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Fueling the Future of Nuclear Power

April 22, 2020
ACO 20-0010

ATTN: Document Control Desk
Mr. John W. Lubinski, Director
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

American Centrifuge Plant; Docket Number 70-7004; License Number SNM-2011

License Amendment Request for American Centrifuge Operating, LLC's License Application and Supporting Documents for the American Centrifuge Plant

INFORMATION TRANSMITTED HEREWITH IS PROTECTED FROM PUBLIC DISCLOSURE AS CONFIDENTIAL COMMERCIAL OR FINANCIAL INFORMATION AND/OR TRADE SECRETS PURSUANT TO 10 CFR 2.390 AND 9.17(a)(4)
AND
INFORMATION TRANSMITTED HEREWITH IS PROTECTED FROM DISCLOSURE PURSUANT TO 10 CFR PART 810

Dear Mr. Lubinski:

The purpose of this letter is to request in accordance with 10 *Code of Federal Regulations* (CFR) 70.34 and 70.65 the U.S. Nuclear Regulatory Commission (NRC) review and approve the proposed amendment for American Centrifuge Operating, LLC's (ACO) License Application and Supporting Documents for the American Centrifuge Plant (ACP) in Piketon, Ohio (Materials License SNM-2011).

On May 31, 2019, ACO and the U.S. Department of Energy (DOE) entered into a letter contract and on October 31, 2019 (Reference 1), ACO signed a three-year contract with the DOE to deploy a cascade of centrifuges to demonstrate production of high-assay, low-enriched uranium (HALEU) fuel for advanced reactors. The two primary objectives of the HALEU Demonstration Program are for ACO to deploy a 16-machine AC-100M HALEU cascade to produce 19.75% ^{235}U enriched product and to demonstrate the capability to produce HALEU utilizing US-origin uranium enrichment technology. Work under the contract includes licensing, constructing, and

American Centrifuge Operating, LLC
3930 U.S. Route 23 South – P.O. Box 628
Piketon, OH 45661

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operating AC-100M centrifuges and related infrastructure in a cascade formation to produce HALEU at the ACP in Piketon, Ohio.

The HALEU Demonstration Program commenced on June 1, 2019. In support of this program, on June 27, 2019 (Reference 2), ACO formally withdrew the request to terminate the American Centrifuge Lead Cascade Facility (Lead Cascade) NRC Materials License (SNM-7003) in order to design and construct the HALEU cascade under NRC oversite. Subsequently, ACO has updated and amended the ACP License Application and Supporting Documents for review and approval to allow HALEU production. Existing NRC-approved Lead Cascade programs currently in use will be transitioned and subsumed into the ACP license upon NRC's final license amendment approval in the requested June 2021 timeframe; thereby allowing for the final termination of NRC Materials License SNM-7003.

Enclosure 1 provides a detailed description, justification, and ACO's significance determination for the proposed changes to the following documents:

- Enclosure 2 provides proposed changes to LA-3605-0001, *License Application for the American Centrifuge Plant.*
- Enclosure 3 provides proposed changes to withheld Appendix B for LA-3605-0001.
- Enclosure 4 provides proposed changes to NR-3605-0003, *Quality Assurance Program Description for the American Centrifuge Plant.*
- Enclosure 5 provides proposed changes to LA-3605-0003, *Integrated Safety Analysis Summary for the American Centrifuge Plant.*
- Enclosure 6 provides proposed changes to LA-3605-0003A, *Addendum 1 of the Integrated Safety Analysis Summary for the American Centrifuge Plant – HALEU Demonstration.*
- Enclosure 7 provides proposed changes to NRC's Materials License SNM-2011 for the American Centrifuge Plant.
- Enclosure 8 provides proposed changes to a new withheld Appendix D for LA-3605-0001.
- Enclosure 9 provides proposed changes to a new withheld Appendix F for LA-3605-0001.

Proposed changes from the previously NRC-approved documents are noted with revision bars in the right-hand margin. Based upon the 10 CFR 70.32 and 70.72 evaluations, not all proposed changes depicted warrant the NRC's review and approval; however, are provided for completeness to assist in the review efforts.

Corresponding proposed changes to LA-3605-0003G, *(U) Classified Information Supporting Addendum 1 of the Integrated Safety Analysis*, will be submitted under separate cover, ACO 20-0014, for the NRC's review as part of this License Amendment Request.

Additionally, to support this License Amendment Request, proposed changes to the below documents will be provided to the NRC for prior review and approval in near-term subsequent submittals:

- LA-3605-0002, *Environmental Report for the American Centrifuge Plant*
- NR-3605-0005, *Fundamental Nuclear Material Control Plan for the American Centrifuge Plant*
- NR-3605-0005B, *Addendum 1 of the Fundamental Nuclear Material Control Plan for the American Centrifuge Plant for HALEU Demonstration*
- NR-3605-0005C, *(U) Program for Precluding and Detecting Unauthorized Production/Enrichment and Diversion Activities for the HALEU Demonstration Centrifuge Facility*
- SP-3605-0042, *(U) Security Plan for the Physical Protection of Special Nuclear Materials at the American Centrifuge Plant*

Enclosures 1, 5, 6, 7, and 8 contain Security-Related Information. Also, in accordance with the guidance provided by the DOE, Enclosures 7 and 9 also contain Official Use Only information. Therefore, ACO requests these enclosures be withheld from public disclosure pursuant to 10 CFR 2.390(d)(1). Enclosures 3, 5, and 6 have been determined, in accordance with the guidance provided by the DOE, to contain Export Controlled Information and must be protected from disclosure per the requirements of 10 CFR Part 810. Additionally, Enclosures 1, 5, 6, and 9 contain Proprietary Information and ACO requests that these enclosures be withheld from public disclosure pursuant to 10 CFR 2.390(a)(4). An affidavit required by 10 CFR 2.390(b)(1)(ii) is provided as Enclosure 10 of this letter.

After the NRC staff has had an opportunity to review the enclosures, ACO is available to support a discussion with the NRC to address questions or clarify issues. Implementing documents are available at the site for inspection. ACO respectfully requests NRC complete their review and final approval on or before June 2, 2021 to support the ongoing schedule for the DOE's HALEU Demonstration Program.

If you have any questions regarding this matter, please contact me at (740) 897-3859.

Sincerely,

Kelly L. Wiehle
Regulatory Manager

Enclosures: As stated

References:

1. HALEU Demonstration Contract Number 89303519CNE000005, awarded May 31, 2019 and definitized on October 31, 2019

2. ACO 19-0008 from L. Cutlip to J. Lubinski (NRC) regarding Withdrawal of Request to Terminate the American Centrifuge Lead Cascade NRC Materials License, dated June 27, 2019

cc (without enclosures, unless otherwise noted):

M. Bartlett, NRC HQ (Enclosures)
Y. Faraz, NRC HQ (Enclosures)
S. Harlow, DOE HQ
J. Hutson, Pro2Serve (CONTR), NE-ORSO
N. Pitoniak, NRC Region II
L. Pitts, NRC Region II (Enclosures)
K. Shears, DOE OR
E. St. Clair, Pro2Serve (CONTR), NE-ORSO
T. Vukovinsky, NRC Region II

Enclosure 10 of ACO 20-0010

Affidavit

Information Contained Within
Does Not Contain
Export Controlled Information

Reviewing Official: #1014

Date: 04/22/2020

AFFIDAVIT OF LARRY B. CUTLIP
SUPPORTING APPLICATION TO WITHHOLD FROM
PUBLIC DISCLOSURE CERTAIN INFORMATION PROVIDED TO NRC IN
LETTER ACO 20-0010 DATED APRIL 22, 2020

I, Larry B. Cutlip, of American Centrifuge Operating, LLC (ACO), having been duly sworn, do herby affirm and state:

1. I have been authorized by ACO to (a) review the information owned by ACO which is referenced herein relating to ACO's License Amendment Request for the American Centrifuge Plant (ACP) (NRC Materials License SNM-2011) as the described in ACO letter dated April 22, 2020, which ACO seeks to have withheld from public disclosure pursuant to section 147 of the Atomic Energy Act (AEA), as amended, 42 U.S.C. § 2167, and 10 CFR 2.390(a)(4), and 9.17(a)(4), and (b) apply for the withholding of such information from public disclosure by the Nuclear Regulatory Commission (NRC) on behalf of ACO.
2. Consistent with the provisions of 10 CFR 2.390(b)(4) of the Commission's regulations, the following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld.
   i. The information sought to be withheld from public disclosure is owned and has been held in confidence by ACO.
   ii. The information is of a type customarily held in confidence by ACO and not customarily disclosed to the public. ACO has a rational basis for determining the types of information customarily held in confidence by it and, in that connection, utilizes a system to determine when and whether to hold certain types of information in confidence. The application of that system and the substance of that system constitute ACO policy and provide the rational basis required. Under that system, information is held in confidence if it falls in one or more of

several types, the release of which might result in the loss of an existing or potential competitive advantage, as follows:

a) The information reveals the distinguishing aspects of a process (or component, structure, tool, method, etc.) where presentation of its use by any of ACO's competitors without license from ACO constitutes a competitive economic advantage over other companies.

b) It consists of supporting data, including test data, relative to a process (or component, structure, tool, method, etc.), the application of which data secures a competitive economic advantage (e.g., by optimization or improved marketability).

c) Its use by a competitor would reduce their expenditure of resources or improve their competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing a similar product.

d) It reveals cost or price information, production capacities, budget levels, or commercial strategies of ACO, its customers or suppliers.

e) It reveals aspects of past, present, or future ACO or customer funded development plans and programs of potential commercial value to ACO.

f) It contains patentable ideas, for which patent protection may be desirable.

g) It reveals information concerning the terms and conditions, work performed, administration, performance under or extension of contracts with its customers or suppliers.

iii. There are sound policy reasons behind the ACO system which include the following:

a) The use of such information by ACO gives ACO a competitive advantage over its competitors. It is, therefore, withheld from disclosure to protect the ACO competitive position.

b) It is information, which is marketable in many ways. The extent to which such information is available to competitors diminishes ACO's ability to sell products and services involving the use of the information.

c) Use by our competitors would put ACO at a competitive disadvantage by reducing their expenditure of resources at ACO expense.

d) Each component of proprietary information pertinent to a particular competitive advantage is potentially as valuable as the total competitive advantage. If competitors acquire components or proprietary information, any one component may be the key to the entire puzzle, thereby depriving ACO of a competitive advantage.

e) Unrestricted disclosure would jeopardize the position of prominence of ACO in the world market, and thereby give a market advantage to the competition of those countries.

f) The ACO capacity to invest corporate assets in research and development depends upon the success in obtaining and maintaining a competitive advantage.

iv. The information is being transmitted to the Commission in confidence and, under the provisions of 10 CFR Section 2.390, it is to be received in confidence by the Commission.

v. The information sought to be protected is not available in public sources or available information has not been previously employed in the same original manner or method to the best of our knowledge and belief.

3. The proprietary information sought to be withheld is contained within Enclosures 1, 5, 6, and 9 of letter ACO 20-0010. Enclosure 1 provides a detailed description and justification for the proposed changes for the License Application and Supporting Documents for the American Centrifuge Plant. Enclosure 5 provides proposed changes to LA-3605-0003, *Integrated Safety Analysis Summary for the American Centrifuge Plant*. Enclosure 6 provides proposed changes to LA-3605-0003A, *Addendum 1 of the Integrated Safety Analysis Summary for the American Centrifuge Plant*. Enclosure 9 provides proposed changes referenced within Chapter 5.0 of LA-3605-0001, *License Application for the American Centrifuge Plant*. These enclosures provide detailed computer calculations, descriptions, and diagrams related to the deployment of ACO's high-assay low enriched uranium (HALEU) enrichment process specifics unique to the American Centrifuge Plant; therefore, determined to be proprietary.

Public disclosure of this proprietary information is likely to cause substantial harm to the competitive position of ACO because it may enhance the ability of competitors to position and provide similar products. Moreover, disclosure of this information may provide insights into the design of ACO's American Centrifuge technology, including structures, systems, and components categorized as Export Controlled Information.

This information is part of that which will enable ACO to:

- Identify the detailed process flows of the various structures, systems, and components used within the HALEU Demonstration cascade and the future American Centrifuge Plant;
- Analyze the hazards evaluations associated with event sequences; and
- To continue future operation of the American Centrifuge Plant.

Further, this information has substantial commercial value as follows:

- The development of the information described in part is the result of applying many hundreds of person-hours and the expenditure of thousands of dollars on design and analysis activities to achieve the information that is sought to be withheld; and
- In order for a competitor of ACO to duplicate the information sought to be withheld, a similar process would have to be undertaken and a significant effort and resources would have to be expended.

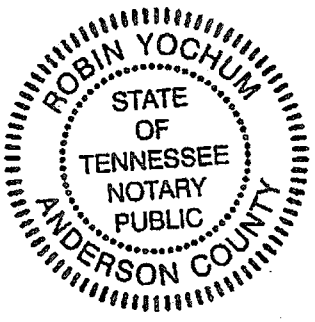
Further the deponent sayeth not.

Larry B. Cutlip, having been duly sworn, hereby confirms that I am the Senior Vice President, Field Operations of American Centrifuge Operating, LLC, that I am authorized on behalf of ACO to review the information attached hereto and to sign and file with the U.S. Nuclear Regulatory Commission this affidavit and the attachments hereto, and that the statements made and matters set forth herein are true and correct to the best of my knowledge, information, and belief.

Larry B. Cutlip

On this 22nd day of April 2020, Larry B. Cutlip personally appeared before me, is known by me to be the person whose name is subscribed to within the instrument and acknowledged that he executed the same for the purposes therein contained.

In witness hereof I hereunto set my hand and official seal.



Robin Yochum
State of Tennessee Notary Public, Anderson County
My commission ends July 28, 2020