UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

August 9, 2005

Westinghouse Electric Company
ATTN: Mr. M. Fecteau, Manager
Columbia Plant
Commercial Nuclear Fuel Division
Drawer R
Columbia, SC 29250

SUBJECT: NRC INSPECTION REPORT NO. 70-1151/2005-006

Dear Mr. Fecteau:

The U.S. Nuclear Regulatory Commission conducted a routine inspection in the area of operational safety. The inspection was conducted at your facility in Columbia, South Carolina, from July 11 through 15, 2005. The purpose of the inspection was to determine whether activities involving licensed materials were conducted safely and in accordance with regulatory requirements. An exit meeting was held on July 15, 2005, during which time observations from the inspection were discussed with you and members of your staff.

The inspection consisted of facility walk downs; selective examinations of relevant procedures and records; examinations of safety-related structures, systems, equipment and components; interviews with plant personnel; and observations of plant conditions and activities in progress. Throughout the inspection, observations were discussed with your managers and staff.

Based on the results of this inspection, no violations of regulatory requirements occurred.

In accordance with 10 CFR 2.390 of NRC's "Rules of Practice," this document may be accessed through the NRC's public electronic reading room, Agency-Wide Document Access and Management System (ADAMS) on the Internet at http://www.nrc.gov/reading-rm/adams.html.

Should you have any questions concerning this letter, please contact us.

Sincerely,

/RA/ D. Hartland acting for
Jay L. Henson, Chief
Fuel Facility Inspection Branch 2
Division of Fuel Facility Inspection

Docket No. 70-1151
License No. SNM-1107

Enclosure: (See page 2)

Enclosure: NRC Inspection Report

cc w/encl:
Sam McDonald, Manager
Environment, Health and Safety
Commercial Nuclear Fuel Division
Westinghouse Electric Corporation
P. O. Box R
Columbia, SC 29250

Henry J. Porter, Assistant Director
Div. of Radioactive Waste Mgmt.
Dept. of Health and Environmental
Control
Electronic Mail Distribution

R. Mike Gandy
Division of Radioactive Waste Mgmt.
S. C. Department of Health and
Environmental Control
Electronic Mail Distribution

Distribution w/encl:
J. Henson, RII
D. Seymour, RII
J. Lubinski, NMSS
M. Galloway, NMSS
G. Janosko, NMSS
M. Adams, NMSS
P. Silvia, NMSS
Public

X SISP REVIEW COMPLETE: Initials: DH____ ☐ SISP REVIEW PENDING*: Initials: _____ *Non-Public until the review is complete
X PUBLICLY AVAILABLE ☐ NON-PUBLICLY AVAILABLE ☐ SENSITIVE X NON-SENSITIVE
ADAMS: X Yes ACCESSION NUMBER:_____

OFFICE	RII:DFFI	RII:DFFI					
SIGNATURE	MC e-mail 8/9	DH 8/9/05					
NAME	MCrespo	DSeymour					
DATE	8/ /2005	8/ /2005	8/ /2005	8/ /2005	8/ /2005	8/ /2005	8/ /2005
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: E:\Filenet\ML052210472.wpd

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.:	70-1151
License No.:	SNM-1107
Report No.:	70-1151/2005-006
Licensee:	Westinghouse Electric Company
Location:	Columbia, SC
Inspection Dates:	July 11 through 15, 2005
Inspector:	Manuel G. Crespo, Fuel Facility Inspector
Approved:	Jay L. Henson, Chief Fuel Facility Inspection Branch 2 Division of Fuel Facility Inspection

Enclosure

EXECUTIVE SUMMARY

Commercial Nuclear Fuel Division
NRC Inspection Report 70-1151/2005-006

This inspection included a review of the licensee's plant operations. The inspection identified the following aspects of the licensee's programs as outlined below:

Plant Operations

- The licensee adequately communicated issues and events among operators and managers. Procedures were clearly written, incorporated the safety and administrative controls for the particular work area, and included instructions for normal and abnormal conditions (Paragraph 2.a).

- A weakness was identified in the test procedure for an item relied on for safety in the hydrofluoric acid spiking station. The licensee initiated the appropriate actions to address the weakness (Paragraph 2.b).

- A weakness was identified in that all signatures on change control forms were not completed prior to returning systems to service after being modified in the Uranium Recycle and Recovery System area. The licensee initiated the appropriate actions to address the weakness (Paragraph 2.c).

- Operators were knowledgeable of the safety controls for their areas (Paragraph 2.d).

- The licensee adequately responded to a fire emergency in the chemical area (Paragraph 2.e).

Attachment
Persons Contacted
Inspection Procedures
Items Opened, Closed, and Discussed
Acronyms

REPORT DETAILS

1. **Summary of Plant Status**

Routine fuel manufacturing operations and maintenance activities were conducted in ammonium diuranate (ADU) conversion, Uranium Recycle and Recovery System (URRS), integrated fuel burnable absorber (IFBA), and pelleting areas. On July 13, 2005, a small fire occurred in one of the scrap ovens that prompted the staffing of the emergency operations center (EOC).

2. **Plant Operations (Inspection Procedure (IP) 88020)**

a. Management and Administrative Practices (O3.01); Plant Activities (O3.03); Operating Procedures (O3.06)

(1) Inspection Scope and Observations

The inspector interviewed upper management and operations supervisors to verify that the present work environment reflected the safety practices outlined by the license. The inspector attended the pre-shift brief in the IFBA area and noted adequate focus on safety. Operators effectively communicated the status of equipment to the Team Manager, who provided feedback to operators regarding ongoing issues. The inspector found the level of communication to be adequate and conducive to safety. No issues were noted.

The inspector observed routine operations in the IFBA, conversion, pelleting, and URRS areas. The inspector noted prompt action by operators when a small spill in the solvent extraction area was cleaned and decontaminated within minutes of it's discovery. The inspector also observed the disposition of grinder sludge, loading of uranium hexafluoride cylinders, and fitzmill powder discharge operation. The inspector noted appropriate adherence to procedures. The inspectors reviewed selected procedures and verified that they were clearly written, incorporated the safety and administrative controls for the particular work areas, and included instructions for applicable normal and abnormal conditions. No issues were noted.

(2) Conclusions

The licensee adequately communicated issues and events among operators and managers. Procedures were clearly written, incorporated the safety and administrative controls for the particular work area, and included instructions for normal and abnormal conditions.

b. Safety Function (O3.02); Maintenance for Safety Controls (O3.07)

(1) Inspection Scope and Observations

The inspector reviewed a sample of the integrated safety analyses (ISAs) pertaining to the hydrofluoric acid (HF) spiking station to verify that the items relied on for safety (IROFS) were properly implemented. The inspector noted a weakness in the test procedure for

IROFS ADUHFS-901, an active engineered control that prevented back flow into the HF spiking station mixing tank (an unfavorable geometry vessel). The IROFS performed it's safety function by automatically closing certain safety significant valves if a level in the proceeding column was exceeded. The inspector noted that the test procedure lacked verification of some of the safety significant valves mentioned in the ISA summary. The inspector also noted that the function verification form used by the instrument technicians also lacked valve verifications.

Following discussions with the licensee's safety staff, the inspector determined that the most safety significant valves stated in the ISA summary were adequately captured in the function verification form; therefore, the IROFS was adequately tested. In response, the licensee initiated a corrective actions process (CAPs) item to ensure that all the valves mentioned in the ISA summary were adequately captured in the test procedure and function verification form.

The inspector reviewed the procedures for the testing of several other HF spiking station IROFS. The inspector also reviewed the systems to verify that the controls were in place. The IROFS appeared adequate to meet their required safety function and no safety issues were noted.

(2) Conclusions

A weakness was identified in the test procedure for an item relied on for safety in the hydrofluoric acid spiking station. The licensee initiated the appropriate actions to address the weakness.

c. Configuration Control (O3.04); Change Control (O3.05)

(1) Inspection Scope and Observations

The inspector reviewed the change control form for the installation of the new coater in the IFBA area. The inspector noted that all the approvals were obtained prior to starting the equipment with special nuclear material. The inspector also reviewed several change control forms for the URRS area, which had gone through significant modifications during the last few months. The inspector noted that several forms lacked the final project engineer's signature. One form also lacked the safety manager's signature as well, although the safety discipline reviews were completed. The inspector noted that the safety significance of the findings were low, as the equipment modifications were properly implemented and did not involve safety significant controls.

As an immediate corrective action for the weakness, the licensee instituted a verification by the operators to ensure that all signatures were obtained prior to returning systems to service after being modified. Further discussions with the licensee revealed that the configuration management system was being audited due to the number of cited violations and events that had occurred over the last year as a result of configuration control management errors. The goal of the audit was to address the root causes of these events and upgrade and streamline the configuration management system. The audit results were expected in a few months.

(2) Conclusions

A weakness was identified in that all signatures on change control forms were not completed prior to returning systems to service after being modified in the URRS area. The licensee initiated the appropriate actions to address the weakness.

d. Safety Training (O3.08)

(1) Inspection Scope and Observations

During the observations of activities, the inspector discussed with operators the safety controls for their systems. The inspector found the operators to be knowledgeable of criticality safety limits for their areas as well as the safety controls for their systems. The operators were also knowledgeable of the operational requirements for their areas. No issues were noted.

(2) Conclusions

Operators were knowledgeable of the safety controls for their areas.

e. Emergency Response (O3.11)

(1) Inspection Scope and Observations

The inspector observed the licensee response to a small fire that occurred in the oxidation oven in the conversion area on July 13, 2005. The inspector noted that the licensee properly activated the EOC and responded to the event in an organized manner. The licensee properly evacuated non-essential personnel from the chemical area and had responders don full-face respirators. No airborne radioactivity was present in the area and no injuries occurred. The emergency brigade members extinguished the fire using the appropriate means available. Following the event, the licensee performed a critique of their response and noted areas for improvement. The inspector noted no issues with the licensee's response.

(2) Conclusions

The licensee adequately responded to a fire emergency in the chemical area.

f. Follow-up on Previously Identified Issues (O3.13)

(1) (Closed) Violation (VIO) 70-1151/2004-05-02: Failure to Perform Periodic Reviews of Procedures

The remaining 18 procedures had been properly reviewed and updated. This item is considered closed.

(2) (Closed) Inspector Follow-up Item (IFI) 2005-002-01: Inaccurate Testing of RONAN

The inspector reviewed the licensee's actions to address the inconsistencies in the testing of the RONAN level transmitters (IROFS ADUHYD-908). A CAPs item had been initiated for the issue to ensure it was addressed. The licensee had decided to install a sight glass on the hydrolysis columns on Lines 1, 2, and 3 (Line 4 was already equipped with one). At the time of the inspection, the parts had been received and plans for installation were being arranged.

Following the installation, the test procedure was to be modified to incorporate the setpoint referenced in the ISA summary (75% of RONAN height). Also, the procedure to periodically calibrate the RONAN system was to be modified to incorporate the use of the sight glasses. This item is considered closed.

3. Exit Meeting

The inspection scope and results were summarized on July 15, 2005, with the licensee. The inspector described the areas inspected and discussed in detail the inspection results. Although proprietary documents and processes were reviewed during this inspection, the proprietary nature of these documents or processes is not included in this report. No dissenting comments were received from the licensee.

ATTACHMENT

1. LIST OF PERSONS CONTACTED

Licensee

C. Aguilar, URRS, Manager
M. Fecteau, Plant Manager
D. Graham, Environmental, Health and Safety (EH&S) Technician
F. Jackson, Acting Conversion Area Manager
S. McDonald, EH&S Manager
T. Shannon, EH&S Operations Manager
M. Rosser, Nuclear Criticality Safety Manager
J. Heath, EH&S Engineering Manager

Other licensee employees contacted included engineers, technicians, and production staff, and office personnel.

2. INSPECTION PROCEDURES USED

IP 88020 Regional Criticality Safety Inspection Program

3. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Item Number	Status	Description
70-1151/04-05-02	Closed	VIO - Failure to Perform Periodic Reviews of Procedures (Paragraph 2.f)
70-1151/05-02-01	Closed	IFI - Inaccurate Testing of RONAN (Paragraph 2.f)

4. LIST OF ACRONYMS USED

ADAMS	Agency-Wide Document Access and Management System
ADU	Ammonium Diuranate
CAPs	Corrective Action Process
CFR	Code of Federal Regulations
EOC	Emergency Operations Center
IFBA	Integrated Fuel Burnable Absorber
IFI	Inspector Followup Item
IP	Inspection Procedure
IROFS	Items Relied on for Safety
ISA	Integrated Safety Analysis
URRS	Uranium Recycle and Recovery System
VIO	Violation