Date: 1/21/2011
- c. UUSA will develop a routing traveler for NOV correspondence to provide points to be considered to help assure correspondence accuracy and completeness. Scheduled Completion Date: 1/21/2011
- d. Corrective Action procedure(s) to be revised to include provision for new Condition Report's during generation of the CR, Supervisory review, or CR screening process to document, if aware of the fact, that the new CR is related

to a previous or pending Notice of Violation. Scheduled Completion Date:
1/31/2011.

- 4) The Date When Full Compliance Was Achieved for Violation A (Example 1)
Full compliance was achieved with completion of vendor testing for the subject nuts and bolts as documented in the Critical Characteristic Verification Package for Cascade 3 dated 1/5/2011.
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1) The Reason for the Violation A (Example 2)

A review of the circumstances related to the less than adequate performance and verification of the PMI (positive material testing) process for Cascade 3 Critical Characteristic 1c identified three apparent causes.

At the time of the subject data collection (5/6/10) the Commercial Grade Dedication (CGD) Program, due to causes identified in the root cause evaluation for CR 2010-2530, there existed a lack of understanding of program responsibilities and scope of the CGD process. These programmatic weaknesses contributed to a lack of proper oversight and ownership of the CGD program specific functions with a resultant lack of clarity for completion of some of the work activities. In this case, a failure to correctly perform or identify the PMI data deficiency and subsequent evaluation conducted to resolve the issue.

The second cause relates to a lack of process for review and acceptance of vendor test reports. There was no defined process for reviewing vendor or Quality Control test/inspection results for sample size and acceptable results. The process should have included data verification through use of acceptance criteria per the applicable CGD plan, correct sample size and derive actions to be taken for data deficiencies. The results should have been assessed for applicability with a documented review by a qualified engineer or quality control inspector.

The third cause relates to Human Performance. As identified during review of this condition, QA Report QA-09-1048 documented a partial review in that for fixed clamp PMI with results documenting a need to review acceptance criteria. In addition, during data documentation/review (documented in Work Plan 1001-MECH-458-028 on 5/6/2010) deficient data for manganese content for individual clamps was identified. Acceptance criteria for completion of the QC report was not provided, nor was there an evaluation of the PMI results performed by either QC or a qualified engineer.

In addition, other commercial grade dedication plans were reviewed for material identification requirements and the PMI test results were reviewed to determine proper testing and methodology was conducted and documented to support the CGD plans acceptance criteria. Of the items identified as having material identification requirements, 9 critical characteristics have been identified as having improper testing methodologies or inadequate test results. Condition reports have been generated to resolve the identified issues.

2) The Corrective Steps That Have Been Taken and Results Achieved for Violation A (Example 2)

- a. A Project Plan development and appointment of a Project Manager has been completed to address CGD program weakness regarding lack of program ownership and lack of oversight of the program. Completed 11/15/2010
- b. NCR 2010-3791 was performed to evaluate the deficient data associated with clamp PMI Manganese content. The disposition was Use-As-Is based on the primary critical attribute of the clamps being clamp strength. Hardness measurements have shown that all parts exceed the specified minimum hardness by a significant amount. In addition, the material does have manganese but the measured percentage is low, with the rest of the data within specification, providing reasonable assurance the clamps are per design. Completed 12/3/2010
- c. Procedure EG-3-2100-05 was revised to include provision for QA review of IROFS41 CGD documentation. Completed 11/15/2010
- d. Human performance training conducted for all personnel associated with IROFS41 inspections. Completed 10/8/2010.

3) The Corrective Steps That Will Be Taken for Violation A (Example 2)

- a. Procedure EG-3-2100-17, Review of test results Supporting Commercial Grade Dedication is being developed to provide for establishing a method for documenting review of test results supporting commercial grade (CGD) activities. Scheduled Completion Date: 1/21/2011

4) The Date When Full Compliance Was Achieved for Violation A (Example 2)

Full compliance was achieved on 12/3/2010, upon Approval of the disposition of NCR 2010-3791.

The Reason for the Violation A (Example 3)

(No Response required, as stated by NRC in Inspection Report 070-3103/2010-015)

UUSA Reply to Violation B:

1) The Reason for the Violation

It was initially perceived that BESCO had performed a design function for which it was not approved to perform as documented on the Approved Suppliers List (ASL). However, after further URENCO USA (UUSA) review it was identified that a process failure related to UUSA engineering design approval of the subject CGDP had occurred and that BESCO was not required to be on the ASL to perform this design function.

The reason for this event was the failure of UUSA to formally communicate to the supplier specific UUSA design basis requirements as the responsible party for this design function. The Purchase Order (PO) Purchase Requisition Applicable Document List (PRADL) did not include all design basis requirements that were necessary for the Supplier to fabricate and install its contracted IROFS under PO 303199. The original Purchase Requisition (PR) did not contain the required PRADL documents and the PRADL was not updated when the vendor requested and received the design input requirements from UUSA at a post-award meeting held with the vendor on 5/10/10. As part of the PO the vendor was to transcribe the UUSA design basis requirements into the CGDs it prepared and then to submit the CGDs to UUSA for design review and approval.

Because these documents were not identified on the PRADL, the Supplier did not reference the applicable design bases, and other design requirements necessary to assure appropriate quality assurance requirements were included or referenced in its CGD documents, which is contrary to QAPD Section 4, Procurement Document Control, requirements. Further, the vendor made reference in Section 4.3.1 of its CGD-211-01 that the plan identifies the critical characteristics "according to complexity" rather than identified failure modes and safety function, which made it appear that the vendor had provided the design requirements adding to the confusion. The vendor was advised to revise Section 4.3.1 and to identify the UUSA design basis requirements in its CGD list of references under Change Order 3 to PO 303199.

In addition, when the vendor submitted its finalized CGD documents for UUSA review and approval they were not processed in accordance with established UUSA procedures (RM-3-3000-01, Control of Documents via RM-3-3000-01-F-4, Vendor Submittal Form; and EG-3-7000-01, Review of Supplier Information via EG-3-7000-01-F-1, Supplier Document Review (SDR) Form). Instead, they were reviewed and approved by the Supplier Technical Representative (STR) via e-mail. SDRs were later processed as a result of the UUSA investigation, which entailed a formal review by the STR and a cross-functional /discipline review from the Projects Engineering Manager over Configuration Management, to evaluate the programmatic controls of the vendor-supplied CGD Plan (i.e., CGD-211-01). The vendor was required to also add a provision to its CGD cover sheet to document that UUSA Engineering approval had been received by identifying the SDR approval numbers on its CGD cover sheet since the Supplier did not have design approval authority. Documentation of UUSA engineering approval on the cover sheet demonstrates that the correct design input requirements from the AREVA documents had been incorporated into the Supplier's documents in accordance with QAPD Section 3, Design Control, requirements.

As part of an extent of condition, other Supplier purchase orders were reviewed and a similar finding was made with PO 303277. The corrections identified above were also made to the PO under Change Order 2 to PO 303277.

In summary, the reasons for this condition are as follows:

- Lack of procurement document controls between UUSA Project and Procurement personnel to ensure UUSA design documents given to the Supplier

informally were incorporated into the procurement PRADL for completeness and accuracy of the PO.

- Lack of UUSA Project commercial grade dedication due diligence in performing a formal comprehensive CGD and technical review of Supplier submitted CGD documents and requiring that a UUSA Engineering signoff provision be added on the Supplier's CGD documents to denote formal UUSA Engineering Approval of the non-engineered CGDPs.
- The Supplier did not request that the PO PRADL be updated to reflect the UUSA design basis documents provided to them informally by the STR and to then reference them in their CGDPs.
- There were knowledge and rule based human performance weaknesses exhibited in the meeting with BESCO on 05/20/10 where there was a lack of a questioning attitude by the attending UUSA Project and Procurement personnel as to why the Supplier was asking for design requirements in order to prepare their CGD Plans.

2) The Corrective Steps That Have Been Taken and Results Achieved

- a. The PRADLs to LES-PO-303199 and LES-PO-303277 were revised to identify the AREVA design documents applicable to the POs and, UUSA Procedures RM-3-3000-01 and EG-3-7000-01 were identified so the vendor could understand the use of Forms RM-3-3000-01-F-4 and EG-3-7000-01-F-1 on how Supplier documents are to be submitted to UUSA; and how UUSA will review and approve the Supplier's submittals, respectively. Completed 11/19/2010.
- b. SDR-2010-3261 was completed by the STR and SDRs 2010-3345 and 2010-3392 were completed by the UUSA CGD group. Comments were incorporated into CGD-211-01, Revision 3, which was reviewed and accepted. Completed 12/14/2010.
- c. The Supplier was requested to revise its CGDs to: incorporate the documents identified in action "a." above as well as to revise its CGD-211-01, Section 4.3.1 wording of "...their critical characteristics selected based upon the complexity of each component" to "...based upon the AREVA design documents and QAPD identified in References 6.10 and 6.11 (new AREVA references)." Exact wording was provided to the Buyer by both the PR and PO. The Supplier was also requested to add a provision on its CGDP documents to include a UUSA Engineering approval block to allow a formal UUSA signature to be placed on the form or provide reference to a UUSA SDR approval transmittal. Completed 11/19/2010
- d. The Supplier was provided a copy of DACE 2010-3195 to inform the Supplier of its responsibility to identify all applicable design bases and other design requirements provided to it for ensuring the quality of procured items comply with UUSA design requirements. This includes ensuring the PO PRADLs are updated with the documents provided, and that a UUSA engineering approval signoff is identified on all engineering documents since the Supplier did not have engineering approval authority. Completed 11/19/2010
- e. Revised Procedure PR-3-2000-01 to update Buyer and STR responsibilities to ensure that the PRADL contains all documents given to the Supplier at any meeting or communication held with the potential Supplier or after award of contract that will be relied upon for the completion of the contract are added to the purchase order PRADL; added to the Buyer's responsibilities the need to

question the purchase requestors as to the completeness of their submitted PRADL to ensure all documents the vendor needs to rely on to perform their contracted scope of work are present on the PRADL; and provided a NOTE that for vendors preparing CGDPs for UUSA without having design authority they are to provide a UUSA design approval block on the CGDP to document UUSA Engineering approval of the document via the EG-3-7000-01 Supplier Document Review (SDR) Process. Completed 11/23/2010

- f. Conducted a communications lessons learned training session with all Procurement Purchasing and Procurement Engineering personnel on the importance of: Ensuring that any document provided to a Supplier by Procurement or other UUSA agency that the Supplier needs to rely upon in the fulfillment of their contractual requirements is to be incorporated on to the PRADL; that vendor submitted documents to the Buyer or STR through e-mail or other communication device for review and approval is not permitted and the vendor must submit the documents to the Document Control Unit e-Room via Form RM-3-3000-01-F-4; and to provide PRADL document due diligence with the purchase requestors in ensuring that the submitted purchase request PRADL is complete and accurate for the prospective vendor to perform its contracted scope of work. Completed 11/19/2010
- g. Conducted PR-3-2000-01, Rev 5 training on UUSA Control of Procurement for Procurement Specialists, Sub-Contract Administrators, Procurement Engineers and Procurement Management staff as part of the change management plan provided under the PR-3-2000-01, Revision 5. Completed 12/9/2010

3) The Corrective Steps That Will Be Taken for Violation

All actions for this condition have been taken

4) The Date When Full Compliance Was Achieved

Full compliance was achieved with the completion of the review of SDRs 2010-3345 and 2010-3392 on 12/14/2011.