



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

January 26, 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 70-7003/2014-005**

Dear Mr. Lewis:

This letter refers to the inspections conducted during the period from October 1 through December 31, 2014, 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 October 9, 2014.

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/

James A. Hickey, Chief
Projects Branch 1
Division of Fuel Facility Inspection

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

Enclosure:
NRC Inspection Report Number 70-7003/2014-005
w/Attachment: Supplementary Information

cc: (See page 3)

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

Sincerely,

/RA/

James Hickey, Chief
Projects Branch 1
Division of Fuel Facility Inspection

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

Enclosure:
NRC Inspection Report Number 70-7003/2014-005
w/Attachment: Supplementary Information

cc: (See page 3)

DISTRIBUTION:

- B. Smith, NMSS
- O. Siurano-Perez, NMSS
- J. Hickey, RII
- L. Pitts, RII

PUBLICLY AVAILABLE
 NON-PUBLICLY AVAILABLE
 SENSITIVE
 NON-SENSITIVE
 ADAMS: X Yes
 ACCESSION NUMBER: ML15026A208
 X SUNSI REVIEW COMPLETE X FORM 665 ATTACHED

OFFICE	RII:DFFI	RII:DFFI	RII:DFFI	RII:DFFI			
SIGNATURE	/RA/	/RA./	/RA/	/RA/			
NAME	LPitts	KKirchbaum	TVukovinsky	NPitoniak			
DATE	1/ 26 /2015	1/ 26 /2015	1/26/2015	1/26/2015	1/ /2015	1/ /2015	1/ /2015
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

J. Lewis

3

cc:

Mr. Mario Robles, Jr.
Regulatory Manager
American Centrifuge Operating, LLC (ACO)
3930 U.S. 23 South
P.O. Box 628
Piketon, OH 45661

R. M. DeVault
Manager
Regulatory Oversight
Department of Energy
Electronic Mail Distribution

Michael L. Bear
Branch Chief
Radiological Branch
Ohio Emergency Management Agency
2855 West Dublin-Granville Road
Columbus, OH 43235-2206

Michael Rubadue
Ohio Department of Health
Bureau of Radiation Protection
246 N. High Street
Columbus, OH 43215
Electronic Mail Distribution

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 70-7003

Certificate No.: SNM-7003

Report No.: 70-7003/2014-005

Licensee: American Centrifuge Operating, LLC

Facility: American Centrifuge Lead Cascade Facility

Location: Piketon, OH

Dates: October 1 through December 31, 2014

Inspectors: K. Kirchbaum, Fuel Facility Inspector, DFFI
N. Pitoniak, Fuel Facility Inspector, DFFI

Approved by: J. Hickey, Chief
Projects Branch 1
Division of Fuel Facility Inspection

Enclosure

EXECUTIVE SUMMARY

American Centrifuge Operating, Lead Cascade Facility
NRC Inspection Report 70-7003/2014-005
October 1 – December 31, 2014

Inspections were conducted by regional inspectors during normal shifts in the areas of Safety Operations, 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.

Safety Operations

- The fire protection programs and fire protection systems were adequately maintained in accordance with the license application and site procedures. (Paragraph A.1)

Radiological Controls

- The Radiation Protection programs were implemented in accordance with the license application and regulatory requirements. (Paragraph B.1)

Facility Support

- The Emergency Preparedness programs were implemented in accordance with the license application and regulatory requirements. (Paragraph C.1)
- The Plant Modifications program was implemented in accordance with the license application and regulatory requirements. (Paragraph C.2)

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. Safety Operations

1. Fire Protection Annual (IP 88055)

a. Inspection Scope and Observations

The inspectors toured the X-3001 Process Building, X-7725 Recycle/Assembly Building, and the X-7727H Transfer Corridor. The inspectors noted the material condition of the fire system valves, piping, and various support systems, including the emergency diesel room sprinkler system, was adequate. The inspectors verified that flammable materials were stored in marked cabinets and that housekeeping and the control of combustible materials were adequate and consistent with approved procedures. The inspectors reviewed and observed a selection of combustible control program inspections (performed by the licensee) at various locations and noted that the verifications had been completed within proper periodicity.

The inspectors observed annual live fire exercise training performed at the on-site burn house for the fire brigade members. The inspectors noted that all fire equipment used in the fire exercise functioned properly and was properly implemented by fire brigade members.

The inspectors evaluated the licensee's hot work program through procedure reviews and interviewing members of the fire protection staff. The inspectors determined the work permits and work permit implementing procedures were adequate.

The inspectors reviewed records to verify that the observed fire protection systems were maintained in an adequate state of readiness and had been properly tested to verify their ability to perform their safety function. The inspectors determined that fire walls, doors, and penetration seals were being maintained in a condition that would ensure they were available and reliable to perform their safety function. Also, the inspectors determined that fire hoses and portable extinguishers were provided at designated locations, access was unobstructed, and all component surveillances were up-to-date.

The inspectors conducted field walk-downs for a selection of post indicator valves (PIVs) to verify the operational readiness of the site fire loop. The PIVs were in the position required by procedure and the material condition of the valves, operating wrenches, and position indicator windows was adequate.

The inspectors reviewed the licensee's fire protection system out-of-service records and determined that adequate compensatory measures had been put in place for out-of-service, degraded or inoperable fire protection equipment, systems or features.

The inspectors reviewed the licensee's corrective action program entries since September 2013 and determined that the licensee has been identifying fire protection operability problems at an appropriate threshold and were entering them into the corrective action program.

b. Conclusion

No violations of NRC requirements were identified.

B. Radiological Controls

1. Radiation Protection (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 six radiation protection technicians with no discrepancies identified.

The inspectors reviewed the Total Effective Dose Equivalent (TEDE) 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.

b. Conclusion

No violations of NRC requirements were identified.

C. Facility Support

1. Emergency Preparedness (IP 88050)

a. Inspection Scope and Observations

The inspectors interviewed staff and reviewed records and determined that any changes made to the Emergency Plan or within the facility had been properly coordinated within the Emergency Preparedness program. The inspectors reviewed procedures with significant revisions since the last emergency preparedness inspection and determined that the changes were in compliance with the Emergency Plan. The inspectors reviewed the licensee's emergency call list and verified that the list was current.

The inspectors reviewed training records and interviewed licensee staff regarding emergency preparedness training in the past year. The inspectors reviewed qualification records for qualified Emergency Response Organization (ERO) personnel. The inspectors determined that ERO initial and refresher training was conducted in compliance with the Emergency Plan. The inspectors verified that the licensee provided training for hazardous material response as required by the Emergency Plan and that the individuals responsible for utilizing the equipment were qualified. The inspectors verified that the licensee provided training to hypothetical emergency situations which were effective and consistent with the frequency and performance objectives required in the Emergency Plan.

The inspectors reviewed the written agreements with the off-site agencies and verified that the organizations required by the Emergency Plan had up-to-date agreements. The inspectors interviewed the Chief of the Waverly Fire Department and representatives from the Adena Regional Medical Center and determined that they had maintained an adequate understanding of the written agreements. The inspectors interviewed off-site personnel and reviewed records and verified that the licensee invited the off-site support organizations for training as required by the Emergency Plan and determined that the training given was appropriate. The inspectors reviewed records and verified that the licensee has performed communications checks with off-site organizations at a quarterly frequency as required by the Emergency Plan.

The inspectors observed the storage of emergency equipment in the Emergency Operations Center (EOC) and verified that the inventory levels were maintained as required by the Emergency Plan. The inspectors performed random checks of several articles of offsite sampling equipment to include source checks and calibrations. The inspectors toured the EOC and verified that the areas were readily assessable and maintained the appropriate amount of communication equipment. The inspectors reviewed the accountability procedure and verified that accountability meeting points were assessable. The inspectors reviewed drill critiques conducted since the last

inspection and verified that a system was in place for adequately tracking and resolving critique findings. The inspectors reviewed the licensee's corrective action program to verify that issues relating to the Emergency Plan were entered into the corrective action program for resolution.

b. Conclusion

No violations of NRC requirements were identified.

2. Permanent Plant Modifications (IP 88070)

a. Inspection Scope and Observations

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's work control program had provisions to ensure the adequate pre-job planning and preparation of permanent plant modification design packages. The configuration management system had adequate provisions to ensure that permanent plant modifications did not degrade the performance capabilities of items relied on for safety or other safety controls that are part of the safety design basis.

The inspectors verified that the field modifications were in accordance with the design packages and that the packages were properly closed. The inspectors verified that applicable post maintenance installation and testing requirements were adequately identified and performed.

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.

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.

b. Conclusion

No violations of NRC requirements were identified.

D. 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 October 9, 2014. 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>
J. Boyce	FBP Fire Services
S. Corwin	FPB Emergency Management
D. Fosson	Operations Manager
D. Godfrey	Engineering Manager
B. Jones	Operations
S. Kelley	Health Physics Supervisor
T. Martin	Regulatory Affairs
J. McKinley	Maintenance and Work Control Supervisor
M. Robles	Regulatory Manager
V. Shanks	Regulatory Manager
S. Skeens	Fire Safety and Emergency Preparedness Manager
A. Strickland	General Management Staff
J. Thompson	Health Physics Manager
J. Watson	Fire Service and Emergency Management
D. Weber	Design Engineering Manager

2. ITEMS OPENED, CLOSED, AND DISCUSSED

None

3. INSPECTION PROCEDURES USED

88030	Radiation Protection
88050	Emergency Preparedness
88055	Fire Protection Annual
88070	Permanent Plant Modifications