



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

October 22, 2015

James D. Lewis
General Manager, ACP Operations
American Centrifuge Operating, LLC (ACO)
Lead Cascade Facility and American Centrifuge Plant
3930 U.S. Route 23 South
P.O. Box 628
Mail Stop 7560
Piketon, OH 45661

**SUBJECT: AMERICAN CENTRIFUGE OPERATING, LLC, LEAD CASCADE FACILITY,
NUCLEAR REGULATORY COMMISSION INTEGRATED INSPECTION
REPORT NUMBER 70-7003/2015-004**

Dear Mr. Lewis:

This letter refers to the inspections conducted during the period from July 1 through September 30, 2015, at the American Centrifuge Operating, LLC, Lead Cascade Facility in Piketon, OH. The purpose of these inspections was to determine whether activities authorized under the license were conducted safely and in accordance with Nuclear Regulatory Commission (NRC) requirements. The enclosed integrated report presents the results of these inspections. The findings were discussed with members of your staff at an exit meeting held on September 3, 2015.

During the inspections, the NRC staff examined activities conducted under your license as they related to public health and safety and to confirm compliance with the Commission's rules and regulations, and with the conditions of your license. Areas examined during the inspections are identified in the enclosed report. Within these areas, the inspections consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of the inspections, no violations of NRC requirements were identified.

In accordance with 10 CFR 2.390 of NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Should you have any questions concerning these inspections, please contact Tom Vukovinsky at (404) 997-4622.

Sincerely,

/RA/

Marvin D. Sykes, Chief
Projects Branch 1
Division of Fuel Facility Inspection

Docket No. 70-7003
License No. SNM-7003

Enclosure:
NRC Inspection Report Number 70-7003/2015-004
w/Attachment: Supplementary Information

cc: (See page 3)

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NAME	TVukovinsky	LPitts					
DATE	10/22/2015	10/22/2015					10/ /2015
E-MAIL COPY?	YES NO	YES NO		YES NO	YES NO	YES NO	YES NO

J. Lewis

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cc:

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 70-7003

Certificate No.: SNM-7003

Report No.: 70-7003/2015-004

Licensee: American Centrifuge Operating, LLC

Facility: American Centrifuge Lead Cascade Facility

Location: Piketon, OH

Dates: July 1 through September 30, 2015

Inspectors: T. Vukovinsky, Fuel Facility Inspector, DFFI
L. Pitts, Senior Fuel Facility Inspector, DFFI

Approved by: Marvin D. Sykes, Chief
Projects Branch 1
Division of Fuel Facility Inspection

Enclosure

EXECUTIVE SUMMARY

American Centrifuge Operating, Lead Cascade Facility
NRC Inspection Report 70-7003/2015-004
July 1 – September 30, 2014

Inspections were conducted by regional inspectors during normal shifts in the areas of Radiological Controls and Facility Support. The inspectors performed a selective examination of licensee activities which were accomplished by direct observation of safety-significant activities and equipment, tours of the facility, interviews and discussions with licensee personnel, and a review of facility records.

Radiological Controls

- The Radiation Protection programs were implemented in accordance with the license application and regulatory requirements. (Paragraph A.1)
- The inspectors determined the licensee had established and was maintaining an effective program to ensure radiological safety during the receipt, packaging, delivery, and private carriage of licensed radioactive materials. (Paragraph A.2)
- The Environmental Protection program was implemented in accordance with the license application and regulatory requirements. (Paragraph A.3)

Facility Support

- The Plant Modifications program was implemented in accordance with the license application and regulatory requirements. (Paragraph B.1)

Attachment

Key Points of Contact

List of Items Opened, Closed, and Discussed

Inspection Procedures Used

REPORT DETAILS

Summary of Plant Status

The licensee continued the planned installation and evaluation of the research, development and demonstration phase of the American Centrifuge Plant.

A. Radiological Controls

1. Radiation Protection (Inspection Procedure (IP) 88030)

a. Inspection Scope and Observations

The inspectors reviewed multiple self-assessments to verify that the program performance was being reviewed, at least annually, to comply with 10 CFR 20.1101. The inspectors reviewed organization charts and interviewed licensee staff to determine the radiation protection function's responsibilities and independence from operations. The inspectors reviewed a selection of procedures to determine that changes in the radiological protection procedures made since the last inspection were consistent with regulatory and license requirements.

The inspectors reviewed instrument calibration records and verified that the performance of radiation protection instruments and equipment was in accordance with license requirements and procedures. The inspectors reviewed training and qualification records for three radiation protection technicians with no discrepancies identified.

The inspectors reviewed the Total Effective Dose Equivalent results and determined that they were less than the regulatory limit of 5 rem per year. The inspectors reviewed the personnel dosimeter results as submitted to the licensee by their contractor and determined that the Lens Dose Equivalent and Shallow Dose Equivalent results were less than the regulatory limit of 15 rem and 50 rem/yr, respectively. The inspectors verified that records were maintained in accordance with 10 CFR 20.2106.

The inspectors reviewed the respiratory protection program and determined that the training, fit testing, and procedural uses of respiratory protection as required by the license application was in compliance with 10 CFR 20.1703.

The inspectors toured the facility and verified that radiological signs and postings accurately reflected radiological conditions within the posted area. Areas were posted in accordance to 10 CFR Part 20. The inspectors verified that the Notice to Employees, NRC Form 3, was posted in a high traffic area in accordance with 10 CFR 19.11.

The inspectors reviewed a sample of survey records conducted in 2014, and determined that surveys adequately evaluated the magnitude and extent of radiation levels in accordance with 10 CFR 20.1501. The inspectors reviewed leak test survey records for sealed sources and determined that the licensee was in compliance with the license application.

The inspectors reviewed the As Low As Reasonably Achievable (ALARA) meeting minutes and determined that staffing levels, meeting frequency, and topics of discussion were in accordance with license application requirements. The inspectors evaluated the ALARA principle during dose result reviews and plant tours and determined that management was maintaining a commitment to ALARA.

The inspectors reviewed a recent event where treatment of a contaminated injured worker was delayed due to miscommunication with the medical facility. The inspectors reviewed the corrective actions developed as part of this incident and met with staff at the Portsmouth Medical Facility. The inspectors toured the Adena Pike Medical Center's emergency room and verified that licensee and Department of Energy contact information was available for medical staff if questions arise during emergencies.

b. Conclusion

No violations of NRC requirements were identified.

2. Transportation of Radioactive Material (IP 86740)

a. Inspection Scope and Observations

The inspectors noted that no radioactive shipments had occurred since the previous inspection in 2014. The inspectors verified the licensee, through their subcontracted services, had maintained an effective program that ensured radiological safety during the receipt, packaging, delivery, and private carriage of licensed radioactive materials. The inspectors also verified transportation activities continued to be maintained in compliance with the applicable transport regulations.

The inspectors reviewed audits of the transportation program and determined the licensee was performing periodic audits of the program as required.

b. Conclusion

No violations of NRC requirements were identified.

3. Effluent Control and Environmental Protection (IP 88045)

a. Inspection Scope and Observations

The inspectors reviewed procedures related to the conduct and implementation of the effluent and environmental monitoring programs. The inspectors reviewed internal audits and verified that issues needing improvement were entered into the licensee's corrective actions system and that corrective action(s) had been/are being adequately implemented.

The inspectors reviewed the 2014 and 2015 Radiological Discharge Monitoring Reports and determined that the licensee was in compliance with 10 CFR 70.59 and 10 CFR 20 Appendix B requirements for uranium. In addition, the inspectors reviewed records of airborne effluents and reviewed records for filter change-outs of the exhaust stack monitor filter. Furthermore, the inspectors reviewed records of liquid effluents and observed sampling activities of the process waste lagoons. As a result, the inspectors verified compliance with the license application, procedures, and 10 CFR 20 Appendix B

limits for both airborne and liquid effluent discharges. Also, inspectors noted that liquid and air borne effluent monitors and associated equipment were calibrated and functionally checked in accordance with procedures and 10 CFR 20.1501.

The inspectors reviewed the public dose assessment and determined that the average annual effluent concentrations released since July 2014, did not exceed the values specified in Appendix B of 10 CFR Part 20. The inspectors reviewed the airborne portion of the public dose assessment and verified that results were in compliance with the ALARA constraint as required by 10 CFR 20.1101(d).

b. Conclusion

No violations of NRC requirements were identified.

B. Facility Support

1. Permanent Plant Modifications (IP 88070)

a. Inspection Scope and Observations

Limited inspection was done in this area due to no significant plant modifications performed in 2015. The inspectors reviewed self-assessments to verify that the program performance was being reviewed. The inspectors reviewed the licensee's problem identification and resolution program to verify that issues relating to the preparation and installation of permanent plant modifications were entered into the corrective action program and the adequacy of corrective actions.

The inspectors reviewed the change management program to verify the licensee has established an effective configuration management system to evaluate, implement, and track permanent plant modifications to the site which could affect safety.

The inspectors verified that the licensee had addressed baseline design criteria stipulated in 10 CFR 70.64 in the designs of permanent plant modifications. The inspectors verified that the licensee had addressed the impacts of modifications to the Integrated Safety Analysis (ISA), ISA Summary, and other safety program information developed in accordance with 10 CFR 70.62.

b. Conclusion

No violations of NRC requirements were identified.

C. Exit Meeting

The inspection scope and results were presented to members of the licensee's staff at various meetings throughout the inspection period and were summarized at the exit meeting conducted on September 3, 2015. No dissenting comments were received from the licensee. Proprietary information was discussed but not included in the report.

SUPPLEMENTARY INFORMATION

1. KEY POINTS OF CONTACT

<u>Name</u>	<u>Title</u>
G. Goslow	Environmental
C. Hamilton	Environmental Safety & Health Manager
M. Karr	Packaging and Transportation
S. Kelley	Health Physics Supervisor
J. Lewis	General Manager
T. Martin	Regulatory Affairs
M. Robles	Regulatory Manager
S. Skeens	Emergency Preparedness Manager
J. Thompson	Health Physics Manager
G. Workman	Plant Services Manager

2. ITEMS OPENED, CLOSED, AND DISCUSSED

None

3. INSPECTION PROCEDURES USED

86740	Inspection of Transportation Activities
88030	Radiation Protection
88045	Effluent Control and Environmental Protection
88070	Permanent Plant Modifications