

**SAFETY EVALUATION REPORT**

DOCKET NO.: 70-7004  
LICENSE NO.: SNM-2011  
LICENSEE: AMERICAN CENTRIFUGE OPERATING, LLC  
SUBJECT: 6-MONTH EXTENSION OF THE NUCLEAR REGULATORY COMMISSION'S AUTHORIZATION FOR THE AMERICAN CENTRIFUGE OPERATING'S HIGH ASSAY LOW-ENRICHED URANIUM DEMONSTRATION PROGRAM

1.0 BACKGROUND

This safety evaluation report (SER) documents the U.S. Nuclear Regulatory Commission (NRC) staff's review of American Centrifuge Operating LLC's (ACO's) license amendment request (LAR) dated April 28, 2022 (Agencywide Documents Access and Management System Accession No. ML22123A143). This LAR requested review and approval to extend the authorization of ACO's High Assay Low-Enriched Uranium (HALEU) demonstration program from May 31, 2022, to November 30, 2022. The HALEU demonstration program at the American Centrifuge Plant (ACP) in Piketon, Ohio was approved by the NRC staff with Amendment 13 to ACO's Materials License No. SNM-2011, dated June 11, 2021 (ML21138A827). The amendment authorizes possession of licensed material for the purpose of demonstrating production of up to 600 kilograms of HALEU in the form of uranium hexafluoride (UF6) for the Department of Energy (DOE) under a 3-year contract which expired on May 31, 2022.

The NRC staff review of the request to extend the authorization of the HALEU demonstration program involved the assessment of ACO's financial qualifications, decommissioning financial assurance and liability insurance information in the amendment request (ML22123A143). Included in the amendment request were the revised HALEU Demonstration Contract<sup>1</sup> with a new expiration date of November 30, 2022, and Amendment 2 to the GCEP Lease Agreement between ACO and the DOE (ML22123A147 Non-Public)<sup>2</sup>. Amendment 2 of the GCEP Lease Agreement extended the duration of ACO's lease for the DOE's Piketon facility to December 31, 2025.

ACO also made editorial changes to its Environmental Report (ER) (ML22123A143) and Fundamental Nuclear Material Control Plan (FNMCP) (ML22123A148 Non-Public). These changes were determined to be administrative in nature. Therefore, the changes to the ER and FNMCP are not evaluated as part of this SER.

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<sup>1</sup> HALEU Demonstration Contract Number 89303519CNE000005, Modification #P000 19 for the HALEU Demonstration Program (ML22123A147 Non-Public), submitted as Enclosure 5.

<sup>2</sup> Amendment 2 to Appendix 1 of the Lease Agreement Between the US. Department of Energy and United States Enrichment Corporation for the Gas Centrifuge Enrichment Plan (ML22123A147 Non-Public), submitted as Enclosure 6.

## 2.0 REGULATORY EVALUATION

### Financial Qualifications, Decommissioning Financial Assurance, and Nuclear Liability Insurance Requirements

Under Title 10 of the *Code of Federal Regulations* (10 CFR), Section 70.25(a)(1), each applicant for a specific license for a uranium enrichment facility must submit either a decommissioning funding plan as described in paragraph (e) of that section or submit a certification of financial assurance in the amount prescribed in paragraph (d) of that section. Under 10 CFR 70.25(e), the funding plan must include a cost estimate of all decommissioning activities and a financial instrument that satisfies the requirements in paragraph (f) of that section. Paragraph 70.25(f)(5) of 10 CFR, in turn, provides that financial assurance for decommissioning funding may be provided when a governmental entity is assuming custody and ownership of a site, an arrangement that is deemed acceptable by such governmental entity. The regulations in 10 CFR 140.13b require applicants for uranium enrichment facilities to provide and maintain nuclear liability insurance.

### NRC Guidance

The NRC staff evaluated the applicant's financial qualifications, decommissioning financial assurance and nuclear insurance and indemnity using the following NRC guidance document:

- NUREG 1520 - "Standard Review Plan for Fuel Cycle Facilities License Applications," Revision 2, June 2015.

## 3.0 FINANCIAL QUALIFICATIONS

The DOE awarded ACO the HALEU Demonstration Contract on May 31, 2019 (ML21127A153). Under the terms of the HALEU Demonstration Contract, DOE agreed to reimburse ACO for 80 percent of its costs incurred in performing the contract, up to a maximum of \$115.0 million, which was increased to \$130.0 million as of March 31, 2022. In addition, on April 7, 2022, the Company received a \$12.0 million modification to increase the total contract funding to \$142.0 million. In April 2022, the HALEU Contract was modified to extend the period of performance to November 30, 2022, with authorization to work through August 31, 2022. Costs under the HALEU Demonstration Contract include direct labor and materials and associated indirect costs, and an allocation of corporate costs supporting the program. Services to be provided over the duration of the contract include constructing and assembling the 18 HALEU centrifuges (16 operating with 2 spares) and related infrastructure in a cascade formation and operating the HALEU cascade to demonstrate HALEU production.

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Proprietary Information  
Withheld Under 10 CFR 2.390

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The NRC staff reviewed the revised HALEU Demonstration Contract between ACO and DOE and the latest financial statements filed with the Securities and Exchange Commission (SEC) (Form 10-Q, dated May 5, 2022). See ACO's website: <https://investors.centrusenergy.com/financial-information/sec-filings>. Based on ACO's financial submittals, the staff concludes that ACO has sufficient cash on hand to fund its portion of the HALEU demonstration program for the extended contract period. Accordingly, the NRC staff finds that ACO appears to be financially qualified to operate the HALEU demonstration program.

#### 4.0 DECOMMISSIONING FUNDING

On May 31, 2019, DOE and ACO signed the contract for the HALEU demonstration program (ML21127A153), which permitted the construction and operation of the demonstration cascade by ACO through June 1, 2022. On April 20, 2022, DOE and ACO extended the term of the contract by 6 months to November 30, 2022 (ML22123A143). On September 9, 2021, DOE and ACO signed Amendment 2 of Appendix 1 of the GCEP Lease Agreement (ML21286A085 Non-Public) retaining the following statements from Amendment 1 of Appendix 1 of the GCEP Lease Agreement dated June 27, 2019 (ML22209A063 Non-Public), that pertain to decommissioning funding and liability:

- As of May 31, 2019, ACO had fully satisfied the lease turnover conditions and any existing financial assurance provided under Section 4.3 (of the GCEP Lease Agreement) was released, surety bonds were canceled, and collateral returned to the ACO.
- Any facilities or equipment constructed or installed by ACO under the Demonstration Contract with the Department shall be included in Exhibit B (of the GCEP Lease Agreement) as Leased Personality and may be returned to the Department in an "as is" condition at the end of the lease term.
- The Department hereby assumes all liability for the decontamination and decommissioning of such facilities and equipment installed, and any work performed, under the Demonstration Contract with the Department including any materials or environmental hazards on the site. Therefore, no financial assurance for any liability or lease turnover conditions shall be required from ACO.
- The parties agree that any work performed under the HALEU Demonstration Contract on the leased premises shall be considered a permitted use; any alterations or changes to the premises pursuant to the Demonstration Contract with the DOE shall be a permitted change to the premises; and any liabilities of ACO arising from or incident to the performance of work under the Demonstration Contract with the DOE shall be governed solely by such contract and any financial protection afforded to ACO as a person indemnified under the Act.

License Condition 17 requires ACO to provide decommissioning funding plan cost estimates up to full capacity operations. Under the Amendment 2 to the GCEP Lease Agreement, DOE assumes all liability for the decontamination and decommissioning of such facilities and equipment installed, and any work performed, under the HALEU Demonstration Contract with the Department including any materials or environmental hazards on the site. DOE accepts full responsibility for decommissioning of all equipment and materials under the HALEU

demonstration program until November 30, 2022, including the dispositioning of any depleted UF6 tails generated from the HALEU cascade. For these reasons, the NRC staff determined that ACO does not need to revise and submit a decommissioning funding plan at this time and License Condition 17 is unchanged.

License Condition 16 requires ACO to provide copies of proposed financial assurance instruments to the NRC for review at least 6 months prior to planned date for obtaining licensed material. DOE accepts full responsibility for the costs of decommissioning all equipment and dispositioning of radioactive materials under the HALEU demonstration program until November 30, 2022. DOE's indemnification of all costs includes the dispositioning of any depleted UF6 tails generated from the HALEU cascade. For these reasons, ACO is not required to submit financial assurance instruments for the HALEU demonstration program under License Condition 16 at this time. However, this License Condition continues to be applicable to the commercial ACP.

## 5.0 NUCLEAR INSURANCE AND INDEMNITY

ACO submitted Amendment 2 to Appendix 1 to the GCEP Lease Agreement and the revised HALEU Demonstration Contract to demonstrate DOE's indemnification of the HALEU demonstration program, pursuant to the Price-Anderson Act. In evaluating ACO's application for an extension of the authorization for the HALEU demonstration program, the NRC staff found ACO remains in compliance with the liability insurance requirements in 10 CFR 140.13b based on its determination that DOE would provide indemnity for the program.

The staff reviewed the liability coverage information provided in the extension request and finds it is consistent with the guidance in Section 1.2.4.3.2 of the SRP (NRC, 2015). The NRC staff confirmed that during the operation of the HALEU demonstration program, ACO will be indemnified by DOE in accordance with Amendment 2 to the GCEP Lease Agreement and revised HALEU Demonstration Contract. The NRC concludes that ACO appears to be financially qualified to construct and operate the ACP HALEU 18-centrifuge cascade for the duration of its contract with DOE, which expires on November 30, 2022. Therefore, the NRC finds that ACO has satisfied the liability insurance requirements of 10 CFR 140.13b and 140.14(a)(3).

## 6.0 ENVIRONMENTAL REVIEW

The NRC staff also considered whether there would be any significant environmental impacts associated with this amendment request. The licensing action involves updating documents which demonstrate ACO's financial qualifications, decommissioning funding, and nuclear insurance and indemnification, and makes corresponding changes to License Condition 16 and License 17. The regulations in 10 CFR 51.22(c)(10)(i), (ii) and (v) and 51.22(c)(11) allow a categorical exclusion for changes (1) to a surety, insurance, and/or indemnity, (2) to administrative procedures, (3) that involve minor revisions to the license; and (4) that are administrative in nature. The staff determined that the changes will not result in any significant change in effluents released offsite or any significant increase in individual or cumulative occupational radiation exposure. Additionally, the amendment will not result in any construction impacts or any significant increase in the potential for consequences from radiological accidents. The NRC staff determined that this proposed action fits categories of actions that do not require an environmental assessment or environmental impact statement. Specifically, the action falls under the categorical exclusions in 10 CFR 51.22(c)(10)(i), (ii) and (v) and (11).

## 7.0 CONCLUSION

The NRC staff evaluated ACO's financial qualifications, decommissioning funding, and nuclear insurance and indemnity submitted with the amendment request in making its determination on the proposed action.

For the reasons set forth in this SER, the NRC staff finds that:

1. Based on the revised HALEU Demonstration Contract and ACO's Form 10-Q, dated May 5, 2022, filed with the SEC, ACO appears to be financially qualified to provide the financial resources necessary to carry out the proposed action in a safe and secure manner, and ACO has sufficient cash on hand to cover its share of the costs of construction and operation of the HALEU demonstration program;
2. DOE will continue to be financially responsible for all phases of the HALEU demonstration project, including the decommissioning of the facility;
3. The staff reviewed the liability coverage information provided in the extension request and finds ACO has satisfied the liability insurance requirements of 10 CFR 140.13b and 140.14(a)(3); and
4. The NRC staff amends License Condition 15 to memorialize the revised expiration date of November 30, 2022, for ACO's authorization to operate the HALEU demonstration cascade. The staff also amends License Condition 16 to memorialize the expiration date of December 31, 2025, in Amendment 2 to the GCEP Lease Agreement.

The staff reviewed the financial qualifications and liability coverage information provided in the request to extend the authorization period for the HALEU demonstration until November 30, 2022. The NRC staff finds ACO's financial qualifications and liability coverage meet the requirements of 10 CFR 70.22(a)(8) and 70.23(a)(5). The NRC staff concludes that ACO appears to be financially qualified to complete construction of the ACP HALEU 18-centrifuge cascade and its operation until November 30, 2022, when the HALEU Demonstration Contract (ML21127A153, ML22123A143) with DOE will terminate. Additionally, the NRC staff confirmed that for the duration of the HALEU demonstration program, in accordance with the Amendment 2 to the GCEP Lease Agreement and the extended HALEU contract, ACO will be indemnified by DOE until December 31, 2025. Therefore, the NRC finds that ACO has satisfied the liability insurance requirements of 10 CFR 140.13b and 140.14(a)(3).

The NRC staff's extension of the ACO's HALEU demonstration will remain in effect until November 30, 2022. Based on the provisions in Amendment 2 of the GCEP Lease Agreement, the NRC staff finds that DOE's contractual commitment to assume all liability for the decontamination and decommissioning of the HALEU demonstration program facilities and equipment is sufficient to satisfy the decommissioning funding requirements in 10 CFR 70.25.

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