

From: [Wiehle, Kelly L](#)
To: [Trefethen, Jean](#)
Cc: [Corrado, Jonathan K](#); [Faraz, Yawar](#)
Subject: [External_Sender] Additional Information in Support of the Environmental Assessment
Date: Thursday, March 30, 2017 8:58:46 AM
Attachments: [image001.emz](#)
[image002.png](#)
Importance: High

Good morning Jean,

Attached you will find answers to your questions, with the exception of the additional information being placed in the NUREG-1748 format for your use. Hope to get the additional information to you on Monday.

As you can see, I have referenced where this information has been pulled from and is approved for public release. Please let me know if you need any of these references provided to you for your documentation or if you have any questions.

Kelly
740.897.3859

RAI #1 Where will waste go – Please provide the name of the disposal site and how it is qualified or licensed to receive the waste. Please provide as much info as possible and still be publically available.

Response: As stated within ACO 17-0015 dated March 1, 2017, Section XII.a of DP-2605-0001, *Decommissioning Plan for the American Centrifuge Lead Cascade Facility* (Decommissioning Plan): Classified and unclassified, low-level contaminated waste is anticipated to be shipped to the Department of Energy's (DOE) Nevada National Security Site (NNSS) in North Las Vegas, NV.

RAI #2 How will the waste be shipped – Please provide as much detail as possible regarding intended means of shipping the waste for the onsite transfer to any offsite intermediate site/s and then also to the final destination.

Response: Lead Cascade decommissioning waste will be transported by authorized ground commercial carriers primarily using state highways. Load limits on these routes is controlled by the *Code of Federal Regulations*, Title 49, *Transportation*, at a gross weight of 80,000 pounds.

As stated within ACO 17-0015 dated March 1, 2017, Section VIII.b of the Decommissioning Plan: Lead Cascade decommissioning will be jointly performed by the Licensee (American Centrifuge Operating, LLC [ACO]) and an NNSS-approved waste contractor for package certification and shipment of classified and/or contaminated material. ACO has selected EnergySolutions, LLC (EnergySolutions) to fill this role. ACO will remove and package wastes for disposal in compliance with approved procedures, applicable laws, and regulations.

The NNSS-approved contractor will certify that the waste is packaged in accordance with the NNSS Waste Acceptance Criteria (WAC). ACO and EnergySolutions will ensure packaged waste is shipped in accordance with a NRC-approved transportation security plan.

A limited amount of the generated waste will be Low-Level Mixed Waste (LLMW) and as such will require special treatment (macro encapsulation) before burial at NNSS. ACO intends to contract EnergySolutions to perform this special treatment. This facility holds a DOE possessing facility clearance and the associated site security plan protects classified material sent to the site by various generators throughout the DOE complex. This LLMW will be shipped from Piketon, Ohio, to Oak Ridge, Tennessee, for treatment, repackaged in accordance with EnergySolutions procedures, and then continue shipment to NNSS for permanent burial.

RAI #3 Shipping route – Please provide a general description of the route i.e. “through these states on highways and freeways.” Any details in this regard that do not make the document classified would be welcome and useful.

Response: As stated within LA-2605-0002, *Environmental Report for the American Centrifuge Lead Cascade Facility*, the reservation is served by southern Ohio’s two major highways: U.S. Route 23 and Ohio SR 32. These highways are one and one half miles west of the site and two miles north of the site, respectively. The site is 3.5 miles from the intersection of the U.S. Route 23 and Ohio SR 32 interchange. Both routes are four lanes with U.S. Route 23 traversing north-south and Ohio SR 32 traversing east-west. Approximately 70 miles north of the site, U.S. Route 23 intersects I-270, I-70, and I-71. Traffic may access I-64 approximately 20 miles southeast of Portsmouth, Ohio.

The decommissioning waste shipments will travel from Ohio to the destination on well-established routes used by other authorized shippers.

RAI #4 Frequency/duration – i.e. over X months or years approximately XX number of shipments would be made to dispose of all waste. Please try to frame this in such a way so that as much information is publically available as is possible.

Response: As stated within ACO 17-0015 dated March 1, 2017, Section VIII.e of the Decommissioning Plan: The Licensee is confident that decommissioning activities will be completed well within the timeframes outlined within 10 CFR 70.38(h) (i.e., within 24 months after NRC approval of this Decommissioning Plan). Should these circumstances change at any time during the decommissioning efforts, the Licensee will provide the appropriate notification to the NRC in accordance with 10 CFR 70.38(f).

Approximately 315 shipments are anticipated for this decommissioning project and are anticipated to be completed prior to the final license termination which is expected during 2018.

RAI #5 Table 1 – With the removal of the Estimated Volume column – the statement beneath the table is not accurate: “As depicted in Table 1... rad-waste is estimated to be approximately 180,000...” Please modify the statement regarding the estimated volume so I can reference the estimated volume in the EA, i.e., remove “as depicted in Table 1” from the sentence.

Response: ACO 17-0015 dated March 1, 2017, Section XII of the Decommissioning Plan, provides this same type of information; however, the quantities are withheld.

As discussed with Jean on March 24th, this issue can be clarified within this RAI response rather than another supplement to the letter. This will avoid confusion of multiple submittals on the subject on the part of the general public.

RAI #6 On page 4, second paragraph, last sentence reads “Approved waste handling methods will be utilized....” Please provide additional details regarding the approved methods e.g., by what process were these methods approved, by whom and how.

Response: As stated within ACO 17-0018 dated March 10, 2017, the Licensee is confident that activities related to dismantling, decontamination, packaging, and shipment can be accomplished within the bounds of the License Application. Changes to current activities or procedures are evaluated using 10 CFR 70.72 to determine if prior NRC approval is required.

As discussed in Section 11.4 of the License Application (LA-2605-0001), a management controls program has been established for the development, issuance, and control of Lead Cascade procedures. The Lead Cascade employees are committed to the use of approved and controlled written procedures to conduct nuclear safety, safeguards, and security activities for the protection of the public, facility employees, and the environment. Procedures are used to ensure safe work practices and apply to workers, visitors, contractors, and vendors. The procedure process utilizes a graded approach to provide the necessary rigor for safe Lead Cascade operation, assure the Licensee’s commitments to meeting regulations and standards, and assure a balance of effective safety with practical efficiency in facility operations. Procedures are intended to prescribe those essential actions or steps needed to safely and consistently perform operations and maintenance activities.

As discussed in Chapter 9.0 of the License Application, the Lead Cascade has radioactive effluent control and as low as reasonably achievable (ALARA) programs that meet NRC requirements. The Lead Cascade will not use any radionuclide that has not already been used at the site reservation and is expected to make a minimal contribution to site effluents. The Lead Cascade Environmental Protection Program will provide protection to the public and the environment while minimizing the chance of human or programmatic error. As discussed in Chapter 4.0 of the License Application, the currently approved Radiation Protection (RP) program ensures occupational radiation exposures and radioactive contamination is kept as low as reasonably achievable (ALARA). Requirements of these programs are flowed into approved operating procedures that will be used during the decommissioning efforts.

As discussed in Section 9.2.2.3 of the License Application, the Lead Cascade has a radioactive and mixed waste program in place. Waste generated by the Lead Cascade is managed in accordance with applicable state and federal regulations. Offsite shipments of radioactive wastes are manifested in accordance with 10 CFR 20.2006. Waste shipments are packaged, labeled, and manifested in accordance with applicable State, DOT, NRC, and EPA requirements.

Additionally, Licensee-generated wastes are disposed of at commercial disposal facilities that are licensed in accordance with 10 CFR Part 61 or applicable NRC Agreement State requirements, or DOE facilities governed by DOE Order 435.1, *Radioactive Waste Management*. Packages are inspected prior to shipment, as appropriate, to verify compliance with applicable packaging and transportation requirements.

Management organization and controls, effluent control and environmental protection, and radioactive waste management inspection modules are conducted annually by the NRC and have routinely been determined to be compliant with license requirements.

As discussed with Jean on March 24th, this issue can be clarified within this RAI response rather than another supplement to the letter. This will avoid confusion of multiple submittals on the subject on the part of the general public.