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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 No. 70-3103

Subject: 2016 Annual Summary of 10 CFR 70.72(c) Evaluations

Pursuant to the requirements of 10 CFR 70.72(d)(2), Louisiana Energy Services, LLC (LES), dba URENCO USA (UUSA) herewith submits the 2016 Annual Summary of changes to records required by 10 CFR 70.62(a)(2). It should be noted that the changes summarized were made in accordance with the applicable regulations and approved processes.

The enclosed 2016 summary identifies all of the 10 CFR 70.72(c) evaluations completed by UUSA during the 2016 calendar year.

If you have any questions, please contact Salem Thyne, Licensing and Performance Assessment Manager at 575.394.5252.

Respectfully,

Jay Laughlin
Chief Nuclear Officer and Head of Operations

Enclosure: 2016 Summary of 10 CFR 70.72(c) Completed Evaluations

NMSSO1

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Enclosure

2016 Summary of 10 CFR 70.72(c) Completed Evaluations

70.72(c) Identifier	70.72(c) Approval Date	Change Description	ISA Summary Affected (Yes/No)	Programs Affected
2015-0238	03/29/2016	Revise TQ-3-0100-13, Training and Qualification Guidelines, to incorporate the following items: Added a note to the Main Body to establish a grace period for periodic training requirements. Revised Attachment 24, Qualification and Certification Program for Qualified Checkers, Competent Inspectors, and Subject Matter Experts for 48Y Cylinder Lifting Lugs, to provide clarification of records requirements, to add logistics Services Manager authority for granting and removing qualification, and establish a requirement for an annual eye exam. Revised Attachment 1, General Employee Training (GET) and Qualification Program, to allow a challenge exam for initial training. Added Attachment 25, Qualification and Certification Program for Information Services, to establish a training program for Information Services. Revised Attachment 9, Operator Training and Qualification Program, to establish recertification requirements for Certified Operators.	No	ISA Summary Revision
2016-0010	02/9/2016	This evaluates the following two items: 1. UBC Crane Trolley rail splice bars and fasteners. 2. UBC Crane Bridge rail end-stops anchorages. It is proposed to downgrade the Quality Level of the items from QL-1 to QL-3. 1) The splice bars were never intended to be part of IROFS27e boundary. The rail and clips ensure the trolley does not fall in a seismic event. The splice bars only ensure the trolley's movement can occur from one section of the rail to the other. 2) The bridge rail end-stops were at one time considered for including in IROFS27e boundary. Once the uplift restraints were designed, the end-stops were no longer necessary. They were left in the boundary and are being removed to help address discrepancies found. These items were originally left as QL-1 components for conservatism. These components were not previously established as QL-1 components in NEF-BD-27e and were excluded in the previous revision of the BDD through CC-EG-2015-0008.	No	Chemical Safety / IROFS Boundary Definition
2016-0019	2/5/2015	Modification (ECR-9398/CC-EG-2016-0037) implements changes to SBM1005 Cascade Control PLC's to introduce the ability to do Online PLC Updating. Additionally, an upgrade to the Utility SCADA from v7.4 to v7.5.There are no QL-1 attributes associated with this modification.	No	IT Systems / Plant Software
2016-0011	1/12/16	The proposed change removes the welded shear bars from the design of Grapple End-truck Assembly on the UBC Gantry Crane and replaces them with a bolted shear bar package. This corrects a manufacturing error that had omitted the welded shear bars from the installed crane, and with the installation of the bolted shear bar package the full functionality of IROFS27e will be restored. Welding the shear bars onto the UBC Gantry Crane in situ is not feasible, therefore bolted on shear bars will be installed instead.	No	IROFS Boundary Definition

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2016-0022	3/31/2016	The proposal is to install a second pressure transducer in the 425 product vent headers in all assays. A second transducer in each assay would allow Operations to connect a cylinder, perform the vapor pressure check on the first transducer and second without disconnecting the cylinder. Currently, Operations has to move the cylinder to complete the second verification. IROFS16e and IROFS16f require independent vapor pressure verification by two independent pressure transducers. Only one pressure transducer, 100x-425-1MP1, currently exists on the vent header in all assays. Adding a second transducer will remove the amount of time it takes for Operations to disconnect and move the cylinder to another station in another assay. This modification will also remove the amount of time it takes to weigh the cylinder on the WOHWA between IROFS16e and IROFS16f.	No	IROFS
2016-0025	2/2/2016	Modify the piping of the feed system in Assays 1001-1004 so that sampling of all feed stations/hotboxes of a given assay can take place from a single point. This will be done by tying the sample piping from each hotbox to a common header and connecting to the existing feed sample rigs (one per assay) at a fixed location. A feed sample from a specific hotbox can be taken by opening the valve in that hotbox. The design, construction, and installation of the feed piping is QL-3. Safe-by-design verifications are required (e.g., diameter, spacing) prior to the new portion of the system going into operation. There are no QL-1 IROFS associated with this modification.	No	Plant Modifications
2016-0029	4/13/2016	The PCS product cylinder weight alarm settings for all product stations throughout the plant (Assays 1001 through 1006) are being changed to allow more filling of product into 30B cylinders while staying conservatively below the fill limit. Current PCS cylinder weight alarm setpoints are 2200 kg for H and 2203 kg for HH1, although the limiting 30B fill limit is 2277 kg (as set forth by ANSI Standard N14.1). The current PCS cylinder weight alarm settings are being changed to 2234 kg for H and 2237 kg for HH1. This change does not affect any IROFS in the plant. A software revision of the PCS will be required. This software change will be done to the product PLC. This change does not affect the classified network.	No	IT Systems / Plant Software / SPPP

70.72(c) Identifier	70.72(c) Approval Date	Change Description	ISA Summary Affected (Yes/No)	Programs Affected
2016-0030	2/18/2016	The PLC software for the SBM-1005 (assay 1005 and 1006) solid feed stations (SFSs) is being modified to correct problems experienced with the Lenze drive system, wherein the cylinder superior valve actuator is not always able to close the valve and the valve position is not always remembered after power interruptions take place. A software update will be made to the PLC software to correct this issue. There are no QL-1 IROFS attributes associated with the assay 1005 or 1006 SFSs or in this modification.	No	IT Systems / Plant Software / SPPP
2016-0031	4/13/2016	The PLC software for the SBM-1005 (assay 1005 and 1006) low temperature take-off stations (LTTSs) is being modified to reduce the number of event messages during station standby mode. Specifically, a time delay will be added to the PLC software to reduce the amount of event messages from the hot gas bypass valve during standby mode. The event message is not unexpected during station standby mode and is not a concern. Reducing the amount of hot gas bypass valve event messages will allow more storage space for legitimate event messages in the PLC and will prevent the likelihood of losing an important event message. There are no QL-1 IROFS attributes associated with the assay 1005 or 1006 LTTSs or in this modification.	No	IT Systems / Plant Software / SPPP
2016-0037	3/13/2016	The modification to the calculations ensures the margin utilized in the disposition of UBS Crane weld issues is maintained in the design. Table 1 and Table 2 in ACECO-REP-21297-012 detail available design margins in bridge/gantry crane and trolley structure load bearing welds.	No	Engineering Design
2016-0042	6/17/2016	This modification is for twelve additional wall and floor penetrations in the second floor and between the second and first levels in the CRDB1100 Bunker Building. This is in support of the utility piping and HVAC/GEVS ducting needed in support of the UTC laboratory construction. The change impacts walls and floors that are OL-3 fire barriers that will be sealed off with approved fire penetration seals. QL-1 attributes of this modification are required due to IROFS27c.	No	IROFS / QA
2016-0046	4/5/2016	This modification is to modify existing penetration seals in support of new cabling being installed in buildings 1001, 1003, 1500, 1100, 1600, 1620. The new cabling is being installed as part of the B-Tech modification. Routing of cabling is been handled via a separate design and work package. QL-1 attributes of this modification are required due to IROFS35. This modification also provides as-built conditions for affected fire penetration seal drawings.	No	Plant Modification / QA / IROFS

70.72(c) Identifier	70.72(c) Approval Date	Change Description	ISA Summary Affected (Yes/No)	Programs Affected
2016-0049	3/18/2016	Operations requests additional stillages to be installed in 1005. This modification is to change the drawing detail to allow more stillages to be installed.	No	Plant Engineering / Plant Modification
2016-0050	4/21/2016	Shift Operations proposes to install a locking 471-XA10 valve on the autoclaves to lock the valve open. This valve is required to be maintained open at all times during autoclave operation for IROFS12. Maintaining 471-XA10 OPEN is required by IROFS12. The verification step is performed in Attachment 1 of OP-3-0470-01. These valves isolate xMP3 pressure transducer. Even though the valve will be locked open, the valve shall still be checked in the OPEN position for IROFS12. This step cannot be removed from Attachment 1 of OP-3-0470-01.	No	IROFS / Plant Modification
2016-0053	4/6/2016	The TC12X project raises SWU performance of TC12 cascades in SBM1001/2 and 1001/2X by raising centrifuge speed a modest amount. Some systems and calculations are modified from the currently installed configuration to support the change. These changes require outages of all cascades being modified to the TC12X configuration. The plant systems requiring modification for conversion to TC12X are: • Process Service Corridor PLC and Key Switch (ECR-9279/CC-EG-2015-0151/70.72 #2015-0212) • HVAC (ECR-9333, no CC/70.72 required) • Tails Control Valve Cone (ECR-9314, no CC/70.72 required)) • SCADA Update to v64 for TC12X (ECR-9274/CC-EG-2015-0146/70.72 #2015-0209) • Plant Control System (PCS) Update and AU1001-4 Dump Button Upgrade (ECR-9371/CC-EG-2016-0025/70.72 #2016-0053) The change to the Process Service Corridor (PSC) Programmable Logic Controller (PLC) and Key Switch adds the new TC12X run frequency to the MF Drives and run/run-up converters. It also contains an earlier version of changes to the Cascade Control and Protection PLCs. 70.72 #2015-0212 applies. The change to the HVAC raises the normal temperature in the PSC and installs a duct heater in the link corridor. The purpose is prevent de-sublimation of UF6 in the secondary tails header during a cascade evacuation for asset protection. No 70.72 is required. The change to the tails control valve ensures appropriate flow rates during tails evacuation (TE Full) for asset protection. No 70.72 is required.	No	Plant systems modification / PCS PLC / SPPP

70.72(c) Identifier	70.72(c) Approval Date	Change Description	ISA Summary Affected (Yes/No)	Programs Affected
		The Supervisory Control and Data Acquisition (SCADA) Update to v64 implements classified PCS software to support TC12X implementation in AU1001 and AU1002. It does not update the Cascade PLC software. 70.72 #2015-0209 applies. The Plant Control System update implements changes to the Cascade Control and Protection PLCs. Although not directly related to TC12X, the Dump Button Upgrade for AU1001, AU1002, AU1003 and AU1004 is included in the PCS software update for TC12X. The Dump Button Upgrade adds a test capability to the circuit, but does not change the function of the dump button. This 70.72 applies to the Cascade Control and Protection PLCs changes. In preparing for TC12X implementation the ability to apply archery in a TC12 cascade has been added to the TC12 cascade design. The change to add archery to a TC12 is not within the scope of this 70.72. ISA Impact Evaluation ISA-IIE-0539-00 reviewed the impacts of the change from TC12 to TC12X centrifuge configuration in SBM-1001. Specifically, the impact evaluation considers the following changes to parameters affecting the safety analyses for the UUSA site: • a rise in the Material At Risk (MAR) values for SBM-1001 • a rise in the Damage Ratio (DR) for a crashed/idled TC12X centrifuge versus that for a TC12 • a change in the cascade flow rates • a rise in the High-High alarm level for FLOMEL power for TC12X versus that for a TC12		
		As a result of these parameter changes, chemical consequence analyses have been updated. All the required consequence calculations and nuclear criticality safety analyses are complete and document the effects of the change to TC12X in SBM1001. None of the changes described result in increases in dose or chemical consequences above the Low Consequence level. In addition, the changes do not result in any changes or additions to accident sequences or IROFS to mitigate or prevent the postulated events. This 70.72 applies to the updated chemical consequences analysis.		

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2016-0064	6/17/2016	The UUSA QAPD, Section 22.3, Design Control, Design Documentation and Records states: LES will specify applicable design requirements for QL-2AC components. QL-2AC components will be identified in applicable design documents. The documents affected in ECR's 9268A, 9269A, 9270A, 9271A, and 9272A have been identified as having QL-2AC components and should be designated per the UUSA QAPD, Section 22.3. The impact of this change will bring the affected drawings in compliance with the UUSA QAPD for QL-2AC requirements.	No	Engineering Design / QAPD
2016-0091	8/4/2016	CC-EG-2016-0020 proposes a modification to the current 7 Bar Test Facility to replace faulty components (valves or plugs) on heeled (≤ 2.2kg UFs) 30B or 48Y cylinders. The proposed change removes IROFS47b and IROFS3 and replaces them with IROFSC21 for accident sequence VR1-5; IROFS47b and IROFS3 have already been replaced on similar rigs in the plant with IROFSC21. The proposed change also removes IROFS23a which is a sole administrative IROFS and replaces it with multiple IROFS (IROFS23b and IROFS24a) which perform the same safety function as IROFS23a.	Yes	IROFS / 7 Bar Test Facility
2016-0095	6/6/2016	Two additional Monitoring Wells are to be drilled to replace Monitoring Well #4. These wells are needed due to the planned abandonment of Monitoring Well #4 because of a failure in the well casing. These new Monitoring Wells need to be located as they are on current design drawings by locating them with Northings and Eastings. The impact of this change will give Urenco USA two new locations for Monitoring Wells to replace Monitoring Well #4.	Yes	Plant Projects / Chemistry
2016-0119	7/20/2016	CC-EG-2016-0003 proposes the removal of IROFS27a/b from the ISAS and any accident sequence or reference associated with IROFS27a/b. IROFS27a/b (passive engineered controls to prevent flooding due to local intense precipitation to ensure building area subcriticality) are no longer required as the applicable accident sequence (EE-LP-CRDB-Bunker(CR)) is no longer applicable. NCS calculations take into account flooded conditions for processes in the CRDB bunker, therefore IROFS are not required to mitigate or prevent flooding from occurring. The applicability of these IROFS has already been removed from the operating rooms (i.e. GEVS room, Chemistry lab) within the CRDB bunkered area. The remaining rooms will be brought online with associated criticality calculations that account for flooded conditions.	Yes	IROFS / Chemistry / Operations

70.72(c) Identifier	70.72(c) Approval Date	Change Description	ISA Summary Affected (Yes/No)	Programs Affected
2016-0123	8/31/2016	The proposed change is to add a torque value to the Liquid Sampling Manifold (LSM) pressure transducer flange drawing. Shift Operations continuously has Helium Leak Tests that fail after LSM pressure transducer installation	No	Engineering Design / Operations / Plant Modification
2016-0125	8/3/2016	CC-MA-2015-0001 proposes a change to the description in the ISA Summary for emptying chemical/Dump traps and subsequent changes to the controls required for trap emptying. The trap emptying process as defined by the current ISA Summary does not fully account for the size of URENCO USA's Dump NaF traps which, when filled, weight in excess of 600lbs and are approximately 4 feet high and 3 feet in diameter. The proposed change, a criticality approved vacuum drum attachment that will remove the spent chemical directly into a container, makes trap emptying more flexible while still being compliant with UUSA processes. The controls required for trap emptying include IROFS23b, personal respiratory protection; IROFS24a, airflow away from the worker; and IROFS31a/b, limiting uranic mass in a non-safe by design waste container. Changes were made to the accident sequences and Boundary Definition Documents to incorporate the proposed trap emptying method. Accident sequence VR2-1 for chemical trap material removal was changed from an intermediate consequence to a high consequence based off of ISA calculation 32-2400503-01-LES Attachment I and therefore requires an additional IROFS in order to meet the performance requirements of 10 CFR 70.61. Accident sequence VR2-2 was editorially changed; IROFS23b and IROFS24a were erroneously classified as preventive in the current version of the ISA Summary. They should be classified as mitigative IROFS since the use of respiratory protection and airflow away from the worker does not prevent a chemical release from occurring. Accident sequence VR2-9 was added and no changes were made to accident sequence VR2-7.	Yes	IROFS Accident Sequences / IROFS Boundary Definitions / Engineering / Chemistry
2016-0126	6/17/2016	Modification (ECR-9398/CC-EG-2016-0037) implements changes to SBM1.005 Cascade Control PLC's to introduce the ability to do Online PLC Updating. Additionally, an upgrade to the Utility SCADA from v7.4 to v7.5. There are no QL-1 attributes associated with this modification.	No	IT Systems / Plant Software / SPPP

70.72(c) Identifier	70.72(c) Approval Date	Change Description	ISA Summary Affected (Yes/No)	Programs Affected
2016-0143	8/3/2016	Proposed change CC-RW-2015-0001 updates the ISA Summary and SAR for activities that are performed in the Solid Waste Collection Room and the Ventilated Room to be consistent with planned activities and final design. The proposed change also adds accident sequences to the Solid Waste Collection Room for bulking waste containing enriched uranic material and volume reduction of CRDB and LXGEVS filters containing uranic material.	Yes	Chemistry / Accident Sequences
2016-0147	8/31/2016	CC-EG-2016-0035 proposes to delete IROFS14a from the ISA Summary and replace IROFS14b with two redundant IROFS, IROFS58a and IROFS58b. IROFS14a is a control to administratively restrict the proximity of vessels in non-designated locations containing enriched uranic material to ensure a subcritical configuration. Nuclear Criticality Safety Analyses and Evaluations (NCSA/Es) using revised and conservative modelling practices now show that this requirement to restrict the proximity of the vessels is no longer required therefore the IROFS is no longer required. Additionally assumptions made in the NCSA/Es imply that moving more than one component at a time constitutes an array of that component and as such shall be treated like an array of that component, i.e. any controls established for that component array are required. The proposed change also removes IROFS14b which is a sole administrative IROFS and replaces it with multiple IROFS (IROFS58a and IROFS58b) which perform the same safety function as IROFS14b.	Yes	IROFS / Operations / Engineering
2016-0163	9/26/2016	The proposed activity is implementation of revision 0 of CH-3-3070-01, Sub Sampling Rig Maintenance and Troubleshooting, and implementation of revision 1 to CH-3-2070-01, Sub Sampling of UF6. CH-3-3070-01 provides instruction on general maintenance activities and troubleshooting for common issues. These instructions were cut from CH-3-2070-01 to streamline and separate the act of sub sampling from troubleshooting and maintenance. CH-3-2070-01 provides instruction on how to dispense representative homogenous UF6 samples from 1S sample bottles into P10 sample bottles for chemistry analysis and/or shipment to customers. It's revision removes the troubleshooting and maintenance sections to another procedure and adds steps for when pump start up is unsuccessful	No	Chemistry Analysis / Logistics / Maintenance

70.72(c) Identifier	70.72(c) Approval Date	Change Description	ISA Summary Affected (Yes/No)	Programs Affected
2016-0168	8/26/2016	The URENCO Technology Center laboratory facilities are being constructed on the URENCO USA site on the second floor of the Bunker within the Cylinder Receipt and Dispatch Building (CRDB). The scope of the UTC is to support R&D, process improvement, and qualification programs on behalf of URENCO Group. The primary purpose of these programs is to increase efficiency and ensure safe, economical, and reliable operations at all sites. The UTC is comprised of both laboratory and analytical facilities where the R&D, process improvement, and qualification activities can be conducted independently of ongoing routine plant operations. The majority of the programs will involve the handling of uranium hexafluoride (UF6) and various uranium compounds. These compounds will be limited to depleted, natural, or enriched uranium ≤ 5.0 wt% U235. The use of reprocessed uranium and uranium enriched > 5 wt% U235 is not included in the scope of UTC initial operations, which will require additional safety analysis and regulatory approval.	Yes	Chemistry / EP / SAR / IROFS/Accident Sequences
2016-0169	8/31/2016	CC-EG-2016-0053 proposes a change to NEF-BD-36d. NEF-BD-36d is being updated for CRDB ORR. NEF-BD-36d requires editorial updates to the reference section and clarification throughout the BDD for applicability in the Ventilated room as opposed to the CRDB. The proposed change also corrects the boundary of the IROFS by adding the enhancement from the ISA Summary; "Routine (at least daily) visual inspection verifies no excessive open containers and that all stored waste is contained in metal containers" to it. The Boundary Definition Document should include the IROFS enhancements as part of the Boundary; the proposed change corrects this oversight. This IROFS has never been implemented and the correction needs to be issued prior to implementation.	No	IROFS Boundary Definition
2016-0201	10/11/2016	A series of new drawings are being created for the IROFS 43 wiring schematics for the sub-sampling assembly which will be used in the URENCO Technology Center. The design is identical in function to the existing design, with the exception that there will only be one sub-sampling assembly in the UTC versus the two assembly design used in the Chemistry Lab.	Yes	Chemistry / Plant Modifications / Engineering

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<tr><th>70.72(c) Identifier</th><th>70.72(c) Approval Date</th><th>Change Description</th><th>ISA Summary Affected (Yes/No)</th><th>Programs Affected</th></tr>
<tr><td>2016-0218</td><td>10/19/2016</td><td>The proposed change involves components i.e. valves and level indicators for the LECTS system with previously designated QL-2AC no longer require such quality level designation as their associated IROFS has been revised.
<table>
<tr><td>1100-681-1A52</td><td>1100-684-2A3</td><td>1100-684-1ML6</td></tr>
<tr><td>1100-684-1A1</td><td>1100-684-2A4</td><td>1100-684-2ML1</td></tr>
<tr><td>1100-684-1A2</td><td>1100-684-2A6</td><td>1100-684-2ML2</td></tr>
<tr><td>1100-684-1A3</td><td>1100-684-2A7</td><td>1100-684-2ML3</td></tr>
<tr><td>1100-684-1A4</td><td>1100-684-1ML1</td><td>1100-684-2ML4</td></tr>
<tr><td>1100-684-1A6</td><td>1100-684-1ML2</td><td>1100-684-2ML5</td></tr>
<tr><td>1100-684-1A7</td><td>1100-684-1ML3</td><td>1100-684-2ML6</td></tr>
<tr><td>1100-684-2A1</td><td>1100-684-1ML4</td><td></td></tr>
<tr><td>1100-684-2A2</td><td>1100-684-1ML5</td><td></td></tr>
</table>
Due to changes made to administrative IROFS55a and IROFS55b converting them to enrichment controls ensuring criticality safety for transfers from the slab tanks to BSTs, release tanks, and totes. No Monitoring Support or Operated Support Equipment are currently required for IROFS55a and 55b. These components will be identified as QL-3 in applicable design documents.</td><td>No</td><td>Quality Assurance / Plant Modification</td></tr>
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