



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

July 12, 2024

Paul Lorskulsint, Chief Nuclear Officer  
and Head of Compliance  
Louisiana Energy Services, LLC  
P.O. Box 1789  
Eunice, NM 88231

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING LOUISIANA ENERGY SERVICES, LLC LICENSE AMENDMENT REQUEST 23-02 - CHANGES TO LICENSE CONDITIONS AND RAISE ENRICHMENT LIMIT TO LESS THAN 10 WEIGHT PERCENT FOR LOW ENRICHED URANIUM PLUS PRODUCTION SYSTEMS (ENTERPRISE PROJECT IDENTIFICATION NUMBER L-2023-LLA-0168)

Dear Paul Lorskulsint:

By letter dated November 30, 2023 (Agencywide Documents Access and Management System [ADAMS] Number ML23334A122), Louisiana Energy Services, LLC, dba Urenco USA, requested an amendment to Materials License special nuclear material (SNM)-2010. The amendment proposes an increase of the enrichment limit from 5.5 weight percent (wt. %) uranium 235 (U-235) to less than 10.0 wt. % U-235. UUSA has termed U-235 enriched to less than 10 wt. % as Low Enriched Uranium Plus (LEU+). The proposed increase would result in revisions to numerous license conditions and minor administrative changes in the license. Our review of your application has identified that additional information is needed before final action can be taken.

The additional information, specified in the enclosure, should be provided within 30 days from the date of this letter.

Pending your response, we anticipate completing our review by the end of November 2024. This date could change depending on the findings of our technical review, urgent assignments, or other factors. We will promptly communicate any significant changes to this schedule.

Enclosure 2 transmitted with this letter contains **Security Related Information**. When separated from Enclosure 2, this letter and Enclosure 1 are decontrolled.

P. Lorskulsint

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In accordance with Title 10 of the *Code of Federal Regulations* Part 2, "Agency Rules of Practice and Procedure," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room (PDR) or from the Publicly Available Records component of the NRC's ADAMS. ADAMS is accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html>. The PDR is open by appointment. To make an appointment to visit the PDR, please send an email to [PDR.Resource@nrc.gov](mailto:PDR.Resource@nrc.gov) or call 1-800-397-4209 or 301-415-4737, between 8 a.m. and 4 p.m. eastern time (ET), Monday through Friday, except Federal holidays.

If you have any questions regarding this communication, please contact me at 301-415-4053, or via email to [jonathan.rowley@nrc.gov](mailto:jonathan.rowley@nrc.gov).

Sincerely,



Jonathan G. Rowley, Project Manager  
Fuel Facility Licensing Branch  
Division of Fuel Management  
Office of Nuclear Material Safety  
and Safeguards

Docket No.: 07003103  
License No.: SNM-2010

Enclosures:

1. RAI (public)
2. RAI (non-public)

cc: [les@listmgr.nrc.gov](mailto:les@listmgr.nrc.gov)

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P. Lorskulsint

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DOCUMENT DATE: July 12, 2024

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**ADAMS Accession No.: ML24193A213(pkg, non-public); ML24187A155(itr & encl 1); ML24193A241(encl 2, non-public)**

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| <b>OFFICE</b> | NMSS/DFM/FFLB | NMSS/DFM/FFLB | NMSS/DFM/FFLB | NMSS/DFM/FFLB |
| <b>NAME</b>   | JRowley       | JGoodridge    | SLav          | JRowley       |
| <b>DATE</b>   | 07/8/24       | 07/9/24       | 07/11/24      | 07/12/24      |

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**REQUEST FOR ADDITIONAL INFORMATION**

LOUISIANA ENERGY SERVICES, LLC  
LICENSE AMENDMENT REQUEST 23-02  
SPECIAL NUCLEAR MATERIAL LICENSE NO. SNM-2010  
DOCKET NO. 07003103

This enclosure contains the following requests for additional information (RAIs):

1. Environmental - 4 RAIs
2. Human Factors - 1 RAI

1. ENVIRONMENTAL

The regulatory basis for each of the four RAIs is the same.

Regulatory Basis:

The NRC staff will prepare an Environmental Assessment (EA) pursuant to Title 10 *Code of Federal Regulations* (10 CFR) Sections 51.21 and 51.30. The NRC's regulations in 10 CFR 51.45(b) and (c) require an applicant to provide information on the environmental considerations and an analysis of the project. In addition, the NRC staff use the guidance in NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs," especially chapter 3, to prepare the EA.

**Environmental RAI 1-1 - *Recycling Systems***

Description of issue:

The recycling systems and components to be used are directly connected to the present request to install the capacity for enrichment up to 10 weight percent (wt. %). Detailed information about this portion of the increased enrichment process is not provided in the application.

Information Needed:

Explain how increased enrichment operations would affect the recycling systems themselves, as well as the associated wastes, effluents, and emissions.

**Environmental RAI 1-2 - *Waste***

Description of Issue:

The application does not address the potential effect of producing U-235 enriched up to 10 wt.% on the generation and storage of depleted uranium hexafluoride (UF<sub>6</sub>). Lack of this information prevents the NRC staff from being able to fully describe the potential waste management impacts of the increased enrichment process.

Information Needed:

Describe how the process of increasing enrichment up to 10 wt. % U-235 would affect the generation and storage of depleted UF<sub>6</sub>.

### **Environmental RAI 1-3 – Waste**

#### Description of Issue:

The application says: “The implementation of the future License Amendment Request (LAR) to allow for use of recycling systems to decontaminate LEU+ [Low Enriched Uranium Plus] exposed materials and components will not impact waste cylinders.” It is not clear whether this means that the implementation of the recycling systems would not affect the quantity, the types, or the storage of waste cylinders.

#### Information Needed:

State what types of cylinders are used to store what types of waste(s). Indicate whether and how the future implementation of the recycling systems would affect the quantity, types, and storage of waste cylinders.

### **Environmental RAI 1-4 - Public and Occupational Health**

#### Description of Issue:

Hydrogen fluoride (HF) emissions are presented as projections and estimates, but it does not appear that actual HF emission data is included for operations to date. To describe potential impacts from emissions associated with the processing U-235 enriched up to 10 wt. %, the NRC staff needs information about current HF emissions.

#### Information Needed:

If HF emissions data is collected, provide HF emissions data for the timeframe since 2015 to confirm the estimates in the 2015 EA (similar to format provided in the “UUSA Occupational TEDE” table). Otherwise, discuss whether the 2015 EA estimates are accurate representations of HF emissions since 2015 and provide a basis.

## **2. HUMAN FACTORS**

### **Human Factors RAI 2-1**

#### Regulatory Basis:

The requirement in 10 CFR 70.61(e) states that applicants shall establish a safety program to ensure that each item relied on for safety (IROFS) will be available and reliable to perform its intended function when needed.

The requirement in 10 CFR 70.62(d) states, in part, that each applicant or licensee shall establish management measures to ensure compliance with the performance requirements of 10 CFR 70.61, that the measures applied to a particular administrative control may be graded commensurate with the reduction of the risk attributable to that control, and that management measures shall ensure that administrative IROFS required by 70.61(e) are designed, implemented, and maintained as necessary to ensure they are available and reliable to perform their function when needed.

The requirement in 10 CFR 70.65(b)(4) states, in part, the Integrated Safety Analysis Summary must include a description of the management measures to be applied to IROFS, as well as information necessary to demonstrate compliance with the performance requirements of 10 CFR 70.61.

NUREG-1520, “Standard Review Plan for Fuel Cycle Facilities License Applications,” Revision 2, provides guidance to the staff reviewers who perform safety and environmental impact reviews of applications to construct or modify and operate nuclear fuel cycle facilities. Section 3.4.3.1, “Safety Program and Integrated Safety Analysis Commitments,” states, in part, that human factors engineering (HFE) should generally be part of the safety program. Human factors practices should be incorporated into the applicant’s safety program sufficiently to ensure that IROFS and management measures perform their functions in meeting the requirements of 10 CFR Part 70.

Description of Issue:

In section 7, “License Commitments and Requirements,” of the same procedure, it refers to “Safety Analysis Report, Section 3.4.40, IROFS Requiring Operator Actions.” However, the NRC staff reviewed the latest SAR, Revision 50d, and section 3.4.40 is titled, “Administrative Control IROFS.”

Information Needed:

Please clarify which version of the SAR this procedure is referencing.