

April 25, 2013

Mr. Tim Knowles  
Licensing and Performance Assessment Manager  
Louisiana Energy Services, LLC  
P.O. Box 1789  
Eunice, NM 88231

SUBJECT: FIRST REQUEST FOR ADDITIONAL INFORMATION FOR LICENSE  
AMENDMENT REQUEST 12-10 RELATED TO THE SAFETY ANALYSIS  
REPORT FOR CAPACITY EXPANSION OF URENCO USA FACILITY  
TECHNICAL ASSIGNMENT CODE L34193

Dear Mr. Knowles:

We have reviewed License Amendment Request 12-10 for capacity expansion for URENCO USA, dated November 9, 2012. We find that additional information is needed before final action can be taken on your submittal. We are enclosing a Request for Additional Information (RAI) and request that you provide a response within 30 days of this letter. In addition to this RAI please review the application to ensure that references to the tables and other sections of the Safety Analysis Report and supporting documentation are corrected to reflect this current version.

If you have any questions, please contact Mr. Michael Raddatz at 301-492-3108, or via e-mail at [Michael.Raddatz@nrc.gov](mailto:Michael.Raddatz@nrc.gov).

Sincerely,

**/RA/**

Brian W. Smith, Chief  
Uranium Enrichment Branch  
Division of Fuel Cycle Safety  
and Safeguards  
Office of Nuclear Material Safety  
and Safeguards

Enclosure:  
As stated

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

Mr. Tim Knowles  
Licensing and Performance Assessment Manager  
Louisiana Energy Services, LLC  
P.O. Box 1789  
Eunice, NM 88231

SUBJECT: FIRST REQUEST FOR ADDITIONAL INFORMATION FOR LICENSE  
AMENDMENT REQUEST 12-10 RELATED TO THE SAFETY ANALYSIS  
REPORT FOR CAPACITY EXPANSION OF URENCO USA FACILITY  
TECHNICAL ASSIGNMENT CODE L34193

Dear Mr. Knowles:

We have reviewed License Amendment Request 12-10 for capacity expansion for URENCO USA, dated November 9, 2012. We find that additional information is needed before final action can be taken on your submittal. We are enclosing a Request for Additional Information (RAI) and request that you provide a response within 30 days of this letter. In addition to this RAI please review the application to ensure that references to the tables and other sections of the Safety Analysis Report and supporting documentation are corrected to reflect this current version.

If you have any questions, please contact Mr. Michael Raddatz at 301-492-3108, or via e-mail at [Michael.Raddatz@nrc.gov](mailto:Michael.Raddatz@nrc.gov).

Sincerely,

**/RA/**

Brian W. Smith, Chief  
Uranium Enrichment Branch  
Division of Fuel Cycle Safety  
and Safeguards  
Office of Nuclear Material Safety  
and Safeguards

Enclosure:  
As stated

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

**DISTRIBUTION:**  
FCSS r/f

**ML13092A260**

<b>OFFICE</b>	UEB	UEB	UEB
<b>NAME</b>	MRaddatz	TRichmond	BSmith
<b>DATE</b>	04/3/13	04/3/13	04/25/13

**OFFICIAL RECORD COPY**

## **REQUEST FOR ADDITIONAL INFORMATION FOR LICENSE AMENDMENT REQUEST FOR CAPACITY EXPANSION OF URENCO USA FACILITY**

### **(A) Enclosure 1 Section 2.0, Proposed Change; Integrated Safety Analysis Summary: Section 3.3.1.11, SBM-1005 Building Design, Section 3.3.1.12, SBM-1007 Building Design, and Section 3.3.1.12, SBM-1009 Building Design**

1. Describe the significant differences between the design of SBM-1005 (Phase III) and that of currently approved design of SBM-1003 (Phase II). Include a representative sample of analysis and design calculations, as well as design and construction drawings for SBM-1005 (Phase III) that provide a representation of those differences.

The regulations in Title 10 of the *Code of Federal Regulations* (10 CFR) 70.22(a)(7) require the applicant to provide a description of equipment and facilities which will be used by the applicant to protect health and minimize danger to life or property and 10 CFR 70.64 require the applicant to design the facility against natural phenomena hazards and environmental conditions and dynamic effects, taking into consideration chemical and fire protection.

2. To ensure that our review is comprehensive, describe the differences (if any) that are anticipated for SBM-1007 (Phase IV) and SBM-1009 (Phase V).

The regulations in 10 CFR 70.22(a)(7) require the applicant to provide a description of equipment and facilities which will be used by the applicant to protect health and minimize danger to life or property and 10 CFR 70.64 require the applicant to design the facility against natural phenomena hazards and environmental conditions and dynamic effects, taking into consideration chemical and fire protection.

### **(B) Enclosure 1 Section 4.0, Technical Overview/Radiological Impacts**

1. For calculating radiation doses at the site boundary due to the uranium byproduct cylinder storage pad expansion, provide information to support that the minimum distances from the storage pad to the site boundary required to meet the annual dose limit of 25 millirems (mrems) in 40 CFR Part 190 include consideration of organ doses. Demonstrate that calculated doses to any member of the public from external and internal exposures do not exceed the limits in 40 CFR Part 190.

Compliance with 40 CFR 190 is referenced in 10 CFR 20.1301(e). As specified in 40 CFR 190.10(a), reasonable assurance must be provided that the annual dose equivalent to any member of the public from normal operations will not exceed the dose standards of 25 mrems to the whole body, 75 mrems to the thyroid, and 25 mrems to any other organ. Exposures include radiation from uranium fuel cycle operations and planned discharges of radioactive material to the general environment, radon and its decay daughters excepted.

2. For the dose equivalent contribution from Uranium Hexafluoride( $\text{UF}_6$ ) storage inside each cylinder receipt and dispatch building, explain why the ratio of 157 to 377 mrems (an increase by a factor of 2.4) from "simple scaling" is less than the ratio of 3.7 to 10 MSWU (an increase by a factor of 2.7).

Occupational doses to radiation workers from licensed operations must not exceed the limits specified in 10 CFR 20.1201.

**(C) Safety Analysis Report Table 4.1-2, Estimated Dose Rates**

1. Table 4.1-2 lists a dose rate of  $< 0.01$  mrem/hr for the plant general area excluding the separations building modules. Provide estimated dose rates in occupied areas close to the expanded uranium byproduct storage pad and describe the considerations given to these dose rates in the assessment of expanded facility operations.

Occupational doses to radiation workers from licensed operations must not exceed the limits specified in 10 CFR 20.1201.

**(D) Integrated Safety Analysis Summary Section 3.2.7, Stability of Subsurface Materials**

1. Provide a drawing showing locations of the soil borings relative to the proposed facility expansion, assess stability of the materials beneath the proposed expansion, and justify that additional geotechnical investigation is not needed to support design of the proposed expansion.

The regulations in 10 CFR 70.64(a)(4) require the applicant to include adequate protection against environmental conditions and dynamic effects in its design of the facility and 10 CFR 70.62(c)(iv) require the applicant to conduct and maintain an Integrated Safety Analyses that identifies potential accident sequences caused by credible external events.

**(E) Integrated Safety Analysis Summary Section 3.3.2.2.3.2, External Projectiles**

1. Provide the updated aircraft hazard risk determination report demonstrating that the low-level federal airway passing within 9 km (~6 statute miles) northeast of the facility is not a safety hazard to the entire facility including the proposed expanded portion.

The regulations in 10 CFR 70.64(a)(4) require the applicant to include adequate protection against environmental conditions and dynamic effects in its design of the facility and 10 CFR 70.62(c)(iv) require the applicant to conduct and maintain an integrated safety analysis that identifies potential accident sequences caused by credible external events. In addition, 10 CFR 70.61(b) and 70.61(c) require the applicant to demonstrate an accident event can be excluded from further consideration based on either its likelihood or its consequences.