

SEP 11 2019  
LES-19-134-NRC



Attn: Document Control Desk  
Director  
Office of Nuclear Material Safety and Safeguards  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Louisiana Energy Services, LLC  
License Number: SNM-2010  
NRC Docket Number: 70-3103

Subject: 60 Day Written Supplement for Event Notification 54101

References:

1. Letter from S Cowne to NMSS providing the 60 day written follow-up report for Event Notification 54101, dated 7/25/2019 (LES-19-109-NRC)


On June 4, 2019 Louisiana Energy Services, LLC dba URENCO USA (UUSA), submitted Event Notification 54101 to the NRC Operations Center in accordance with 10 CFR 70.74(a). On July 25, 2019, UUSA provided Reference 1, the 60 day written follow-up report required by 10 CFR 70.74(b).

Reference 1 stated that UUSA would provide the Apparent Cause Evaluation (ACE) following management review and approval. UUSA herewith provides the approved ACE as Enclosure 1. UUSA has also revised the information provided, in Reference 1, to comply with 10 CFR 70.50(c)(2). This revision was performed as a result of the ACE completion. The revised information is in Enclosure 2.

Also note that Reference 1 incorrectly referenced EN 53892 in the Subject. The event number that should have been referenced is EN 54101. UUSA requests that the NRC correct any internal references to the incorrect event number as needed.

If you have any questions, please contact Rick Medina, Acting Licensing and Performance Assessment Manager, at 575-394-5846.

Respectfully,



Stephen Cowne  
Chief Nuclear Officer and Compliance Manager

Enclosures: 1. ACE for Event Report 132253  
2. Written Follow-up Report

IE 72  
NM5520

LES-19-134-NRC

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LES-19-134-NRC

**ENCLOSURE 1**

**ACE for Event Report 132253**

Procedure Title: Apparent Cause Evaluation Guidelines	
<b>CA-3-1000-02 F-1</b> <b>Apparent Cause Evaluation</b>	CA-3-1000-02 Rev. 9 Level 3 - Information Use Page 1 of 5

**Apparent Cause Evaluation**  
**ER Number: 132253**  
**Event Date: 06/01/2019**

Evaluator: *Kevin Slavings*

**Problem Statement**

During the 1LS1 Recovery, 1001-471-1A12, 1MP6 Isolation was found open. During the connect procedure, this valve should have been ensured closed. This was the first connect following the annual IROFS10 surveillance which leaves this valve open.

**Event Narrative**

On 06/01/2019 the annual IROFS10 surveillance was completed for 1LS1. MA-3-2470-01, Step 9.1.1.c leaves the 471-1A12 open following a soap bubble test (CAMR-2).

On 06/01/2019, 1LS1 was being connected following the annual IROFS10 surveillance. The individual performing the autoclave connect is an experienced operator and was using OP-3-0470-01, Attachment 1 to connect autoclave 1LS1. Contrary to Step 3.5, first bullet, 471-1A12, 1MP6 Isolation was not ensured closed.

On 06/04/2019, 1LS1 was being recovered per OP-3-0470-01 Attachment 10 following a trip experienced during a station brownout. Step 3.16 first bullet ensures 471-1A12, 1MP6 Isolation valve closed. At this time it was determined that the 471-1A12 was left open following maintenance on 1LS1 and was not ensured closed during the autoclave connect.

471-1A12 is an isolation boundary for IROFS10 and failing to ensure this valve closed during the connect sequence, allowed for the autoclave to be placed in operation without ensuring IROFS10 integrity. The resulted in a 24 hour report to the NRC.

A review of approved procedures reveals the requirement to position the 471-1A12 in the closed position every time the autoclave is connected. The apparent cause of this event is complacency when performing a routine evolution. Furthermore discussions with numerous operators reveal that it is common practice to visually look at the valve when doing system lineups and not actually place their hands on the valve to verify position (CAMR-1). This practice when combined with complacency from performing the same routines frequently supports making this type of mistake. Additionally, it has been identified there are numerous IROFS related valves verifications that are not flagged as critical steps in the autoclave procedure alone (CAMR-3).

In summary, there was one apparent cause and several contributing factors in this event. The operators will receive coaching on the dangers of complacency when doing routine evolutions (CA-1). The planned corrective actions that will strengthen the robustness of the IROFS10

Procedure Title: Apparent Cause Evaluation Guidelines

**CA-3-1000-02 F-1**

**Apparent Cause Evaluation**

CA-3-1000-02

Rev. 9

Level 3 - Information Use

Page 2 of 5

boundaries (CAMR-4), retrain operators in the preferred method of performing valve verifications (CAMR-1) and procedural enhancements to minimize the probability of recurrence (CAMR-2, CAMR-3, CAMR-4, CAMR-5, CAMR-6, CAMR-7 and CAMR-8).

A review of ReAct and the Operations HPE data base do not reveal any other times that this has occurred, therefore this is a one-time event.

**Cause(s) and Corrective Action(s)**

Cause	Corrective Action	Actions Impact Level	Due Date	Assigned Group
<b>Apparent Cause – “Complacency due to infrequent operation of valve”</b>	Coach Operators on the dangers of becoming complacent in routine operations	<b>CA-1</b>	Complete	Shift Operations  AC145236 through AC145241
<b>Contributing Cause – “Improper verification of valve positions by use of visual verification vs hands on verification.”</b>	Provide training to all operators to include physical verification of components in the field and not using visual indication as sole method.	<b>CAMR-1</b>	Complete	Shift Operations  AC145236 through AC145241
<b>Contributing Cause – “MA-3-2470-01 leaves valves out of normal position.”</b>	Revise procedure to close XA12 following soap bubble test (Step 9.1.1.d)	<b>CAMR-2</b>	9/20/19	Maintenance AC145244
<b>Contributing Cause – “Steps that ensure integrity of IROFS 10 and 28 in OP-3-0470-01 not flagged as critical steps and commitment steps.”</b>	Revise all Operations Procedures to identify IROFS related steps as critical steps and commitment steps. Also separate these steps from the system valve lineups to allow importance to be placed on them.	<b>CAMR-3</b>	9/20/19	Operations Support AC145236
<b>Contributing Cause – “Valves that are not usually operated are the IROFS10 established</b>	Place configuration control locks on 471-XA11, 471-XA12 and 471XA14 in the closed	<b>CAMR-4</b>	9/20/19	Operations Work Control AC145235

**CA-3-1000-02 F-1**

**Apparent Cause Evaluation**

CA-3-1000-02

Rev. 9

Level 3 - Information Use

Page 3 of 5

boundary.”	position			
<b>Contributing Cause – “Steps that ensure integrity of IROFS not flagged as critical steps and commitment steps.”</b>	Revise all Chemistry Procedures to identify IROFS related steps as critical steps and commitment steps. Also separate these steps from the system valve lineups to allow importance to be placed on them.	<b>CAMR-5</b>	11/21/19	Chemistry AC145979
<b>Contributing Cause – “Steps that ensure integrity of IROFS 10 and 28 in OP-3-0470-01 not flagged as critical steps and commitment steps.”</b>	Revise all Logistics Procedures to identify IROFS related steps as critical steps and commitment steps. Also separate these steps from the system valve lineups to allow importance to be placed on them.	<b>CAMR-6</b>	11/21/19	Logistics AC145980
<b>Contributing Cause – “Steps that ensure integrity of IROFS 10 and 28 in OP-3-0470-01 not flagged as critical steps and commitment steps.”</b>	Revise all Deco and Recycling Procedures to identify IROFS related steps as critical steps and commitment steps. Also separate these steps from the system valve lineups to allow importance to be placed on them.	<b>CAMR-7</b>	11/21/19	Deco & Recycling AC145981
<b>Contributing Cause – “Steps that ensure integrity of IROFS 10 and 28 in OP-3-0470-01 not flagged as critical steps and commitment steps.”</b>	Revise AD-3-1000-01 to require steps that establish IROFS boundaries or implement the IROFS actions be flagged as commitment steps and critical steps.	<b>CAMR-8</b>	11/15/19	Operations Support AC145977
<b>Contributing Cause – “Not all personnel are aware of the impact their day to day jobs may have on the safety</b>	UUSA Training perform a training needs analysis to determine adequacy of training for Maintenance and	<b>CA-5</b>	9/20/19	Operations Support AC145246

**CA-3-1000-02 F-1**  
**Apparent Cause Evaluation**

CA-3-1000-02  
Rev. 9  
Level 3 - Information Use  
Page 4 of 5

<b>functions of IROFS.”</b>	Operations personnel for tasks that can impact IROFS boundaries			
<b>Contributing Cause – “Steps that IROFS boundaries are not flagged as critical steps and commitment steps.”</b>	Revise all Maintenance Procedures to identify IROFS related steps as critical steps and commitment steps. Also separate these steps from the system valve lineups to allow importance to be placed on them.	<b>CA-6</b>	9/20/19	Maintenance AC145245
<b>Contributing Cause – “Not all personnel are aware of the impact their day to day jobs may have on the safety functions of IROFS.”</b>	UUSA Training perform a training needs analysis to determine adequacy of training personnel outside the Operations and Maintenance departments for tasks that can impact IROFS boundaries	<b>CA-7</b>	11/21/19	Operations Support AC145980

Procedure Title: Apparent Cause Evaluation Guidelines	
<b>CA-3-1000-02 F-1</b> <b>Apparent Cause Evaluation</b>	<b>CA-3-1000-02</b> Rev. 9 Level 3 - Information Use Page 5 of 5

### **Extent of Condition**

A review of standard evolutions that can impact IROFS boundaries falls mainly within Operations and Maintenance. Actions have been created to evaluate all Operations, Maintenance, Chemistry, Logistics and Deco/Recycling Procedures for steps that can have an impact of IROFS or their safety function to be flagged as critical steps and have commitment flagged to increase awareness and ensure compliance (CAMR-3 and CA-6).

Additional actions have been created for the UUSA Training Department to perform a training needs analysis to determine if additional training should be implemented to raise awareness when dealing with IROFS and IROFS support equipment boundaries (CA-5 and CA-7).

### **Attachments**

Include any additional documents that would not be readily available to a future reader of the report. This may include graphs, charts, photos, etc



LES-19-134-NRC

**ENCLOSURE 2**

**Written Follow-up Report**

Written Follow-up Report

- I. Applicable information required by 10 CFR 70.50(c)(2)
  - a. The probable cause of the event, including all factors that contributed to the event and the manufacturer and model number (if applicable) of any equipment that failed or malfunctions is provided below:
    - i. The investigation determined that the apparent cause was complacency due to infrequent operation of the 1001-471-1A12 isolation valve. The contributing causes were;
      1. Improper verification of valve positions by use of visual verification –vs- hands on verification.
      2. MA-3-2470-01, Autoclave Leak Check Surveillance IROFS10, leaves the valves out of their normal position
      3. Steps that ensure integrity of IROFS10 and 28 in OP-3-0470-01 are not flagged as critical steps and commitment steps
      4. Valves that are not usually operated makeup the IROFS10 established boundary
      5. Steps that ensure integrity of IROFS are not flagged as critical steps and commitment steps
      6. Not all personnel are aware of the impact their day to day jobs may have on the safety function of IROFS
  - b. Corrective actions taken or planned to prevent occurrence of similar or identical events in the future and the results of any evaluations or assessments are:
    - i. The operators will receive coaching on the dangers of complacency when doing routine evolutions. The planned corrective actions that will strengthen the robustness of the IROFS10 boundaries include retraining the operators in the preferred method of performing valve verifications and procedural enhancements to minimize the probability of recurrence.
  - c. UUSA is subject to Subpart H of 10 CFR 70; therefore, a discussion of whether the condition was identified and evaluated in the Integrated Safety Analysis (ISA) is provided below:
    - i. The IROFS was identified in the UUSA ISA as a safety control to mitigate the consequences of a release of UF<sub>6</sub> within the autoclave. The ISA evaluated accident sequences that could result in consequences to the workers and public. The valve was determined to be needed to mitigate the adverse consequences to workers and public.