



November 7, 2017  
ACO 17-0048

Mr. David Snyder, Ph.D.  
Archaeology Reviews Manager  
Ohio Historic Preservation Office  
1982 Velma Avenue  
Columbus, Ohio 43211

**Status of the Decommissioning Activities at the American Centrifuge Lead Cascade Facility in Pike County, Ohio**

Dear Mr. Snyder:

**Purpose**

The purpose of this letter is to provide the Ohio State Historic Preservation Office (OHPO) with a status of the decommissioning activities currently being conducted by the American Centrifuge Operating, LLC, the U.S. Nuclear Regulatory Commission (NRC) Materials Licensee for the American Centrifuge Lead Cascade Facility (Lead Cascade) in Piketon, Ohio.

**Background**

In the NRC consultation (Reference 1) with the OHPO for the recent approval of the shipment of classified and/or contaminated material to the U.S. Department of Energy's (DOE) Nevada National Security Site for disposal, the Ohio OHPO expressed concern (Reference 2) regarding potential impacts to the Portsmouth Gaseous Diffusion Plant (PORTS) reservation. The concern expressed is that "decommissioning work sets in motion direct and foreseeable consequences that will result in substantial change" to the PORTS reservation.

**Discussion**

The decommissioning activities currently being conducted at the Lead Cascade are separate from the environmental cleanup program being conducted elsewhere by DOE on the PORTS reservation. The gaseous diffusion plant (GDP), which began operations in 1954, is located on the 3,777-acre federal reservation in a rural area of Pike County, Ohio. The GDP ceased operation in 2001. The decontamination and decommissioning of the GDP by DOE is ongoing.

In August 2002 (Reference 3), the Licensee, formerly USEC Inc., contacted the OHPO in regard to the then proposed action of locating the Lead Cascade at the site of the former DOE Gas Centrifuge Enrichment Plant (GCEP). The footprint of the Lead Cascade is located within the southwestern portion, approximately 330-acres, of the highly developed industrial DOE PORTS reservation that has been subject to extensive environmental characterizations throughout the years of operation.

In a letter dated October 15, 2002 (Reference 4) the OHPO stated that one of the features giving significance to PORTS is the large-scale operation comprising the GDP. The buildings in the Lead Cascade were not part of that operation. Additionally, it was stated, that it appeared the buildings to be modified for the Lead Cascade operation were somewhat different in style, function, and scale than the main buildings that make up the core of the PORTS property. Therefore, given the fact that the Lead Cascade is not integral to the PORTS operation, OHPO concurred with the Licensee's finding that the effect of the installation and operation of the Lead Cascade will not be adverse, referencing 36 *Code of Federal Regulations* (CFR) 800.5(b).

The Lead Cascade facilities are leased from the DOE under a lease agreement for the former GCEP facilities at PORTS. This lease agreement was entered into pursuant to the Agreement between the DOE and USEC Inc. dated June 17, 2002, which established a deployment schedule for a new cost effective advanced gas centrifuge plant at PORTS.

During the term of the lease, construction and operation of the prototype Lead Cascade occurred in several steps as various models and configurations of centrifuges were tested with the most recent being a demonstration cascade of 120 AC100 centrifuges. However, in 2016, after successfully testing the Lead Cascade, DOE discontinued funding of the Lead Cascade and the Licensee announced that the Lead Cascade would be shut down and the NRC Materials License (SNM-7003) for the Lead Cascade terminated after decommissioning was complete. The lease itself expires in 2019.

The lease agreement between the DOE and the United States Enrichment Corporation for the GCEP Appendix 1, Section 4.3, *Return of GCEP Leased Premises, GCEP Leased Facilities, and GCEP Leased Personalty*, Section (c) states in part, "Prior to returning the GCEP Leased Facilities, the Corporation will comply with the following criteria: 1) For radiological contamination, the GCEP Leased Facilities shall be returned in a condition that meets NRC's radiological criteria for unrestricted use in 10 CFR 20.1402, as amended." Based upon this lease condition, at the completion of decontamination and decommissioning of the Lead Cascade, the facilities will be prepared for return to the DOE for unrestricted use per lease requirements. Please note that none of the buildings leased by United States Enrichment Corporation are being torn down. Equipment in the buildings is being removed, but the buildings are being returned intact to DOE.

### **Conclusion**

Decommissioning activities for the Lead Cascade are nearing completion. Licensee work on radioactively contaminated equipment has not occurred outside the Lead Cascade facilities. During the life of the NRC Materials License (SNM-7003), there have been no spills (or uncontrolled releases) of radioactive material to the environment; therefore, the only areas that could potentially be contaminated with licensed material are areas where work was performed on contaminated equipment or containing radioactive material within the facilities.

Turnover requirements of the lease agreement require the GCEP Leased facilities to be restored to the same or as good a condition as initially leased. Based upon these facts, the Licensee has determined that the Lead Cascade decommissioning activities have no adverse effects on historical resources included or eligible for inclusion in the National Register of Historic Places. Additionally, there would be no impact to the historical integrity of the PORTS reservation since there are no plans to remove or demolish the former GCEP facilities used by the Licensee for operation and decommissioning of the Lead Cascade.

Mr. David Snyder, Ph.D.  
November 7, 2017  
ACO 17-0048, Page 3

**Contacts**

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

Sincerely,



Kelly L. Wiehle  
Regulatory Manager

cc: Y. Faraz, NRC HQ  
S. Koenick, NRC HQ  
A. Lawson, DOE – Portsmouth Office  
M. Learn, NRC Region III  
L. Pitts, NRC Region II  
A. Snyder, NRC HQ  
J. Trefethen, NRC HQ  
J. Zimmerman, NRC HQ

References:

1. NRC letter from C.I. Roman to B. Logan regarding Request for Concurrence on the Determination of No Effects on Historic Properties for the American Centrifuge Operating, LLC Request to Package and Ship for Disposal Classified Matter and Contaminated Waste From the Lead Cascade Facility (Docket Number: 70-7002), dated April 13, 2017
2. Letter from D. Welling to C.I. Roman (NRC) regarding Disposal of Waste from the Lead Cascade Facility (Docket Number: 70-7003), Portsmouth Gaseous Diffusion Plant (PORTS), Pike County, Ohio, dated May 8, 2017
3. Letter from P.J. Miner (USEC Inc.) to M. Epstein (SHPO) regarding National Historic Preservation Act, Section 106 Compliance, Installation and Operation of a Gas Centrifuge Lead Cascade Facility at the Portsmouth Gaseous Diffusion Plant (PORTS) in Piketon, Ohio, dated August 2, 2002
4. Letter from D. Snyder (SHPO) to S.J. Robinson (DOE) regarding Installation and Operation of a Gas Centrifuge Lead Cascade Facility - Portsmouth Gaseous Diffusion Plant (PORTS), Pike County, Ohio, dated October 15, 2002