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

June 11, 2021

Ms. Kelly L. Fitch, Regulatory Manager
American Centrifuge Operating, LLC
P.O. Box 628
Mail Stop 7560
3930 U.S. 23 South
Piketon, Ohio 45661

**SUBJECT: CENTRUS ENERGY CORP. AMERICAN CENTRIFUGE OPERATING –
LICENSE AMENDMENT 13 – APPROVAL TO OPERATE SIXTEEN
CENTRIFUGES TO DEMONSTRATE PRODUCTION OF HIGH-ASSAY LOW-
ENRICHED URANIUM IN PIKETON, OHIO UNTIL MAY 31, 2022
(EPID L-2020-LLA-0085)**

Dear Ms. Fitch:

By letters dated December 5, 2019 (Agencywide Documents Access and Management System [ADAMS] Accession No. ML19352G024), April 22, 2020 (ADAMS Accession No. ML20125A103), May 7, 2020 (ADAMS Accession No. ML20139A100), and June 23, 2020 (ADAMS Accession No. ML20314A098), American Centrifuge Operating, LLC (ACO), a wholly owned indirect subsidiary of Centrus Energy Corp., requested that the U.S. Nuclear Regulatory Commission (NRC) amend its Materials License SNM-2011 for the American Centrifuge Plant (ACP). By letters dated May 25, 2021 (ADAMS Accession Nos. ML21148A261, ML21148A148, ML21148A147) and June 10, 2021 (ADAMS Accession No. ML21162A049), ACO provided final updates to the documents contained in the submittals identified above. The submittals are seeking approval from the NRC to possess licensed material for the purpose of demonstrating production of up to 600 kilograms of High-Assay Low-Enriched Uranium (HALEU) in the form of uranium hexafluoride for the Department of Energy (DOE) under a 3-year contract which expires on May 31, 2022.

The NRC staff has completed its review of the submittals identified above, and has found them to be acceptable. The details associated with the reviews are documented in a publicly available Safety Evaluation Report (Enclosure 1 to this letter) and its five non-public appendices (Enclosures 2 to 6). Enclosure 7 contains Amendment 13 to License SNM-2011 (non-public) for the ACP, and Enclosure 8 contains its redacted version (public). Amendment 13 to License SNM-2011 is effective immediately. The Environmental Assessment (ADAMS Accession No. ML21085A705) associated with this license amendment was issued on June 4, 2021.

As part of this licensing action, the following amendments to License SNM-7003 and SNM-2011 are being made:

Enclosures 2 to 7 transmitted herewith contain sensitive non-public Information. When separated from the sensitive conditions in Enclosures 2 to 7, this document and Enclosures 1 and 8 are decontrolled.

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- (1) License Condition (LC) 6 consisting of the possession limits for the commercial ACP is being changed to LC 6 and a new LC 6.a is being added consisting of the possession limits for the HALEU Demonstration Program that expires on May 31, 2022.
- (2) LC 10.c has been modified to incorporate the Environmental Report dated May 25, 2021.
- (3) LC 10.d has been modified to incorporate the Fundamental Nuclear Material Control Plan dated May 25, 2021.
- (4) LC 10.e has been modified to incorporate the License Application dated May 25, 2021.
- (5) LC 10.f has been modified to incorporate the Quality Assurance Program Description dated May 25, 2021.
- (6) LC 10.g has been deleted since the Security Program documents are addressed via other LCs.
- (7) LC 10.i has been modified to replace SP-HQ-0001 and SP-HQ-0002 with SP-HQ-0008 approved on September 4, 2018 as clarified on September 11, 2018 per the DOE's three-year accreditation dated August 15, 2018 (accredited through August 14, 2021).
- (8) New LC 10.y has been added incorporating the Security Plan for the Physical Protection of Special Nuclear Material at the ACP SP-3605-0042 dated May 25, 2021.
- (9) LC 11 was modified to clarify that it also applies to the HALEU Demonstration Program.
- (10) LC 12 was modified to incorporate the special authorizations and exemptions identified in Section 1.2.5 of the ACP License Application Revision dated May 25, 2021.
- (11) LC 14, requiring ACO to obtain liability insurance prior to obtaining licensed material was modified to state that it does not apply to the HALEU Demonstration Program.
- (12) LC 15, which requires, in part, that ACO obtain funding before operation, was modified to state that it does not apply to the HALEU Demonstration cascade.
- (13) LC 16, requiring ACO to provide final copies of the proposed financial assurance instruments to the NRC for review at least 6 months prior to the planned date for obtaining licensed material, was modified to state that it does not apply to the HALEU Demonstration Program.
- (14) LC 19 was modified to update the application with more recent Nuclear Quality Assurance (NQA-1) requirements for computer software for nuclear facility applications.
- (15) A new LC 25 was added requiring prior NRC approval of any liquid uranium hexafluoride (UF₆) operations at the ACP.
- (16) A new LC 26 was added prohibiting ACO from producing UF₆ product in excess of 20 percent U-235 by weight.

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(17) A new LC 27 was added prohibiting ACO from implementing changes to reduce the margin of subcriticality for safety without NRC approval of the change, require ACO to provide a summary of non-administrative changes to the computer code validation report within 30 days, and provide the revised validation report to the NRC upon request.

(18) A new LC 28 was added to require a maintenance, testing and calibration program for security systems.

In accordance with Title 10 of the *Code of Federal Regulations*, Section 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter and Enclosures 1 and 8 will be available electronically for public inspection in the NRC Public Document Room, or from the Publicly Available Records component of the NRC's ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room). Enclosures 2 to 7 to this letter contain sensitive, unclassified information, and are deemed Official Use Only – Security-Related Information (OUO-SRI), Proprietary Information, or Safeguards Information (SGI). Therefore, these will not be placed in the Public Document Room, nor will they be publicly available in ADAMS, with the exception of Enclosure 5 marked SGI which will not be placed in ADAMS.

If you have any questions regarding this action, please contact Mr. Yawar Faraz by telephone at 301-415-7220, or via e-mail at Yawar.Faraz@nrc.gov.

Sincerely,

Jacob I. Zimmerman, Chief
Fuel Facility Licensing Branch
Division of Fuel Management
Office of Nuclear Material Safety
and Safeguards

Docket No. 07007004
License No. SNM-2011

Enclosures:

1. Safety Evaluation Report (public)
2. Safety Evaluation Report Appendix A Integrated Safety Analysis (OUO-SRI)
3. Safety Evaluation Report Appendix B Minimum Margin of Subcriticality (OUO-SRI, Proprietary)
4. Safety Evaluation Report Appendix C Material Control and Accounting (OUO-SRI, Proprietary)
5. Safety Evaluation Report Appendix D Physical Security of Special Nuclear Material (SGI)
6. Safety Evaluation Report Appendix E Emergency Management (OUO-SRI, Proprietary)
7. Amendment 13 of the ACP License (OUO-SRI)
8. Amendment 13 of the ACP License (public)

cc: centrus_acp@listmgr.nrc.gov
L. Cutlip, Senior Vice President, Centrus
A. Griffith, DOE NE-HQ
S. Harlow, DOE NE-HQ

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SUBJECT: AMERICAN CENTRIFUGE OPERATING – LICENSE AMENDMENT 13 – APPROVAL TO OPERATE SIXTEEN CENTRIFUGES TO DEMONSTRATE PRODUCTION OF HIGH-ASSAY LOW-ENRICHED URANIUM IN PIKETON, OHIO UNTIL MAY 31, 2022 (EPID L-2020-LLA-0085)

DATED: June 11, 2021

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ADAMS Accession Nos.: ML21138A826 (Pkg), ML21138A827 (Ltr)
 ML21148A291 (Encl 1), ML21148A293 (Encl 2)
 ML21148A294 (Encl 3), ML21152A021 (Encl 4)
 ML21152A029 (Encl 6), ML21138A829 (Encl 7),
 ML21138A828 (Encl 8) *via e-mail

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