

DOCKET: 70-3103

LICENSEE: Louisiana Energy Services, LLC
Eunice, New Mexico

SUBJECT: SAFETY EVALUATION REPORT FOR U.S. NUCLEAR REGULATORY COMMISSION APPROVAL OF LOUISIANA ENERGY SERVICES, LLC, CORRECTIVE ACTION PROGRAM LICENSE COMMITMENT, AS DOCUMENTED IN LOUISIANA ENERGY SERVICES QUALITY ASSURANCE PROGRAM DESCRIPTION REVISION 34D

1.0 BACKGROUND

By letter dated July 10, 2013 (Ref. 1), Louisiana Energy Services, LLC (LES) (dba as URENCO USA [UUSA]) requested use of non-cited violations (NCVs) for dispositioning severity level IV (SL IV) violations for inspection activities conducted at the LES National Enrichment Facility in Eunice, New Mexico, in accordance with the provisions of the revised U.S. Nuclear Regulatory Commission (NRC) Enforcement Policy (Ref. 2). The January 2013 revision of the NRC Enforcement Policy enables the NRC to disposition SL IV violations for fuel cycle facilities as NCVs if the NRC has determined that the applicant or licensee has an adequate corrective action program (CAP), the licensee enters the violation into its CAP, and the criteria in Section 2.3.2 of the Enforcement Policy are met.

In January 2013, the NRC issued draft NUREG-2154, "Acceptability of Corrective Action Programs at Fuel Cycle Facilities" (Ref. 3). The draft NUREG provided guidance to the staff for the review of licensee CAPs to determine their acceptability in meeting the elements of the revised Enforcement Policy. Based on comments received from Nuclear Energy Institute (NEI) (Ref. 4), the NRC staff determined that it would withdraw the draft NUREG and instead issue a Regulatory Guide (RG). As documented in the staff response to the NEI comment letter (Ref. 5) and comment resolution table (Ref. 6), the issuance of a RG will allow licensees to commit to follow the RG elements via a simple license amendment in lieu of a more substantial amendment request that would be more resource intensive for the industry.

The NRC staff strives to provide the highest level of regulatory stability possible in the interim period between withdrawal of the draft NUREG and issuance of the RG while supporting licensee interest in establishing adequate CAPs in the near term. As such, the NRC staff will review licensee CAP submittals received prior to issuance of the RG using the following approach: review will be performed against the guidance in the draft NUREG, as augmented by insights from public comments received and staff preparation and review of the draft RG. It is anticipated that there will be minimal, if any, changes to the basic principles of CAP adequacy in the transition from a draft NUREG to a RG, so the NRC staff does not expect reviews conducted in accordance with the draft NUREG to be lacking any necessary elements that will be implemented once the RG is issued.

By letter dated August 7, 2013, the NRC transmitted requests for additional information (RAIs) (Ref. 7) on the LES CAP based on review against draft NUREG-2154. LES provided responses to the RAIs by letters dated September 10, 2013 (Ref. 8) and October 16, 2013 (Ref. 9). Revision 34b of the LES quality assurance program description (QAPD) (Ref. 10) included changes to the QAPD made in parallel with RAI responses. An inspection of CAP implementing

policies and procedures and CAP effectiveness was conducted by Region II and NRC Headquarters staff during the weeks of November 12-15, 2013 (in office), and November 18-20, 2013 (on site). As a result of observations made during the inspection and subsequent follow-up calls with the licensee, LES made clarifications to the QAPD in Revisions 34c (Ref. 11) and 34d (Ref. 12), submitted by letters dated December 13, 2013, and December 20, 2013, respectively.

The NRC staff has reviewed the LES CAP, as documented in Revision 34d of the QAPD and has determined that it meets the elements needed for an acceptable fuel facility CAP. The specific areas of review of the LES CAP included controls and commitments related to (1) policies, programs, and procedures; (2) identification, reporting, and documentation of safety and security issues; (3) significance classification and causal evaluation of safety and security issues; (4) development and implementation of corrective actions; and (5) assessment of corrective action and program effectiveness. The NRC staff review is described in further detail below.

The NRC also conducted an inspection to (1) assess the ability of the licensee's policies and procedures to implement the commitments made in the QAPD, and (2) verify the effectiveness of the LES CAP. Prior to NRC authorization to disposition SL IV violations as NCVs at the LES facility, the NRC will issue an inspection report documenting the results of these inspection activities.

2.0 TECHNICAL REVIEW

2.1 Policies, Programs, and Procedures

The LES QAPD, as described in the introduction section of the document, applies to all phases of the facility life cycle (design, construction, operation, maintenance and modification, and decommissioning) and describes the requirements to be applied to those structures, systems and components and activities that have been designated by LES as meeting certain levels of Quality Assurance (QA) to ensure the availability, reliability, and operability of the facility and its systems. The QA Levels and applicable requirements of the QAPD are defined in Section 2, "Quality Assurance Program," of the QAPD. The levels include QA Level 1, QA Level 1 Graded, QA Level 1-Fire Protection, QA Level 2, and QA Level 3. Quality Level 1 is applied exclusively to items relied on for safety (IROFS), any items which are determined to be essential to the function of the IROFS. The other QA levels are applied to non-IROFS and entail a graded application of elements of the QAPD. Section 2 identifies QA controls applicable to conditions adverse to safety and security and states that such conditions will be identified, classified, trended, and appropriate follow-up actions taken in accordance with Section 16, "Corrective Action¹," of the QAPD.

Section 16 of the QAPD includes the commitment for LES to implement CAP processes in procedures that include controls for the prompt identification and correction of conditions adverse to quality, safety, and security. It also includes commitments for the classification of conditions according to their significance; evaluation of identified conditions for potential

¹ Section 21.16 of the QAPD describes corrective action program controls for quality level (QL) QL-1G IROFS, and Section 22.16 describes corrective action program controls for QL-2AC IROFS. Both these QLs apply to graded categories of IROFS; however, the QAPD asserts that corrective action requirements for the graded program elements shall be in accordance with the requirements of Section 16 of the QAPD.

reportability under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 21 or other applicable reporting requirements; need for a stop work; determination of the cause of significant conditions adverse to quality, safety, and security and identification of corrective actions to prevent recurrence; and verification of the proper implementation of corrective actions taken for significant conditions adverse to quality, safety, and security.

Section 16 of the QAPD also describes the terminology used in the CAP, including the meaning of the terms “condition adverse to quality,” “significant condition adverse to quality,” “condition adverse to safety and security,” and “significant condition adverse to safety and security.”

Section 1, “Organization,” of the LES QAPD, describes the organization of the LES QA and corporate structure and identifies responsibilities of persons performing quality-related work for the facility. The QAPD states that LES employees and contractor employees representing LES have full responsibility to ensure that the facility is designed, constructed, operated, and decommissioned in a manner to protect the health and safety of the public. The QAPD requires each individual to identify concerns using the corrective action process described in Section 16 of the QAPD whenever the health and safety of LES workers, the public, or the environment could be compromised or QAPD requirements may not be satisfied.

Section 1 of the QAPD allows for the designation of work to contractors, but asserts that the delegation of work between LES and contractors will be identified in applicable plans, contracts, and implementing procedures and, in all cases of delegation, LES will retain responsibility for all work performed under the direction of LES. Within the LES organization, responsible managers have the authority to delegate tasks to other qualified individuals within their organization provided the designated individual possesses the required qualifications; these qualifications are documented; and the delegation is made in writing. The responsible manager retains the ultimate responsibility for delegated functions.

Section 1 of the QAPD states that the QA organization is sufficiently independent from cost and schedule considerations, has stop work authority, and is provided sufficient authority, access to work areas, and organizational freedom to perform quality activities, which includes CAP activities.

Section 5, “Instructions, Procedures, and Drawings,” of the QAPD states that activities affecting quality shall be prescribed by and conducted in accordance with approved procedures and other implementing documents. During the design and construction phases, procedures undergo review and approval by the affected organizations with review and oversight by the QA organization, as applicable. Procedures describing responsibilities and functions of the QA organization are approved by the LES QA Manager to ensure compliance with the QAPD. During construction and operations, the LES functional area managers have responsibility to review and approve the procedures that cover activities under their organizational purview. Approved procedures are then subject to QA audits and/or surveillance. As described in Section 6, “Document Control,” of the QAPD, implementing documents and documents specifying quality requirements or prescribing activities affecting quality, are reviewed for adequacy, correctness and completeness and by the QA organization, prior to approval and issuance.

The NRC staff determined that the LES CAP, as described in QAPD Revision 34d, is acceptable for the establishment of CAP policies, programs, and procedures in accordance with the review criteria of Section 5.1 of draft NUREG-2154. Specifically, the QAPD describes CAP policies and program elements, including definitions, CAP expectations, requirements,

personnel responsibilities, and implementation processes. The QAPD also describes the quality assurance organization and provides QA staff with sufficient authority, access to work areas, and organizational independence to perform its responsibilities. The QAPD describes the development and use of procedures as well as the maintenance of QA records, which includes CAP documents. The QAPD also includes requirements for review and approval of CAP procedures by the QA organization.

2.2 Identification, Reporting, and Documentation of Safety and Security Issues

Section 16 of the LES QAPD states that conditions adverse to quality, safety, and security will be identified promptly and corrected as soon as practical at the UUSA facility. The section also identifies a commitment to implement a procedure or set of procedures to implement the CAP and provide for prompt identification and correction of conditions adverse to quality, safety, and security. Section 1 of the QAPD requires each individual to identify concerns using the corrective action process described in Section 16 of the QAPD whenever the health and safety of workers, the public, or the environment could be compromised or QAPD requirements be violated; this includes LES employees as well as contractor employees representing LES.

Section 2 of the LES QAPD identifies that detailed QA training is provided on the LES QAPD and job specific QA procedures prior to an employee beginning work activities related to IROFS. Such training includes topics such as the LES QA program, organization, and CAP should ensure that employees understand their CAP responsibilities and are able to identify adverse conditions during their work activities.

Section 16 of the QAPD requires the documentation of conditions adverse to quality, safety, and security and reporting of such conditions to the appropriate levels of management. The QAPD states that responsible management will investigate and fully identify the adverse condition, document the results, and then determine the appropriate corrective action, which may include remedial action and/or actions to prevent recurrence. After completing the corrective actions, responsible management will document completion of the actions in a timely manner. Section 16 also requires that the identification, cause, and corrective action for significant conditions adverse to quality, safety, and security be documented and reported to appropriate levels of management.

Section 16 of the LES QAPD commits to establish procedures to evaluate significant conditions adverse to quality, safety, and security for reportability to the NRC when required under 10 CFR 21, "Reporting of Defects and Noncompliance," or other applicable reporting requirements.

The NRC staff determined that the LES CAP, as described in QAPD Revision 34d, is acceptable for the identification, reporting, and documentation of safety and security issues in accordance with the review criteria of Section 5.2 of draft NUREG-2154. The QAPD requires all personnel to identify conditions adverse to safety or security and includes provisions for the prompt identification, documentation, and reporting of safety and security issues as well as consideration for potential NRC reportability.

2.3 Significance Assessment and Causal Evaluation of Safety and Security Issues

Section 16 of the LES QAPD defines conditions adverse to quality and significant conditions adverse to quality. Conditions adverse to quality are defined as items such as failures, malfunctions, deficiencies, deviations, defective material and equipment and nonconformance directly associated with a QL-1 or QL-2 item or service. The definition of significant condition

adverse to quality includes several conditions to enable personnel to identify those that rise to the level of “significant.” Such conditions include, for example, deficiencies that would seriously affect the ability of an IROFS to perform its safety function, significant errors in a QL-1 computer program after its release, and repetitive deficiencies related to a QL-1 activity.

Conditions adverse to safety and security are similarly defined as items such as failures, malfunctions, deficiencies, deviations, defective material and equipment and nonconformances directly associated with safety and security. The definition of significant condition adverse to safety and security includes several conditions to enable personnel to identify those that rise to the level of “significant.” Such conditions include, for example, a trend of multiple conditions adverse to safety or security, or a repeated failure to implement a portion of an approved procedure.

For significant conditions adverse to quality, safety, and security, the QAPD requires that the cause of the condition be determined, corrective action taken to preclude recurrence, and evaluation be performed to determine if stopping work is warranted.

Section 16 of the LES QAPD further commits to implement procedures to control the classification of issues as significant or non-significant; evaluation for stop work condition; and determination of the cause and corrective actions to preclude recurrence for significant conditions.

The NRC staff determined that the LES CAP, as described in QAPD Revision 34d, is acceptable for the significance assessment and causal evaluation of safety and security issues in accordance with the review criteria of Section 5.3 of draft NUREG-2154. The QAPD establishes criteria for classifying the significance of conditions adverse to safety and security. LES defines conditions adverse to safety and security consistent with the NUREG, and commits to determine the root cause of significant conditions, evaluate their potential impact on work in progress, and take action to preclude recurrence.

2.4 Development and Implementation of Corrective Actions

Section 16 of the LES QAPD describes the LES process for the development and implementation of corrective actions for safety and security issues. It states that conditions adverse to quality, safety, and security will be documented and reported to the appropriate levels of management, and corrective actions will be implemented as soon as practical to correct the adverse condition.

Section 16 of the QAPD states that the identification, cause, and corrective action for significant conditions adverse to quality, safety, and security will be documented and reported to the appropriate levels of management. Significant conditions adverse to quality, safety, and security will be tracked and evaluated so that adverse trends can be identified and appropriate corrective action can be taken. Follow-up action will be taken to verify implementation of the corrective actions for significant conditions adverse to quality, safety, and security. The effectiveness of these corrective actions will be assessed as part of periodic CAP audits performed by the QA organization.

Section 16 of the QAPD describes measures that will be taken by LES to prevent recurrence of significant conditions adverse to safety and security. Significant conditions adverse to quality, safety, and security will be reported to the QA organization for tracking. Responsible management shall then determine the root cause and corrective action (including remedial

action and actions to prevent recurrence) based on investigation results. Concurrence will be obtained from the QA organization to ensure that QA requirements are satisfied in the corrective actions assigned. After completion of corrective actions for significant conditions, the QA organization will verify the adequacy of corrective action implementation. For significant conditions adverse to quality, safety, and security, LES will take action to evaluate the extent to which other items and activities, including work in progress, may be affected so that appropriate action can be taken, such as stopping work.

The NRC staff determined that the LES CAP, as described in QAPD Revision 34d, is acceptable for the development and implementation of corrective actions for safety and security issues in accordance with the review criteria of Section 5.4 of draft NUREG-2154. The QAPD commits to the timely development and initiation of corrective actions following identification of conditions adverse to quality, safety, and security. LES identifies measures to ensure that conditions and trends that are adverse to safety or security are reported to the appropriate level of management. The QAPD includes measures for the QA organization to review the actions developed and verify their implementation for significant conditions adverse to quality, safety, and security.

2.5 Assessment of Corrective Action and Program Effectiveness

Section 18, "Audits," of the LES QAPD states that internal audits will be performed to verify compliance with and determine the effectiveness of the QA program. Audit teams will have sufficient organizational independence and authority to perform an effective audit that meets all requirements of the QAPD. Audits will be scheduled in a manner to provide coverage, consistency, and coordination with ongoing work, and at a frequency commensurate with the status and importance of the work. The audit schedule will be developed annually and revised as necessary to ensure that coverage is maintained current. The periodicity of internal audits is specified as annually for construction and biennially for operations.

Section 18 of the QAPD states that audits should give consideration to previous audit results and corrective actions, nonconformance reports, identified trends, and significant organizational changes. Audits may be supplemented by QA Surveillances conducted in accordance with approved procedures to ensure that QA is providing sufficient oversight of important QAPD activities. As described in RAI responses dated September 10, 2013, the Performance Assessment Department conducts annual assessments of the CAP.

Section 16 of the QAPD further identifies that the periodic audits performed by QA on the CAP will include an assessment of actions taken by management to verify the implementation of corrective actions for significant conditions adverse to quality, safety, and security.

Section 16 of the LES QAPD states that procedures will identify requirements and organizational responsibility for trending. LES will perform trend evaluations on conditions adverse to quality, significant conditions adverse to quality, and conditions adverse to safety and security. Section 15, "Nonconforming Items," of the LES QAPD states that documentation associated with nonconformance will be analyzed periodically to identify adverse quality trends.

As described in Section 16 of the QAPD, LES trend evaluations will be performed in a manner and at a frequency that provides for prompt identification of adverse quality trends; when identified; adverse trends will be handled in accordance with the CAP and reported to the appropriate management.

The NRC staff determined that the LES CAP, as described in QAPD Revision 34d, is acceptable for the assessment of corrective action and program effectiveness in accordance with the review criteria of Section 5.5 of draft NUREG-2154. Specifically, the QAPD commits to ensure that the effectiveness of the CAP is evaluated by QA at regular, specified intervals of 1-2 years. Because audits assess all elements of the QAPD, the audit includes an evaluation of the ability of the CAP to identify conditions adverse to safety and security, identify NRC reportable events, evaluate the significance, correct the condition, notify management, and prevent recurrence. The QAPD also describes measures for trending of adverse conditions, to include nonconformances and conditions adverse to quality, safety, and security, whether significant or not.

3.0 CONCLUSION

The NRC staff has determined that the LES CAP, as described in Revision 34d of the LES QAPD, describes an acceptable CAP for meeting the provisions of the NRC Enforcement Policy. The LES CAP satisfies the review criteria set forth in Sections 5.1-5.5 of draft NUREG-2154, as well as criteria, such as the management of adverse conditions containing sensitive information, that were identified as part of the review and public comment process associated with the draft NUREG.

4.0 REFERENCES

1. LES-13-0083-NRC, "Request for use of Non-cited Violations for the UUSA Facility," dated July 10, 2013 (ADAMS Accession No. ML13196A259).
2. NRC, "Enforcement Policy," dated January 2013 (ADAMS Accession No. ML12340A295).
3. Draft NUREG-2154, "Acceptability of Corrective Action Programs at Fuel Cycle Facilities," January 2013 (ADAMS Accession No. ML13219B205).
4. Letter, NEI to NRC, "Industry Comments on DRAFT NUREG-2154, 'Acceptability of Corrective Action Programs at Fuel Cycle Facilities' (78 FR 11903; Docket: NRC-2013-0033)," dated April 22, 2013 (ADAMS Accession No. ML13133A219).
5. Letter, NRC to NEI, "Acknowledgement Letter to Confirm Receipt of April 22, 2013, Nuclear Energy Institute Comment Letter on draft NUREG-2154, 'Acceptability of Corrective Action Programs for Fuel Cycle Facilities,'" dated August 19, 2013 (ADAMS Accession No. ML13148A079).
6. Comment Resolution Summary, Draft NUREG-2154, dated June 2013 (ADAMS Accession No. ML13158A143).
7. Request for Additional Information, NRC to T. Knowles, "Louisiana Energy Services, LLC Requesting the use of Non-Cited Violations at the URENCO USA Enrichment Facility," dated August 7, 2013 (ADAMS Accession No. ML13214A291).
8. LES-13-0131-NRC, "Response to NRC Request for Additional Information on Louisiana Energy Services, LLC Requesting the Use of Non-cited Violations at the URENCO USA Enrichment Facility," dated September 10, 2013 (ADAMS Accession No. ML13260A145).
9. LES-13-00144-NRC, "Clarification to UUSA response for the use of Non-Cited Violations at the Urenco USA facility," dated October 16, 2013 (ADAMS Accession No. ML13294A008).
10. Letter, LES to NRC, "Quality Assurance Program Description (QAPD) Update [Revision 34b]," dated October 15, 2013 (ADAMS Accession No. ML13290A597).
11. Letter, LES to NRC, "Quality Assurance Program Description (QAPD) Update [Revision 34c]," dated December 13, 2013 (ADAMS Accession No. ML14007A072).
12. Letter, LES to NRC, "Quality Assurance Program Description (QAPD) Update [Revision 34d]," dated December 20, 2013 (ADAMS Accession No. ML13358A340).

PRINCIPAL CONTRIBUTOR

Sabrina Atack, NMSS/FCSS