

LES-23-074-NRC

6/24/2023



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  
NRC Docket No. 70-3103

Subject: 10 CFR 70.50(c) 30 Day Report for EN 56550 - Partial Loss of Criticality  
Accident Alarm System

Reference: EN 56550, Partial Loss of Criticality Accident Alarm System,  
dated June 1, 2023

On June 1, 2023, Louisiana Energy Services (LES), dba Urenco USA (UUSA), made an Event Notification to the Nuclear Regulatory Commission (NRC) Operations Center in accordance with 10 CFR 70.50(b)(2). This notification (Reference) reported a Criticality Accident Alarm System (CAAS) detector fault was received. Event Notification 56550 details this occurrence.

As required by 10 CFR 70.50(c)(2), the Enclosure provides the written follow-up report within 30 days of the initial report.

Should there be any questions concerning this submittal, please contact Chris Schwarz, Licensing and Performance Assessment Manager, at 575.394.5783.

Respectfully,

Wyatt Padgett

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Padgett  
Date: 2023.06.24 12:36:50  
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Wyatt Padgett  
Compliance Manager

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**Enclosure**

**10 CFR 70.50(c) 30 Day Report for EN 56550 - Partial Loss of  
Criticality Accident Alarm System**

10 CFR 70.50(c)(1)

(i) Caller's name, position title, and call-back telephone number;

- The individual who facilitated Event Notification (EN) 56550 was Jim Rickman, Senior Licensing Specialist. The call-back telephone number is 575-394-6558.

(ii) Date, time, and exact location of the event;

- The NRC Event Notification was submitted at 20:16 EST on June 1, 2023. The discrepancy reported in EN 56550 was identified at approximately 02:39 MDT on June 1, 2023. The location of this event was at Urenco USA in Eunice, New Mexico (Lea County). The affected area within the UUSA facility included the SBM 1005 Process Service Corridor (PSC).

(iii) Description of the event:

At approximately 02:39 MDT on June 1, 2023, during inclement weather, a Phase II Criticality Accident Alarm System (CAAS) detector fault was received indicating the SBM 1005 Process Service Corridor (PSC) was affected. Initial troubleshooting efforts indicated two (2) CAAS nodes were impacted and the SBM 1005 Process Services Corridor was evacuated.

UUSA implemented compensatory measures through the use of Area Radiation Monitors (ARM) to achieve an equivalent 10 CFR 70.24 safety function in the affected area while supporting maintenance troubleshooting efforts.

UUSA reported this event to the NRC under Event Notification 56550 in accordance with 10 CFR 70.50(b)(2) in which equipment is disabled or fails to function as designed when required by regulation.

(A) Radiological or chemical hazards involved, including isotopes, quantities, and chemical and physical form of any material released;

- There were no radiological or chemical hazards involved and no material was released. The affected area was limited to SBM 1005 Process Services Corridor.

(B) Actual or potential health and safety consequences to the workers, the public, and the environment, including relevant chemical and radiation data for actual personnel exposures to radiation or radioactive materials or hazardous chemicals produced from licensed materials (e.g., level of radiation exposure, concentration of chemicals, and duration of exposure);

- There were no actual or potential health or safety consequences to workers, the public, or the environment. No unexpected exposure to radioactive materials or hazardous chemicals produced from licensed materials occurred. During the time period in which the equipment was postulated to be unavailable, subsequent source testing of each detector caused activation of CAAS and associated alarms, which indicated the affected detectors were functioning properly, and CAAS would have alarmed in the event of an actual criticality event.
- Plant instrumentation detected no release during the event.
- No contamination events occurred; therefore, no decontamination was necessary.
- No dose alarms or dose rate alarms occurred during the response.

(C) The sequence of occurrences leading to the event, including degradation or failure of structures, systems, equipment, components, and activities of personnel relied on to prevent potential accidents or mitigate their consequences;

- During a lightning storm, an overvoltage, appears to have caused a particular electronic component to fail.

(D) Whether the remaining structures, systems, equipment, components, and activities of personnel relied on to prevent potential accidents or mitigate their consequences are available and reliable to perform their function;

- The structures, systems, equipment, components, and activities in the unaffected areas remain available and reliable to perform their function. The occurrence of the CAAS detector fault was limited to the SBM 1005 Process Services Corridor.
- Upon discovery, SBM 1003 and 1005 were evacuated of personnel pending troubleshooting of CAAS and compensatory measures were implemented for the area by placement of three (3) Area Radiation Monitors (ARMs) into operation.
- The issue was corrected and subsequent source testing of the detectors caused activation of CAAS and associated alarms, indicating that the affected detectors are functioning properly.

(iv) External conditions affecting the event;

- Suspect the weather conditions; lightning storm, caused a possible overvoltage on the particular electronic component.

(v) Additional actions taken by the licensee in response to the event;

- The condition has been entered into UUSA's accredited Corrective Action Program, EV 160632. A suspected cause investigation was conducted in accordance with UUSA's accredited corrective action program.

(vi) Status of the event (e.g., whether the event is on-going or was terminated);

- The event is not considered to be on-going as the CAAS system is available. The required redundancy was maintained throughout the event.

(vii) Current and planned site status, including any declared emergency class;

- No change in site emergency status occurred or will occur in response to this event.

(viii) Notifications, related to the event, that were made or are planned to any local, State, or other Federal agencies;

- No notifications to local, State, or Federal agencies occurred or are planned for this event.

(ix) Status of any press releases, related to the event, that were made or are planned.

- No press releases were made and no press releases are planned.

10 CFR 70.50(c)(2)

(ii) 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 malfunctioned;

- The suspected cause is that there was an overvoltage during a lightning storm that cause a particular electronic component to fail.

(iii) Corrective actions taken or planned to prevent occurrence of similar or identical events in the future and the results of any evaluations or assessments; and

- A Suspected Cause type investigation was initiated in accordance with UUSA's corrective action program and resolution of the Suspected Cause tracked through EV 160632. The issue has been corrected and is now closed. Source testing of each detector caused activation of CAAS and associated alarms, indicating that the affected detectors are functioning properly.

(iv) For licensees subject to Subpart H of this part, whether the event was identified and evaluated in the Integrated Safety Analysis.

- The UUSA Integrated Safety Analysis Summary (ISAS), Table 3.7-1, Accident Sequence and Risk Index, lists the potential accident sequences that were identified that could have consequences that exceed the performance criteria of 10 CFR 70.61 listed in Subpart H. Items Relied on

For Safety (IROFS) necessary to prevent or mitigate event sequences that exceed 10 CFR 70.61 criteria have been identified.

CAAS function and equipment are not included in the Table 3.7-1, Accident Sequence and Risk Index. Therefore, the CAAS is not a component of an IROFS and is not necessary to prevent or mitigate event sequences that exceed 10 CFR 70.61.

Section 3.1.5, Criticality Monitoring and Alarms, describes the facility CAAS design, installation, and maintenance commitments.