

NUCLEAR REGULATORY COMMISSION

[Docket No. 70-7003; NRC-2017-0137]

The American Centrifuge Lead Cascade Facility in Piketon, Ohio

AGENCY: Nuclear Regulatory Commission.

ACTION: Environmental assessment and finding of no significant impact; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing an environmental assessment (EA) and a finding of no significant impact regarding a request from American Centrifuge Operating, LLC (ACO or the licensee). ACO is authorized to possess and use special nuclear material (SNM), source material, and byproduct material at its Lead Cascade Facility (LCF) in Ohio under NRC License SNM-7003, issued in 2004. ACO requested the NRC's approval to ship radioactively contaminated and non-contaminated classified matter and waste from the LCF to the Nevada National Security Site (NNSS) operated by the U.S. Department of Energy (DOE). The classified matter and waste would be permanently buried at the NNSS. ACO operated the LCF on DOE's site in Piketon, Ohio, where a gaseous diffusion uranium enrichment plant had previously operated. The LCF was operated as a test facility using centrifuges to enrich uranium, and provided reliability, performance, cost and other data for use in deciding whether to construct and operate a commercial uranium enrichment plant at DOE's Piketon, Ohio, site.

DATES: The EA and FONSI referenced in this document are available on June 13, 2017.

ADDRESSES: Please refer to Docket ID NRC-2017-0137 when contacting the NRC about the availability of information regarding this document. You may obtain publicly-available information related to this document using any of the following methods:

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID NRC-2017-0137. Address questions about NRC dockets to Carol Gallagher; telephone: 301-415-3463; e-mail: Carol.Gallagher@nrc.gov. For technical questions, contact the individual listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **NRC's Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly-available documents online in the ADAMS Public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "[ADAMS Public Documents](#)" and then select "[Begin Web-based ADAMS Search](#)." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. The ADAMS accession number for each document referenced (if it is available in ADAMS) is provided the first time that it is mentioned in this document.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

FOR FURTHER INFORMATION CONTACT: Jean Trefethen, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-0867, e-mail: Jean.Trefethen@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Introduction.

By letter dated February 24, 2017 and supplemented on March 10, 2017 (ADAMS Accession Nos. ML17073A109 and ML17087A285, respectively), the licensee requested NRC approval of ACO's plan to ship off site for disposal radioactively contaminated and non-contaminated classified matter and waste generated at the American Centrifuge LCF. The LCF is located on an approximately 3,700 acre (1,500 hectare) site in Pike County, Ohio, that is owned by the DOE. The DOE leases portions of this site, including the LCF buildings, to the licensee. The LCF classified matter and waste would be sent to the DOE's NNSS for permanent disposal there. The NRC staff has prepared an EA (ML17153A093) as part of its review of this proposed action in accordance with the requirements in part 51 of title 10 of the *Code of Federal Regulations* (10 CFR), "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions" and associated staff guidance. The NRC has concluded that the proposed action will not have a significant effect on the quality of the human environment.

II. Summary of Environmental Assessment

The licensee has identified three types of waste to be shipped: solid radioactive, liquid radioactive, and solid low level mixed waste (LLMW). The licensee states that approximately 315 waste shipments to NNSS will be necessary, and anticipates that these shipments will be completed in calendar year 2018.

The ACO estimates that approximately 180,000 cubic feet (5,097 cubic meters) of Class A solid radioactive waste would need to be shipped to NNSS. This waste would be packaged in Intermodal Freight Transport and B-25 box containers for shipment. The B-25 box containers are nominally 4 x 4 x 6 feet steel containers with a bolted lid. The licensee also plans to ship liquid radioactive waste consisting of oils removed from LCF process equipment during disassembly. Solid LLMW, consisting of various electronic components from the LCF, would be packaged into B-25 box containers for disposal. This solid LLMW would first be further processed at the EnergySolutions facility in Oak Ridge, Tennessee, to substantially reduce surface exposure to leaching media, before being shipped to NNSS for disposal.

ACO also would transfer unclassified, low-level contaminated liquid waste to a facility on DOE's Piketon, Ohio, site for further processing. This unclassified waste would not be shipped to NNSS.

The Need for the Proposed Action

By letter dated March 2, 2016, the licensee notified the NRC of its decision to permanently cease LCF operations (ADAMS Accession No. ML16074A405). In preparation for future decommissioning of the LCF, ACO is packaging its classified matter and waste for transport to the NNSS for permanent burial.

Environmental Impacts of the Proposed Action

The NRC staff evaluated the potential environmental impacts associated with the proposed action, and has performed its environmental review in accordance with the requirements in 10 CFR part 51 and associated staff guidance. As detailed in the EA, the staff in preparing the EA reviewed relevant information submitted by the licensee, consulted with the

Ohio State Historic Preservation Office (Ohio SHPO), and received input from the Ohio Department of Health.

Packaging and preparation of classified matter and waste for shipping occurs inside the LCF buildings, and no activities involving land disturbance are planned. Therefore, the NRC staff finds that there would be no impacts to the following resources areas: land use, geology and soils, water resources, ecology, meteorology, climate, air quality, noise, visual and scenic resources, and socioeconomic resources.

The NRC staff evaluated the radiological impacts to workers and the public. The staff found that the projected radiological doses to workers would be below the dose limits specified in 10 CFR 20.1201, "Occupational dose limits to adults," and that radiological doses to the public would be indistinguishable when compared to background radiation.

The proposed shipments would be made using authorized commercial carriers that would travel primarily on state highways using well-established routes to the final burial site at NNSS. The NRC determined that the relatively small total number of shipments spread over an extended period of time, along with the limited duration of the shipping process, would not significantly affect traffic flow.

The NRC staff also evaluated the cumulative impacts by identifying past, present, and reasonably foreseeable future actions at DOE's Piketon, Ohio, site, and the incremental impacts of ACO's proposed action. The staff determined that the proposed action would not significantly contribute to cumulative impacts. The staff also determined that the proposed action would not affect federally-listed endangered or threatened species or their critical habitats.

Environmental Impacts of the No-Action Alternative

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the “no-action” alternative). Under the no-action alternative, all waste generated by LCF operations to date would remain onsite. The no-action alternative does not comply with commitments made during licensing or the decommissioning requirements of 10 CFR 70.38. Therefore, the NRC staff concludes that leaving all of the LCF the waste onsite is not a reasonable alternative to approving the proposed action.

Agencies and Persons Consulted

On May 24, 2017 (ADAMS Accession No. ML17111A766), the NRC consulted with Ohio Department of Health regarding the environmental impacts of the proposed action. The state official concurred with the environmental assessment and finding of no significant impact (ADAMS Accession No. ML17153A269). The NRC also spoke with the Ohio SHPO and consulted by letter dated April 13, 2017 (ADAMS Accession No. ML17102B319). The Ohio SHPO responded by letter dated May 8, 2017, stating that a finding of No Adverse Effect for the proposed action is appropriate (ADAMS Accession No. ML17144A176).

III. Finding of No Significant Impact.

In accordance with the requirements in 10 CFR part 51, the NRC staff has concluded that the proposed action will not significantly affect the quality of the human environment. Therefore, the staff has determined, pursuant to 10 CFR 51.31, that preparation of an environmental impact statement is not required for the proposed action, and that a finding of no significant impact is appropriate.

Dated at Rockville, Maryland, this 5th day of June 2017.

For the Nuclear Regulatory Commission.

/RA/

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