



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

July 20, 2012

Mr. David Precht
Manager, Columbia Plant
Westinghouse Electric Company
Commercial Nuclear Fuel Division
5801 Bluff Road, Drawer R
Columbia, SC 29250

SUBJECT: WESTINGHOUSE ELECTRIC COMPANY- NRC INSPECTION REPORT
NO. 070-1151/2012-003

Dear Mr. Precht:

The U.S. Nuclear Regulatory Commission (NRC) conducted an announced, routine inspection on May 7, 2012, at your Columbia, South Carolina facility. The enclosed report presents the results of the inspection. At the conclusion of the inspection, the results were discussed with members of your staff at an exit meeting held on May 10, 2012. The enclosed inspection report documents the inspection results.

The inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspection consisted of facility walk-downs; selective examinations of relevant procedures and records; interviews with plant personnel; and plant observations. Throughout the inspection, observations were discussed with your managers and staff. Based on the results of the inspection, no violations of regulatory requirements were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and 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>.

If you have any questions, please call me at (404) 997-4629.

Sincerely,

/RA/

Marvin D. Sykes, Chief
Fuel Facility Inspection Branch 3
Division of Fuel Facility Inspection

Docket No. 070-1151
License No. SNM-1107

Enclosure: (See page 2)

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***see previous concurrence**

☒ PUBLICLY AVAILABLE ☐ NON-PUBLICLY AVAILABLE ☐ SENSITIVE ☒ NON-SENSITIVE
ADAMS: ☒ Yes ACCESSION NUMBER: ML12202A030 ☒ SUNSI REVIEW COMPLETE ☒ FORM 665 ATTACHED

OFFICE	RII:DFFI	RII:DFFI				=	
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NAME	GGoff*	MThomas*					
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E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

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Enclosure:

NRC Inspection Report 70-1151/2012-003

w/Attachment: Supplementary Information

cc w/encl:

Marc Rosser

Manager

Environment, Health and Safety

Commercial Nuclear Fuel Division

Electronic Mail Distribution

Susan E. Jenkins

Assistant Director, Division of Waste Management

Bureau of Land and Waste Management

Department of Health and Environmental Control

Electronic Mail Distribution

D. Precht

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Letter to Mr. David Precht from Marvin D. Sykes dated July 20, 2012

SUBJECT: WESTINGHOUSE ELECTRIC COMPANY- NRC INSPECTION REPORT
NO. 070-1151/2012-003

Distribution w/encl:

M. Sykes, RII
M. Thomas, RII
O. López, RII
R. Johnson, NMSS
C. Ryder, NMSS
M. Baker, NMSS
PUBLIC

U.S. NUCLEAR REGULATORY COMMISSION
REGION II

Docket No.: 70-1151

License No.: SNM-1107

Report No.: 070-1151/2012-003

Licensee: Westinghouse Electric Company

Location: Columbia, South Carolina

Dates: May 7 through 10, 2012

Inspectors: G. Goff, Fuel Facility Inspector
T. Vukovinski, Inspector-In-Training

Approved by: M. Sykes, Chief
Fuel Facility Inspection Branch 3
Division of Fuel Facility Inspection

Enclosure

EXECUTIVE SUMMARY

Westinghouse Electric Company
NRC Inspection Report No. 70-1151/2012-003

This is a quarterly inspection report that includes a routine, announced inspection that was conducted by NRC regional inspectors in the area of maintenance and surveillance of safety controls. This routine, announced inspection consisted of a selective examination of procedures and representative records, observations of activities, walk-downs of items relied on for safety (IROFS), and interviews with personnel. During the inspection period, normal production activities were ongoing.

Maintenance and Surveillance of Safety Controls

Maintenance and surveillance activities associated with a sample of IROFS and other safety controls were adequate to assure that these controls were available and reliable to perform their intended safety function. Effective corrective actions were taken to address safety controls that did not meet test acceptance criteria. No findings of significance were identified.

Attachment

List of Persons Contacted
List of Items Opened, Closed, and Discussed
Inspection Procedures Used
Documents Reviewed

REPORT DETAILS

Summary of Plant Status

The Westinghouse Facility converts uranium hexafluoride (UF₆) into uranium dioxide and fabricates fuel assemblies for use in commercial nuclear power reactors. During the inspection period, normal production activities were ongoing.

A. FACILITY SUPPORT

1. Maintenance and Surveillance of Safety Controls (IP 88025)

a. Inspection Scope and Observations

The inspectors interviewed managers, engineers, technicians, and operators to verify that maintenance and surveillance program activities for items relied on for safety (IROFS) and other safety controls were adequate to assure that IROFS and other safety controls are available and reliable to perform their safety function when needed. Areas inspected included Scrap Uranium Processing; Uranium Recycling and Recovery Services (URRS) which includes the incinerator and solvent extraction (SOLX) process, Pelleting, Conversion, and areas outside the plant. As part of the inspection effort, the most current Integrated Safety Analysis (ISA) was utilized.

The inspectors verified that the licensee's work control program had provisions to ensure adequate pre-job planning and preparation of work packages to support maintenance and surveillance activities. Communications among the attendees at the pre-job planning sessions were adequate and strongly emphasized safety. The inspectors reviewed maintenance and surveillance work packages for thoroughness and to ensure that work packages challenged and verified operability of IROFS and other safety controls.

The inspectors observed maintenance work activities on selected systems and processes and determined that work activities were conducted in accordance with license requirements, approved procedures, and work orders. Specifically, the inspectors observed maintenance activities on the following:

- S-1008 ammonia scrubber,
- a standard high efficiency particulate air (HEPA) filter housing unit serving the ammonium dihydrate area,
- a TORIT® HEPA filter housing unit,
- conductivity probes and associated interlocks,
- fire pumps,
- Line 2 vaporizer dye penetrant test, and
- Line 2 vaporizer steam pressure checks.

The inspectors verified that calibrations and post-maintenance testing as specified by the licensee requirements were, overall, adequately performed prior to restoring equipment to operational status. One maintenance activity lacked a work order which was subsequently generated after the inspectors inquired about it. Corrective actions were verified to have been taken when a safety control failed or had degraded. Completed work packages were reviewed prior to returning equipment to service.

The inspectors reviewed the licensee's problem identification and resolution program to verify that performance issues relating to the maintenance and surveillance of IROFS and other safety controls were entered into the corrective action program and subsequently evaluated the adequacy of the corrective actions taken.

In addition to observing maintenance and surveillance activities, inspectors conducted other activities that included the following:

- Tours of indoor and outdoor fuel production areas which included URRS, Conversion, and Scrap Uranium Processing noting IROFS, other safety controls, signs/postings, operators performing routine duties, and housekeeping. No significant issues were identified.
- Walkdown of the Waste Water Treatment area.
- Observation of shift turnover and management plan-of-the-day meetings.
- Review of log book entries in control rooms.
- Review of training records for operators performing maintenance activities.

b. Conclusion

No violations of NRC requirements were identified.

B. SPECIAL TOPICS

1. Follow-up on Previously Identified Issues

Violation 70-1151/2011-004-01: Failure to remove from service defective sling, IROFS UF6CYL-110

This item was discussed and remains open. Inspectors interviewed contractor personnel; reviewed an applicable checklist; and observed the current sling on the hoist. Inspectors requested to review, assess, and confirm the adequacy of training for the operators of this equipment, but this information was not yet available. As a result, this violation remains open.

2. Event Follow-up

(Closed) Event Notification 47861: Contaminated Individual Required Medical Treatment at Medical Facility

This item was discussed and the affected individual was interviewed. The NRC reviewed the 30-day report submitted by the licensee and evaluated additional supporting documentation. The NRC determined that the licensee's corrective actions, taken as a result of this event, were adequate. The NRC did not identify any issues of significance related to this event. This item is closed.

C. Exit Meeting

On May 10, 2012, the inspectors presented the inspection results to David Precht, Plant Manager, and other members of the licensee staff. No dissenting comments were received from the licensee. Proprietary information was discussed, but not included, in this report.

SUPPLEMENTAL INFORMATION

1. List of Persons Contacted

<u>Name</u>	<u>Title</u>
R. Amick	Engineer
R. Bates	Maintenance and Equipment Improvement
R. Byrd	Team Manager of Instrumentation and Control
E. Cauley, Jr.	Area Team Manager URRS (2 nd shift)
G. Couture	EHS Licensing and Regulatory Programs Manager
D. Crone	Structural Engineer
S. Culler	EHS Records Coordinator
L. Dudas	Conversion Area Process Engineer
B. Faris	Licensing Engineer
A. Goldberg	URR Services Process Engineer
D. Graham	EHS Technician/Licensing and Regulatory Reporting
D. Hennings	Work Week Manager
J. Howell	Conversion Area Manager
A. McGeehee	Nuclear Criticality Engineer
K. Merrit	Product Assurance Chemical Operation
T. Northcutt	Acting Manager of Nuclear Fuel Continuous Improvement
P. Page	Maintenance Engineer
J. Peterson	Site Maintenance Manager
D. Precht	Plant Manager
E. Prytherch	Maintenance and Equipment Improvement
M. Rosser	EHS Manager
J. Short	Pellet Area Process Engineer
R. Taylor	EHS Engineering
D. Underwood	Plant Systems Engineer
J. Watkins	Product Assurance Manager
T. Wells	Acting Manager, Work Management Group/MRO Stores

2. List of Items Opened, Closed, and Discussed

Item Number	Status	Description
VIO 70-1151/2011-004-001	Open	Failure to remove from service defective sling, IROFS UF6CYL-110 (The licensee failed to inspect and remove from service a sling, IROFS UF6CYL-110, that had a cracked hook and a throat opening of more than 15% of the normal throat opening)
EN 47861	Closed	Contaminated Individual Required Medical Treatment at Medical Facility

3. **Inspection Procedure Used**

IP 88025 Maintenance and Surveillance of Safety Controls

4. **Documents Reviewed**

Records: Reviewed electronic training records for several operators who were performing specific maintenance activities.

Procedures:

CA-002, "Columbia Plant Electronic Training and Procedure System (ETAPS)," Rev. 44, 07/14/2011

COP-815022, "S-1008 Inspection and Clean Out," Rev. 0, 05/01/2009

COP-815413, "Ammonia Fume Ventilation System (S-1008 Scrubber)," Rev. 16, 05/23/2011

COP-816001, "Pressure Test of UF6 Supply and Education Lines," Rev. 11, 05/06/2011

MCP-203311, "Verification of Interlock ADUVAP-910," Rev. 1, 10/12/2006

MCP-203311, "Verification of Interlock ADUVAP-910," Rev. 2, 05/08/2012

SYF-213-3, "Generic Crane Shift Operational Safety Checklist," Rev. 2, 11/08/2007

SYF-221-1, "Pressure Test Report (for Hot Oil Pressure Test)," Rev. 2, 03/01/2012

SYP-203, "Isolation of Hazardous Energy," Rev. 13, 11/22/2011

SYP-221, "Equipment Pressure Testing Program," Rev. 1, 05/04/2012

Condition Reports Written as a Result of the Inspection:

CR-12-130-C007, Documented during IP 88025 inspection, 05/09/2012

CR-12-130-C008, Documented during IP 88025 inspection, 05/09/2012

Other Documents:

PM 81210, "SI-Safety, S1008 Scrubber Nozzle Inspection – Annual PM"

OM 81234, "SI-Safety, S1008 Scrubber Overflow Piping – Annual OM"

PM 11010, "SI-Safety, Chem Lab Fume Scrubber – Annual PM"

PM 82241, "SI-Safety, HEPA Filter House Inspection – 13-week PM"

OM 82230, "SI-Safety, Ventilation Duct Integrity Inspection – Annual OM"

OM 81026, "SI-Safety, XOMOX 3-Way Valve Verification – Annual OM"

PM 20321, "SI-Safety, HEPA Filter House Inspection – 13-week PM,"

PM 82003, "SI-Safety, Weigh Hopper, ADU Pelleting – 6-month PM"

PM 82105, "SI-Safety, Dust Collector Diaphragm and Solenoid Valve -- 3-month PM"

OM 81007, "SI-Safety, Scrubber (S-XII) Bottom Rake-Out – 13-week OM"

PM 82030, "SI-Safety, Stacking Gage on Pilot Line – 6-month PM"

OM 81234, "SI-Safety, S1008 Scrubber Overflow Piping – Annual OM"

OM 82102, "SI-Safety, Pellet Trays Needing Repair – 13-week OM"

Annual Shutdown/Inventory Schedule, May 2012

FAF-106-3, "Project Pre-Brief," Rev. 3 (Observed two of these)

IRM COL-12-125, 05/04/2012 (corrective actions)

IRM COL-12-128, 05/07/2012 (corrective actions)

IRM COL-12-129, 05/08/2012 (corrective actions)

Issue Report (#12-130-C007), Red Book Entry (corrective actions)

Issue Report (#12-130-C008), Red Book Entry (corrective actions)

CF-82-613, "Pilot Line Super Torit LOTO," Rev. 0

CF-20-007, "PT Inspection Report," Rev. 1 (for Work Orders 582714 & 581327)

Work Orders: 578783, 579788, 581321, 583802, 583809, 583810, 583972, 584022, 584548, 584622, 584625, 582714, 581327