



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

October 16, 2018

EN 53183
EN 53445

Stephen Cowne, Chief Nuclear Officer
and Compliance Manager
URENCO USA
P.O. Box 1789
Eunice, NM 88231

**SUBJECT: LOUISIANA ENERGY SERVICES, LLC (LES), dba URENCO USA (UUSA) –
NUCLEAR REGULATORY COMMISSION INTEGRATED INSPECTION REPORT
70-3103/2018-004**

Dear Mr. Cowne:

This letter refers to the inspections conducted from July 1 through September 30, 2018, at the URENCO USA facility located in Eunice, New Mexico. The purpose of these inspections was to determine whether licensed activities were conducted safely and in accordance with U.S. Nuclear Regulatory Commission (NRC) requirements. The enclosed report presents the results of these inspections, which were discussed with you and members of your staff on August 16, and October 11, 2018.

These inspections examined activities conducted under your license, as they related to public health and safety, and to confirm compliance with NRC rules and regulations and with the conditions of your license. The inspection areas covered fire protection, emergency preparedness, and event follow-up. Within these areas, the inspections consisted of examinations of selected procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, the NRC has determined that a licensee-identified, Severity Level IV violation of NRC requirements occurred. Because the violation was of very low safety significance and UUSA entered the issue in the corrective action program, this violation is being treated as a Non Cited Violation (NCV), consistent with Section 2.3.2 of the NRC Enforcement Policy. The NCV is described in the enclosed inspection report. If you contest the violation or significance of the NCV, you should provide a 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 20555-0001.

In accordance with Title 10 of the Code of Federal Regulations, Section 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter, its enclosure, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction.

If you have any questions regarding this matter, please contact me at (404) 997-4703.

Sincerely,

/RA/

Omar R. López-Santiago, Chief
Projects Branch 1
Division of Fuel Facility Inspection

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

Enclosure:
Inspection Report No. 70-3103/2018-004
w/Attachment: Supplemental Information

cc: (See page 3)

cc:

Butch Tongate, Cabinet Secretary
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(cc: Cont'd on page 4)

(cc: cont'd)

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SUBJECT: LOUISIANA ENERGY SERVICES, LLC (LES), dba URENCO USA (UUSA) –
 NUCLEAR REGULATORY COMMISSION INTEGRATED INSPECTION REPORT
 70-3103/2018-004

DISTRIBUTION:

M. Lesser, RII
 O. López-Santiago, RII
 R. Nease, RII
 J. Rivera Ortiz, RII
 K. Sturzebecher, NMSS
 PUBLIC

☒ PUBLICLY AVAILABLE ☐ NON-PUBLICLY AVAILABLE ☐ SENSITIVE ☒ NON-SENSITIVE
 ADAMS: ☒ Yes ACCESSION NUMBER: ML18289A557 ☒ SUNSI REVIEW COMPLETE ☒ FORM 665 ATTACHED

OFFICE	RII:DFFI	RII:DFFI	RII:DFFI	RII:DFFI	RII:DFFI	RII:DFFI	RII:DFFI	DC
SIGNATURE	/RA/	/RA/	/RA/	/RA/				/RA/
NAME	JRivera	TGrice	TSippel	PStartz				TVukovsky
DATE	10/16/2018	10/16/2018	10/16/2018	10/16/2018				10/16/2018
E-MAIL COPY	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

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U. S. NUCLEAR REGULATORY COMMISSION
REGION II

Docket No.: 70-3103

License: SNM-2010

Report No.: 70-3103/2018-004

Licensee: Louisiana Energy Services (LES), LLC

Facility: URENCO USA (UUSA)

Location: Eunice, NM

Inspection Dates: July 1 through September 30, 2018

Inspectors: T. Grice, Senior Fuel Facility Inspector (Sections A.1, C.1, and C.2)
J. Rivera-Ortiz, Senior Project Inspector (Sections B.1, C.1, and C.2)
T. Sippel, Fuel Facility Inspector (Sections A.1, C.1, and C.2)
P. Startz, Fuel Facility Inspector (Section A.1)

Accompanying Staff: John Dymek, Reactor Inspector
Mollie Semmes, Fire Protection Engineer

Approved: Omar R. López-Santiago, Chief
Projects Branch 1
Division of Fuel Facility Inspection

Enclosure

EXECUTIVE SUMMARY

Louisiana Energy Services, LLC (LES) dba URENCO USA (UUSA)
Nuclear Regulatory Commission
Integrated Inspection Report 70-3103/2018-004
July 1 – September 30, 2018

Regional inspectors from the U.S. Nuclear Regulatory Commission (NRC) conducted announced inspections during normal shifts and in-office reviews. The inspectors performed direct observation of safety-significant activities and equipment, tours of the facility, interviews and discussions with licensee personnel, and a review of facility documents.

Safety Operations

- The inspectors performed a triennial review of activities in the fire protection area to verify compliance with conditions of the license and regulatory requirements. No violations of more than minor significance were identified. (Section A.1)

Facility Support

- The inspectors reviewed a sample of activities in the emergency preparedness area to verify compliance with conditions of the license and regulatory requirements. No violations of more than minor significance were identified. (Section B.1)

Other Areas

- The inspectors performed follow-up inspection activities for retracted event notification EN 53183, "Potential Deficiency Associated with An Item Relied Upon for Safety," and EN 53445, "Implementation of IROFS 36c". The review of EN 53445 resulted in a licensee-identified, Severity Level IV (SLIV), non-cited violation (NCV) of NRC requirements. This violation is identified as NCV 70-3103/2018-004-01, "Implementation of IROFS36c." (Section C.2.b)

Attachment

Key Points of Contact
List of Report Items
Inspection Procedures Used
Documents Reviewed

REPORT DETAILS

Summary of Plant Status

The URENCO USA facility enriches uranium hexafluoride (UF₆) using a gas centrifuge technology. During the inspection period, the licensee conducted routine plant operations.

A. Safety Operations

1. Fire Protection Triennial Review (Inspection Procedure 88054)

a. Inspection Scope

The inspectors reviewed the Pre-Incident Plan (FP-5-1000-01, Revision (Rev.) 7) to verify that changes since the previous triennial fire protection inspection, if any, were consistent with the facility fire hazard analysis (FHA). The inspectors reviewed the Pre-Incident Plan for the Cylinder Receipt and Dispatch Building (CRDB) to verify that the description of the CRDB fire area, the specific hazards present, and the response/suppression strategy were accurate and reflected the current operational conditions, as required by the licensee's Pre-Incident Plan.

The inspectors toured selected plant areas, including the CRDB, chemical labs, and the Uranium Byproduct Cylinder (UBC) Storage Pad, to verify that flammable materials were stored in marked cabinets and that the control of transient combustible materials were consistent with approved procedures. The inspectors reviewed combustible storage areas, combustible controlled areas, waste collection, and exit pathways to verify that combustible materials were stored and handled in accordance with procedure FP-3-1000-02, "Flammable and Combustible Materials Control," and the requirements of item relied on for safety (IROFS) 36a and IROFS36c. The inspectors reviewed fire loading calculations and transient combustibles permits, observed activities conducted under transient combustibles permit 1100-1-2018-064, and interviewed licensee fire protection staff to verify that the transient combustibles permit program was implemented in accordance with approved procedures and IROFS36a.

The inspectors reviewed samples of licensee procedures and toured plant areas containing safety controls and IROFS to assess the material condition of passive fire protection equipment, systems, and features; and verify that fire dampers, doors, and penetration seals were being maintained in a condition that would ensure they were available and reliable to perform their safety function. The inspectors reviewed the fire ratings of selected fire area boundaries, equipment, and materials used for fire barriers, fire detection, fire water storage tanks, fire pumps and fire suppression systems to verify that they were appropriate for the credible fire hazards present in the areas and meet applicable Code of Record as identified in the licensee's Integrated Safety Analysis (ISA) Summary. The inspectors observed the operation and reviewed inspection and testing records of fire doors to verify that the inspection and testing are appropriate for the credible fire hazards in the area and ensure that the fire doors will perform their safety function under fire conditions in accordance with National Fire Protection Association (NFPA) 80.

The inspectors walked down production and support areas to select samples of smoke and/or heat detectors, manual fire alarm pull stations, audible and visual alarm appliances, and fire alarm control panels and evaluate compliance with the Safety Analysis Report (SAR), paragraph 7.5.1.5, "Fire Detection Systems." The inspectors reviewed samples of maintenance and testing records, applicable procedures, and interviewed licensee personnel to evaluate compliance with maintaining fire detection systems. Also, the inspectors performed walk-downs to verify that fire hoses, nozzles, extinguishers, and other manual firefighting equipment were provided at their designated locations and access was unobstructed. The inspectors reviewed the provided equipment to verify that the equipment was as specified by the licensee's inventory lists and were appropriate for the hazards in the area. The inspectors reviewed fire protection system impairment records to verify that compensatory measures had been put in place for out-of-service, degraded or inoperable fire protection equipment, systems or features in accordance with licensee procedures. The inspectors reviewed procedure FP-3-1000-04, "Fire System or Feature Impairments," and interviewed licensee fire protection staff to verify that the impairment program met the license commitments in Chapter 7 of the SAR.

The inspectors reviewed the licensee's fire protection program to determine whether the program adequately considered the impact of fire suppression agents and activities on nuclear criticality safety (NCS), radiological safety, and other safety controls in accordance with Chapter 7 of the SAR. The inspectors reviewed portions of the licensee's ISA and interviewed licensee staff to verify if the licensee considered the potential consequence of fire induced cable failures, as a result of fire and fire suppression activities; as well as the potential introduction of moderator in accordance with section 7.5.1.1 of the SAR.

The inspectors reviewed samples of procedures, interviewed staff, and conducted a walk-down of plant areas to evaluate if the licensee's fire protection program controls involving hazardous effluents that result from firefighting were consistent with sections 7.3.6 and 7.3.10 of the SAR. The inspectors reviewed containment systems and interviewed licensee staff concerning measures to adequately control and manage firefighting effluents that would minimize the spread of contamination to the local environment.

The inspectors observed a series of radio and telephone systems tests at various locations throughout the facility to verify that the licensee ensures communications are available, operable, adequate, and reliable for their required performance in fire response activities. The inspectors also interviewed the Chief of the City of Eunice Fire Department to confirm the availability of adequate communication capabilities between the licensee and the local fire department. The inspectors reviewed the fire brigade radios to verify that the batteries were at least one hour rated (full charge) and sufficient for their required performance in fire response.

The inspectors evaluated emergency lighting and other related emergency systems to determine whether the adequacy, testing and maintenance were being implemented in accordance with section 7.3.4, "Life Safety," of the SAR and NFPA 101. The inspectors also evaluated the uninterruptible power supply (UPS) battery storage rooms for compliance with hydrogen monitoring requirements specified in the SAR, Section 7.3.9, "Hydrogen Control."

The inspectors reviewed Emergency Response Organization (ERO) drills records (the URENCO USA Emergency Preparedness Drill Report, dated November 20, 2017) to verify that the Emergency Response Team members received training and participated in drills at least an annual basis as required by procedure FP-3-1000-09, "Plant Fire Brigade & Training." The inspectors reviewed training materials, drill records, and interviewed staff to verify that drill objectives and acceptance criteria were met. The inspectors interviewed licensee staff to verify that fire brigade personnel were adequately trained and had demonstrated their ability to combat the simulated fire scenario as required by NFPA 600. The inspectors interviewed operations staff to verify that each shift met the minimum staffing requirement in the SAR, Section 7.5.2.1, for the staffing of the fire brigade. The inspectors reviewed records and interviewed the Eunice Fire Dept. Chief, to verify that the off-site fire support organizations were regularly offered an opportunity for site orientation and provided training as required by the SAR, Section 7.5.2.

The inspectors reviewed samples of corrective action program (CAP) entries for the past 12 months and interviewed staff to verify that the licensee was identifying safety control or IROFS fire protection operability problems at an appropriate threshold and entering them into the CAP in accordance with Section 16 "Corrective Action" of the Quality Assurance Program Document (QAPD). The inspectors reviewed the corrective actions to evaluate if the completed corrective actions were developed, implemented, and tracked in accordance with CA-3-1000-01, "Performance Improvement Program." The inspectors reviewed the results of audits and self-assessments of the fire protection program to verify that the licensee was conducting these audits periodically as required by paragraph 11.5 of the SAR and Section 18 of the QAPD.

The inspectors interviewed licensee staff and reviewed the licensee organizational chart to determine whether the fire protection program's organizational structure was in accordance with FP-2-1000-01, "Fire Protection Program Requirements." The inspectors reviewed a sample of changes to the fire protection program, site, responsibilities and functions to verify that individuals reviewing changes were knowledgeable and qualified.

The inspectors interviewed operators and supervisors, and reviewed training records to verify that the licensee provided IROFS and fire safety training in compliance with procedure FP-2-1000-01.

b. Conclusion

No violations of more than minor significance were identified.

B. Facility Support

1. Emergency Preparedness (Inspection Procedure 88050)

a. Inspection Scope

The inspectors interviewed licensee staff and offsite emergency responders, reviewed samples of procedures and records, and conducted walk-downs of the UUSA facility to verify that the licensee implemented an Emergency Preparedness (EP) Program in

accordance with NRC Requirements and the UUSA Emergency Plan, as incorporated by reference in LES Materials License SNM-2010. The inspectors conducted the following activities:

- Reviewed the Emergency Plan and a sample of implementing procedures to verify these were maintained up to date and were readily available to members of the emergency management and response organizations;
- Reviewed licensee procedure EP-3-1000-02, "Program Change Evaluation" to verify that there were controls in place to evaluate whether proposed changes to the Emergency Plan, the EP Program, or the facility affected program effectiveness and determine whether NRC approval is required prior to implementation;
- Reviewed evaluation records for changes made to the Emergency Plan, the EP Program, or the facility since the last NRC inspection in this area to verify compliance with the requirements for NRC approval prior to implementation;
- Reviewed documentation and toured the main Emergency Operations Center (EOC) to verify that emergency response facilities, equipment, emergency call lists, and procedures were maintained and readily available for the ERO staff;
- Performed a walk-down of the CRDB to verify that emergency action plans (EAPs) were accessible to the staff and personnel evacuation routes were clearly defined;
- Performed a walk-down of assembly areas to verify that these were adequately identified and accessible to plant personnel;
- Reviewed implementing procedures for EOC Operations, Criticality Emergency Response, and Personnel Assembly and Accountability to determine whether the procedures provided guidance for the detection and proper classification of accidents, mitigation of the consequences of accidents, assessment of releases, protective actions recommendations, personnel accountability, notification and coordination, and authority for initiating evacuation alarms as required by the Emergency Plan;
- Interviewed licensee staff to verify that copies of FP-5-1000-01, "Pre-Incident Plan," were available in the appropriate field locations and reviewed selected portions of the Pre-Incident Plan to determine whether they were current and reflected applicable considerations for chemical hazards or water exclusion from moderator-controlled areas;
- Reviewed training completion records for 15 individuals assigned to different roles in the ERO and interviewed five additional individuals in the ERO to verify that the licensee provided continuous training in accordance with the Emergency Plan requirement;
- Reviewed correspondence and training material offered to off-site emergency responders to verify the licensee invited off-site organizations for training and drill participation, and provided continuous training opportunities as required by the Emergency Plan;
- Reviewed written agreements with off-site agencies contained in the Emergency Plan to verify that these were up to date. Interviewed representatives from the Lea County Emergency Management and Eunice Fire and Rescue Department to

determine whether the licensee met its respective written agreements as described in the Emergency Plan, and assess whether off-site responders were aware of the restrictions and hazards associated with using water for fire mitigation;

- Reviewed the ERO shift schedule to verify that the licensee maintained appropriate staffing of trained emergency personnel for all shifts in accordance with the Emergency Plan;
- Reviewed Procedure EP-3-0300-03, "Drills and Exercises," and interviewed EP staff to verify that there were controls in place to keep exercise objectives and scenario details confidential from participants;
- Reviewed recent drill and exercise reports to verify that these were conducted within the required timeframe and contained credible, technically correct, and challenging scenarios to test key elements of the Emergency Plan;
- Reviewed recent drill and exercise reports to verify that the licensee conducted critiques of its emergency response activities and that items identified during critiques were captured in the CAP for resolution;
- Reviewed licensee audit reports to verify that the licensee conducted audits in the area of emergency preparedness as required by the Emergency Plan, and entered audit findings in the CAP for resolution;
- Interviewed licensee staff from the EP organization to confirm whether any events had occurred since the last EP inspection requiring the implementation of the Emergency Plan, and verify that problems or deficiencies associated with the Emergency Plan or implementing procedures were identified and corrected; and
- Reviewed the latest report submitted to the New Mexico Department of Health and Safety and Emergency Management pursuant to the requirements in 40 CFR 370 to determine whether the licensee maintained compliance with the Emergency Planning and Community Right-To-Know Act of 1986 in accordance with the Emergency Plan.

b. Conclusion

No violations of more than minor significance were identified.

C. Other Areas – Event Follow-up

1. (Opened and Closed) EN 53183, Potential Deficiency Associated with an Item Relied On For Safety (Retracted)

a. Inspection Scope

On January 24, 2018, the licensee submitted event notification (EN) 53183 to the NRC to report an unanalyzed condition identified during a self-initiated review of the ISA Summary. The review was to determine whether there was a chemical safety issue concerning the proximity of combustible fuel to the yard tractors/shuttle lifts that UUSA's Logistics organization uses to move UF₆ cylinders on site. The ISA staff determined that the ISA lacked sufficient information regarding the proximity of combustible fuel (from other vehicles moving alongside) to the yard tractors/shuttle lifts controlled by IROFS36c. This IROFS is identified in the UUSA ISA Summary to administratively limit

onsite UF₆ cylinder transporters/movers to only electric drive or diesel powered with a fuel capacity of less than 280 L (74 gal). The ISA staff also determined that revisions to one, or more, of the applicable IROFS boundary definition documents were necessary to establish operator actions and ensure that the volumetric fuel limit of IROFS36c is not compromised due to the proximity of other fuel sources.

The licensee entered the issue in the CAP and evaluated the likelihood of the event using the ISA methodology for the facility. The licensee obtained statistics from both the NFPA and the Department of Transportation (DOT) to allow a simplistic and bounding probabilistic approach to evaluate the probability of a vehicle fire adjacent to a UUSA yard tractor or shuttle-lift that is moving a filled UF₆ cylinder onsite. Based upon the data, the licensee established that the probability of a vehicle fire (per year) that spreads to a yard tractor/shuttle-lift or a vehicle fire on an over-the-road (OTR) transport vehicle was conservatively determined to be 2.68E-06 per year. Additionally, it was determined the probability of a vehicle fire (per year) on a yard tractor/shuttle-lift (with a full UF₆ cylinder) during refueling on the UUSA site was conservatively 4.08E-06 per year. The licensee documented the evaluation in calculation record ISA-IAD-0029, "Probabilistic Assessment of Transport Vehicles Fires involving UF₆ Cylinders at UUSA." In February 2018, the licensee retracted the event notification based on the revised evaluation of the initiating event frequency and the likelihood of the postulated accident sequence.

The inspectors reviewed the licensee's analysis of the initiating event frequency score to verify that the licensee evaluated the event in accordance with the ISA methodology. The inspectors also verified that the licensee's basis for retracting the event was consistent the reporting requirements in 10 CFR 70. While the accident sequence is credible, the revised analysis determined it was highly unlikely, therefore the performance requirements in 10 CFR 70.61 were met and new IROFS were not required for prevention or mitigation.

b. Conclusion

No violations of more than minor significance were identified.

2. (Opened and Closed) Non-Cited Violation (NCV) 70-3103/2018-003-1, "Implementation of IROFS36c," associated with EN 53445 (Retracted)

a. Inspection Scope

On June 5, 2018, the licensee submitted EN 53445 to the NRC to report a condition in which UUSA staff allowed OTR semi-trucks to deliver type 48Y UF₆ cylinders into the CRDB truck bay without implementing the controls of IROFS36c. This IROFS is identified in the UUSA ISA Summary to administratively limit onsite UF₆ cylinder transporters/movers to only electric drive or diesel powered vehicles with a fuel capacity of less than 280 L (74 gal). The licensee identified this event during a review of a proposed procedure change resulting from EN 53183. The licensee documented the event in its CAP as EV 125051, and ceased using OTR trucks to move cylinders into the CRDB.

The licensee later retracted the event notification based on the analysis of the effect of a fire on the cylinders in the CRDB. The licensee's analysis, documented in "Assessment of Safety Significance for Events Documented in EV 125051/123395" and CALC-S-00148, "CRDB Truck Bay Fire," considered the effect of a fire involving the entire combustible loading of an OTR semi-truck on an adjacent cylinder in the CRDB. Additionally, in August 2018, the licensee revised ISA calculation ISA-IAD-0029 to evaluate the probability of the scenario reported in EN 53445. The licensee reanalyzed the initiating event frequency for the applicable accident sequence using additional fire accident data obtained for the resolution of EN 53183, as allowed by the approved ISA methodology for the facility. The licensee determined that the performance requirements in 10 CFR 70.61 for the applicable accident sequence were met although IROFS36c was not implemented.

The inspectors reviewed IROFS boundary documents and interviewed licensee staff to gather information on the circumstances leading to the use of OTR semi-trucks to deliver type 48Y UF₆ cylinders into the CRDB truck bay. The inspectors also reviewed the licensee's analysis of the initiating event frequency score in ISA-IAD-0029 to verify that the licensee evaluated the event in accordance with the ISA methodology. The inspectors also verified that the licensee's basis for retracting the event was consistent the reporting requirements in 10 CFR 70.

b. Conclusion

The inspectors determined that a licensee-identified violation of Materials License SNM-2010, Condition 10 occurred for the failure to conduct authorized activities in accordance with the statements, representations, and conditions in the SAR. Specifically, section 3.1.3 of the SAR, "Management Measures," states in part that IROFS management measures shall ensure that activities of personnel within the identified IROFS boundary are implemented, as necessary, to ensure they are available and reliable to perform their function when needed, to comply with the performance requirements assumed in the ISA documentation. The boundary of IROFS36c, as described in boundary document NEF-BD-36c, states in part that UF₆ cylinders are delivered to the site by OTR semi-tractors to a staging area, disconnected from the trailer, and the OTR semi-tractors leave the site. All other on-site transport of the UF₆ semi-trailers, including movement of UF₆ semi-trailers in and out of the CRDB truck bays, is completed using a yard truck with a fuel tank capacity below the IROFS36c limit. Contrary to this requirement, from February 2 to June 5, 2018, there were several instances where the licensee did not prevent the use of OTR semi-tractors with fuel quantity (1135 L or 300 gallons) exceeding the limits of IROFS36c to move semi-trailers with UF₆ cylinders into the CRDB.

The significance of this violation was determined to be SL-IV in accordance with Example 6.2.d.1 of the Enforcement Policy. The NRC will disposition this violation as an NCV in accordance with Section 2.3.2.a of the Enforcement Policy because the licensee entered it into its CAP as event report EV 127024, restored compliance, and the violation was not repetitive. (NCV 70-3103/2018-004-01, "Implementation of IROFS36c")

D. Exit Meeting

The inspection scope and results were presented to members of the licensee's staff at various meetings throughout the inspection period and were summarized on August 16, and October 11, 2018, to Mr. Stephen Cowne, and other members of the staff. Proprietary information was discussed but not included in the report.

SUPPLEMENTAL INFORMATION

1. KEY POINTS OF CONTACT

<u>Name</u>	<u>Title</u>
W. Aregood	Fire Protection Engineer
A. Bixenman	Licensing Specialist
J. Broom	Assistant Director, Lea County Emergency Management
S. Cowne	Chief Nuclear Officer (CNO) and Compliance Manager
Q. Newell	ISA/NCS Manager
W. Padgett	Licensing Manager
A. Reidy	ISA/NCS Engineer
J. Rickman	Licensing Specialist
A. Rojas	Fire Protection Manager
J. Sanford	Safety & Emergency Response Manager

2. LIST OF REPORT ITEMS

<u>Item</u>	<u>Description</u>	<u>Status</u>
NCV 70-3103/2018-004-01	Implementation of IROFS36c (Section C.2.b)	Opened & Closed
EN53183 (Retracted)	Potential Deficiency Associated with An Item Relied Upon for Safety (Section C.1)	Opened & Closed
EN53445 (Retracted)	Implementation of IROFS 36c (Section C.2)	Opened & Closed

3. INSPECTION PROCEDURES USED

88054	Fire Protection (Triennial)
88050	Emergency Preparedness

4. DOCUMENTS REVIEWED

Records:

114489-M-0018, Fire Protection Water Demand and Water Supply Requirements, Nuclear Technology Solutions LLC, Rev. 3
2018-A-03-006, Report for the URENCO USA Fire Protection Audit, dated April 5, 2018
Assessment of Facility Fire Risk at URENCO USA for ISA and Design Basis, Rev. 8
CALC-F-00001, Fire Hazard Analysis Combustible Loading, Rev. 18
CALC-S-00148, CRDB Truck Bay Fire, Rev. 0
EP-3-0300-04-F-1, Communications Checks of Offsite Organizations, Completed on October 2, 2017
EP-3-0300-04-F-1, Communications Checks of Offsite Organizations, Completed on December 18, 2017
EP-3-0300-04-F-1, Communications Checks of Offsite Organizations, Completed on April 3, 2018

EP-3-0300-04-F-1, Communications Checks of Offsite Organizations, Completed on June 12, 2018

EP-3-0300-04-F-2, Inventory/Operability List-EOC, Completed on October 2, 2017

EP-3-0300-04-F-2, Inventory/Operability List-EOC, Completed on December 18, 2017

EP-3-0300-04-F-2, Inventory/Operability List-EOC, Completed on April 3, 2018

EP-3-0300-04-F-2, Inventory/Operability List-EOC, Completed on June 12, 2018

EP-3-0300-04-F-3, Inventory/Operability List-Alternate EOC, Completed on October 2, 2017

EP-3-0300-04-F-3, Inventory/Operability List-Alternate EOC, Completed on December 18, 2017

EP-3-0300-04-F-3, Inventory/Operability List-Alternate EOC, Completed on April 3, 2018

EP-3-0300-04-F-3, Inventory/Operability List-Alternate EOC, Completed on June 12, 2018

EP-3-0300-04-F-4, Inventory/Operability List – JIC and Media Center, Completed on April 3, 2018

EP-3-0300-04-F-4, Inventory/Operability List-JIC and Media Center, Completed on October 2, 2017

EP-3-0300-04-F-4, Inventory/Operability List-JIC and Media Center, Completed on December 18, 2017

EP-3-0300-04-F-4, Inventory/Operability List-JIC and Media Center, Completed on June 12, 2018

FP-3-1000-04-F-2, Fire System/Feature Impairment Tracking, (Log Book Reviewed August 14, 2018)

FP-5-1000-01, Pre-Incident Plan, Rev. 7

FP-5-1000-01, Pre-Incident Plan, Rev. 7

FPE-REV-001, Fire Hazards Analysis for URENCO USA, Rev. 20

ISA-IAD-0029, Probabilistic Assessment of Transport Vehicles Fires involving UF6 Cylinders at UUSA, Rev. 0 and Rev. 1

LES-S-M-00016, Specification for Penetration Seal and Fire Barrier Application and Bounding Guide for Non-UL System Designs for URENCO USA, Rev. 12

Memorandum of Understanding between City of Eunice Police Department, Fire and Rescue Services and URENCO USA, dated September 23, 2015

National Enrichment Facility Egress Analysis, Prepared for Cascade Halls 1 & 2 and UF6 Handling Area, Building 1001, dated April 3, 2009

National Enrichment Facility Installation Data Pack for 1100 CCRB Building, Siemens Building Technologies, Rev. 1

NEF-BD-36a, Limit Transient Combustible Loading in Uranic Areas, Rev. 15, dated January 9, 2018

NEF-BD-36c, Limit Cylinder Mover to Electric or Diesel with <280L Fuel Load, Rev. 8, dated July 21, 2016

NEF-BD-36c, Limit Cylinder Mover to Electric or Diesel with <280L Fuel Load, Rev. 9, dated August 1, 2018

SA-2017-001, Fire Protection, dated December 14, 2017

Transient Combustibles Permit Number 1100-1-2018-052, issued May 18, 2018

Transient Combustibles Permit Number 1100-1-2018-064, issued June 26, 2018

URENCO USA Emergency Preparedness Drill Report, Criticality Evaluation Drill, dated May 21, 2018

URENCO USA Emergency Preparedness Drill Report, Dress Rehearsal Site Wide Drill, dated September 5, 2017

URENCO USA Emergency Preparedness Drill Report, First Quarter 2018 EOC/JIC Mini-Drills, dated May 3, 2018

URENCO USA Emergency Preparedness Drill Report, Fourth Quarter 2017 EOC/JIC Mini-Drills, dated December 14, 2017
 URENCO USA Emergency Preparedness Drill Report, NRC Evaluated Full-Scale Exercise, dated November 20, 2017
 URENCO USA Emergency Preparedness Drill Report, NRC Evaluated Full-Scale Exercise, dated October 18, 2017
 URENCO USA Emergency Preparedness Drill Report, Second Quarter 2018, Site-Wide Accountability Drill, dated June 14, 2018
 URENCO USA Emergency Preparedness Drill Report, Second Quarter 2018, Site-Wide Take-Cover Drill, dated April 16, 2018
 URENCO USA Fire Brigade Rosters/Training Records (Training Records Reviewed dated August 15, 2018)
 WO1000134526, Five Year Fire System Valve Inspection, dated February 18, 2015
 WO1000318615, 1Y: SBM5 IROFS35 Fire Damper Inspections, dated February 8, 2018
 WO1000331027, Annual Fire System Inspection, dated May 9, 2018
 WO1000332814, Quarterly Fire System Inspections and Tests (Water Flow Alarm), dated May 9, 2018
 WO1000337366, Annual Fire Pump Flow Tests, dated June 29, 2018
 WO1000339102, CRDB Fire Detection Tasks, dated July 17, 2018
 WO1000343819, Inventory Fire Brigade Trailer, dated July 26, 2018

Procedures:

EP-3-0200-06, Assembly and Personnel Accountability, Rev. 9
 EP-3-0200-10, Criticality Emergency Response, Rev. 3
 EP-3-0200-11, Emergency Operations Center Operations, Rev. 7
 EP-3-0300-01 Maintaining Emergency Preparedness, Rev. 12
 EP-3-0300-02 Responder Training, Rev. 9
 EP-3-0300-03 Drills and Exercises, Rev. 5
 EP-3-0300-04 EP Inventory and Equipment Operability, Rev. 19
 EP-3-1000-02, Program Change Evaluation, Rev. 5
 FP-1-1000-01, Fire Loss Prevention, Rev. 0
 FP-2-1000-01, Fire Protection Program Requirements, Rev. 8
 FP-3-1000-01, Fire System and Features Testing and Inspection, Rev. 5
 FP-3-1000-02, Flammable and Combustible Materials Control, Rev. 10
 FP-3-1000-04, Fire System or Feature Impairments, Rev. 16
 FP-3-1000-05, Pre-Incident Plan Development and Control, Rev. 7
 FP-3-1000-09, Plant Fire Brigade & Training, Rev. 1
 LO-3-2000-01, Receipt and Shipment of Cylinders, Rev. 14, dated August 13, 2018
 LO-3-2000-02, On-Site Handling of UF6 Cylinders, Rev. 8, dated March 21, 2018
 MA-3-3836-02, IROFS35, Fire Door Inspections, Rev. 9
 MA-6-0591-03, Quarterly Fire Detection Tasks, Rev. 3
 ORM-36c, Limit Cylinder Mover to Electric or Diesel with <280L Fuel Load, Rev. 7

CAP Reports Reviewed:

EV 106689
 EV 120398
 EV 122100, No Dose Calculation Specialist Response During Off-Hours Drill, dated November 25, 2017
 EV 122143
 EV 125051

EV 126360, Audit 2018-A-07-019, Finding #1: Change Management Process Not Implemented, dated July 16, 2018

EV 123461, Out of Service Telephones During Quarterly Check, dated March 22, 2018

EV 125136, ERO Training Deficiency, dated June 15, 2018

EV 120031, Radio Base Stations Inoperable in the TSB, dated August 8, 2018

Condition Reports Written as a Result of the Inspection:

EV 126569

EV 126592

EV 126593

EV 126594

EV 126598

EV 126601

EV 126602

EV 126605

EV 126603

Other Documents:

1001-LS-FE-1.1, UF6 Area and Cascade Halls 1 & 2, First Floor Egress Path and Fire Extinguisher Layout, Sheet 1 of 3, Rev. 0

1001-LS-FE-1.2, UF6 Area and Cascade Halls 1 & 2, Second Floor Egress Path and Fire Extinguisher Layout, Sheet 3 of 3, Rev. 0

1001-LS-FE-1.3, UF6 Area and Cascade Halls 1 & 2, Third Floor Egress Path and Fire Extinguisher Layout, Sheet 3 of 3, Rev. 0

2018-A-06-017, Report for the URENCO USA (UUSA) Emergency Preparedness NQA-1 Audit, dated August 1, 2018

Assessment of Safety Significance for Events Documented in EV 125051/123395, dated July 10, 2018

Combustible Material Calculation for Large Fork Lift

Email from J. Sanford to J. Sikora (Lea Regional Medical Center), Subject: Annual Training, dated July 11, 2018

Email from T. Boes to E. Fabela (Eunice Fire and Rescue), Subject: Meeting Follow-up, dated July 9, 2018

Email from T. Boes to G. Geisler (Permian Regional Medical Center), Subject: Training Dates, dated August 7, 2018

Email from T. Boes to K. Shearer (Hobbs Fire Department), Subject: Hazmat Team Tour Dates, dated July 24, 2018

Emergency Classification and EALs Training

Emergency Classification and EALs Training-ERO Overview Refresher

Emergency Plan, Rev. 25a

Initial Training Material for Field Monitoring Team

LES-1100-C-ARC-002-11-3, Architectural Cylinder Receipt & Dispatch Building Bunkered Area First Floor Plan El. 3415'-0", Rev. 3

LES-18-025-DHSEM, URENCO USA 2017 Tier II Inventory and Fee, 02/22/2018 Meeting Minutes, Eunice Fire Annual Refresher, dated July 16, 2018

MOD-18-0018, Combustible Loading Update – UTC Lab and Chemistry Lab

Report of the Fire Endurance and Hose Stream Testing of a 6'-0" X 7'-0" Fire Rated Door Assembly Installed With Excessive Clearances in a Concrete Block Wall, Warnock Hersey International, dated October 24, 1986

Review No.: 325EP120, 10 CFR 70.32(i)/10 CFR 40.35(f) Evaluation and Effectiveness Review, dated August 29, 2016

Review No.: 332EP120, 10 CFR 70.32(i)/10 CFR 40.35(f) Evaluation and Effectiveness Review, dated May 18, 2017

SA-2018-007, Emergency Preparedness Self-Assessment, dated June 18, 2018

TQ-3-0100-12-F-10, Training Approval Form, Emergency Operations Center, dated November 5, 2015

TQ-3-0100-12-F-10, Training Approval Form, Emergency Plan Overview Refresher, dated November 5, 2015

TQ-3-0100-12-F-10, Training Approval Form, Initial ERO Overview, dated November 5, 2015

TQ-3-0100-12-F-10, Training Approval Form, Initial Training for Emergency Notification/Communicator, dated November 5, 2015