



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

March 7, 2011

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

**SUBJECT: LICENSEE PERFORMANCE REVIEW FOR WESTINGHOUSE ELECTRIC  
COMPANY, COLUMBIA FUEL FABRICATION FACILITY, DOCKET NUMBER  
70-1151**

Dear Mr. Precht:

The Nuclear Regulatory Commission (NRC) Region II and Headquarters staff completed a review of the Westinghouse Electric Company, Columbia Fuel Fabrication Facility (WEC) inspection results and performance in conducting NRC licensed activities. The review covered the period beginning February 14, 2009, and ending December 31, 2010. Westinghouse's performance was evaluated in the following areas: Safety Operations, Radiological Controls, Facility Support, and Special Topics. This letter and Enclosure 1 provide to you the results of our review, and will be used as a basis for establishing the NRC oversight program for your conduct of licensed activities during the next review period. The review concluded that WEC continued to conduct its activities safely; protecting public health and the environment. Details regarding the Safeguards portion of the review are documented in a separate letter marked "Official Use Only – Security-Related Information" due to the sensitive nature of the subject matter.

During the 2009 performance review, the NRC identified two areas needing improvement; Safety Operations and Facility Support. The NRC requested that for each of these areas, WEC management evaluate common causes underlying the regulatory violations identified during the period and take appropriate actions, including a specific evaluation of whether procedural adequacy, procedural usage, training and knowledge management were contributing factors. During the 2010 review period, the NRC determined that the actions taken by WEC during the period had not been fully effective, in that, the NRC continued to identify similar violations in the area of Safety Operations and, as such, this remains an area needing improvement. These violations related to inconsistent identification and implementation of nuclear criticality safety controls and recurring examples of failing to identify, evaluate and respond to off-normal conditions. The NRC also determined that improvement is needed for nuclear criticality safety (NCS) analysis with respect to adherence to license commitments and NCS program procedures

While the NRC concluded that WEC operated the facility in a manner that adequately protected the health and safety of the workers and the public, and the environment; the NRC plans to augment the core inspection effort in the area of Safety Operations—Operational Safety and Nuclear Criticality Safety.

The results of our review will be discussed with you during a meeting open to the public on May 11, 2011. Areas needing improvement are summarized in the enclosure to this letter. During the meeting, we expect you to discuss your view of your performance in the same major area that the NRC evaluated, and also provide to us actions you have taken to improve your performance.

Enclosure 2 to this letter details the inspections, less those related to physical protection, scheduled through December 31, 2011. The inspection plans are provided to allow for the resolution of any scheduling conflicts and personnel availability issues well in advance of inspector arrival onsite. These inspection plans are tentative and may be revised as circumstances warrant.

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

Questions and comments about NRC's review of WEC's performance should be directed to Mr. Marvin Sykes, who can be reached by telephone at 404-997-4629.

Sincerely,

*/RA/*

Anthony T. Gody, Director  
Division of Fuel Facility Inspection

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

Enclosures

1. Licensee Performance Review
2. Calendar Year 2011 Inspection Schedule

cc w/encls:  
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

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Department of Health and Environmental Control  
Electronic Mail Distribution

\*see previous concurrence

X PUBLICLY AVAILABLE  NON-PUBLICLY AVAILABLE  SENSITIVE  NON-SENSITIVE

ADAMS: X Yes ACCESSION NUMBER: ML110660378 X SUNSI REVIEW COMPLETE

OFFICE	RII:DFFI	RII:DFFI	RII:DFFI	NMSS		
SIGNATURE	MDS for	MDS	ATG	JK		
NAME	MThomas*	MSykes*	AGody	JKinneman*		
DATE	3/ /2011	3/ /2011	3/ /2011	3/ /2011	3/ /2011	3/ /2011
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

Letter to David Precht from Anthony Gody dated March 7, 2011

SUBJECT: LICENSEE PERFORMANCE REVIEW FOR WESTINGHOUSE ELECTRIC  
COMPANY, COLUMBIA FUEL FABRICATION FACILITY, DOCKET  
NUMBER 70-1151

Distribution w/encls:

M. Sykes, RII  
M. Thomas, RII  
J. Kinneman, NMSS  
M. Tschiltz, NMSS  
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P. Silva, NMSS  
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M. Baker, NMSS

**LICENSEE PERFORMANCE REVIEW FOR WESTINGHOUSE ELECTRIC COMPANY,  
COLUMBIA FUEL FABRICATION FACILITY  
ASSESSMENT PERIOD: FEBRUARY 14, 2009 TO DECEMBER 31, 2010**

The following is a summary of the performance of Westinghouse Electric Company, Columbia Fuel Fabrication Facility in the conduct of NRC licensed activities.

**PERFORMANCE AREA: SAFETY OPERATIONS**

This area is comprised of operational safety, nuclear criticality safety (NCS), and fire protection.

**Program Areas Needing Improvement**

During this review period, the NRC determined that the actions taken by WEC during the period had not been fully effective, in that, the NRC continued to identify similar violations in the area of Safety Operations and, as such, remains an area needing improvement. These violations related to inconsistent identification and implementation of nuclear criticality safety controls and recurring examples of failing to identify, evaluate and respond to off-normal conditions. The NRC also determined that improvement is needed for NCS analysis with respect to adherence to license commitments and NCS program procedures

- |                         |   |
|-------------------------|---|
| VIO 70-1151/2010-013-01 | The licensee failed to establish adequate management measures as required by 10 CFR 70.62(d), to ensure that IROFS are available and reliable to perform their function when needed. Specifically, the periodicity of required ventilation system filter differential pressure readings, which were identified in the ISA as IROFS, was not specified in the implementing procedures. |
| EA-08-244               | Failure to establish management measures to ensure that IROFS STORAGE-URRS-110 and STORAGE-URRS-111 were available and reliable to perform their intended safety function when needed.  |
| VIO 70-1151/2009-201-01 | Failure of licensee to correctly apply criteria from ISA Handbook for classifying events as incredible when relying on facility SSCs.   |
| VIO 70-1151/2009-204-01 | Failure to establish and maintain control of a key system, a system involved in measuring the accountability values of a key material category, UO2 pellets for inventory.  |
| VIO 70-1151/2009-204-02 | Failure to maintain functioning tamper seals on rod channels and, when compromised seals were identified, failure to physically count and verify the rods in the applicable channels.   |

EA-10-124 VIO 70-1151/2010-010-01A	Failure to conduct and maintain an integrated safety analysis that identified potential consequences and likelihood of an accident sequence involving a chemical hazard. Specifically, the licensee failed to identify that an overflow in the Q-Tank area could lead to an intermediate consequence event involving excessive concentrations of airborne ammonia.
EA-10-124 VIO 70-1151/2010-010-01B	Failure to designate engineered or administrative controls or control systems as items relied on for safety, when necessary to comply with paragraph 10 CFR 70.61. Specifically, the licensee failed to implement items relied on for safety for the quarantine tank system to reduce the risk of an event which results in an acute chemical exposure which could lead to irreversible or serious long-lasting health effects to a worker.
VIO 70-1151/2010-010-02	Failure to suspend movement and processing of fissile material in the coverage area of CAAS 15, within one hour of CAAS 15 being out-of-service from 11:21 p.m. on January 23, 2010 through 5:37 a.m. on January 24, 2010.
VIO 70-1151/2010-010-03	Failure to develop and/or implement alarm procedures to assure safe operations of the quarantine tank system in response to installed process alarms.
VIO 70-1151/2010-010-04C	Failure to classify the spill as a Local Response Event in accordance with Section 6.1.1 of SEP-002.
VIO 70-1151/2010-010-04D	Failure to: 1) activate the Blue Light Visual Warning System; 2) instruct Security to announce all personnel in the area evacuate; and 3) communicate with the Emergency Director in response to the ammonia airborne concentrations that were measured inside the conversion area as required by procedures.
VIO 70-1151/2010-010-04E	Failure to: 1) activate the Blue Light Visual Warning System; 2) instruct Security to announce all personnel in the area evacuate; and 3) communicate with the Emergency Director, in response to the activation of the criticality accident alarm system, number 15.
VIO 70-1151/2009-005-01	Failure to maintain current knowledge of Item B85403, a seven inch polypack container, containing a small amount of uranium enriched to 4.8 percent in U235 isotope. Specifically, the NRC determined that the licensee's failure to maintain current knowledge of Item B85403 for a period that exceeded 14 days was the result of the actions of one or more unidentified individuals.
VIO 70-1151/2010-007-01	Failure to ensure that a high consequence accident sequence was highly unlikely as required by 10 CFR 70.61.

VIO 70-1151/2010-012-01	Failure to functionally test or verify 12 new safety significant controls related to dust collectors (Torrirts) prior to actual use. On June 12, 2009, the licensee had re-designated the high-level probes on the dust collectors as a safety significant control. However, the licensee only tested the probes that had been identified as needing modifications before to the re-designation. Therefore, 12 high-level probes were not tested as put of the re-designation process. The safety significance of the event was low due to additional controls in place on the dust collectors.
EA-10-153 VIO 70-1151/2010-014-01A	The licensee failed to establish Double Contingency for the filter press to protect against an inadvertent criticality. Specifically, the Integral Fuel Burnable Absorber (IFBA) filter press relied solely on a 'peg and hole' design to prevent the introduction of additional filter plates, which could have led to an inadvertent criticality.
EA-10-153 VIO 70-1151/2010-014-01B	The licensee failed to implement items relied on for safety (IROFS) for the IFBA filter press to prevent an inadvertent nuclear criticality, which is a high consequence event.
EA-10-153 VIO 70-1151/2010-014-01C	The licensee failed to designate the peg and hole design of the filter press as an IROFS when the conclusion for the accident scenario was determined to be incredible based on the peg and hole design feature.
VIO 70-1151/2010-014-02	The licensee failed to conduct operations to assure safe, compliant activities involving nuclear material in accordance with approved procedures.
VIO 70-1151/2010-014-03	The licensee closed out a project without updating IFBA filter system design drawing 807F04EQ02.

### **Recommended Change to NRC Inspection Effort**

The NRC will augment the core inspection effort in the area of Safety Operations – Operational Safety and Nuclear Criticality Safety.

### **PERFORMANCE AREA: RADIOLOGICAL CONTROLS**

This area is comprised of radiation protection, environmental protection, waste management, and transportation.

### **Program Areas Needing Improvement**

- No specific areas needing improvement were identified in Radiological Controls.

**Recommended Change to NRC Inspection Effort**

- Maintain the core inspection effort.

**PERFORMANCE AREA: FACILITY SUPPORT**

This area is comprised of maintenance and surveillance, training, emergency preparedness, management organization and controls, and permanent plant modifications.

**Program Areas Needing Improvement**

- No specific areas needing improvement were identified in Facility Support.

**Recommended Change to NRC Inspection Effort**

- Maintain the core inspection effort.

**PERFORMANCE AREA: SPECIAL TOPICS**

This area is comprised of safety licensing.

**Program Areas Needing Improvement**

- No specific areas needing improvement were identified in Special Topics.

**Recommended Change to NRC Inspection Effort**

- Maintain the core inspection effort.



**07001151 - WEST**  
**Inspection / Activity Plan**  
**01/01/2011 - 12/31/2011**

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
			<b>1ST - 1ST QTR INTEGRATED INSPECTION</b>		<b>1</b>
1	01/01/2011	03/31/2011	IP 92701	Followup	
			<b>LPR - PERFORMANCE REVIEW</b>		<b>1</b>
1	01/01/2011	12/31/2011	IP 92701	Followup	
			<b>MO/OT/OP - MO/OT/OP</b>		<b>3</b>
1	01/24/2011	01/28/2011	IP 88005	Management Organization And Controls	
1	01/24/2011	01/28/2011	IP 88010	Operator Training/Retraining	
1	01/24/2011	01/28/2011	IP 88020	Operational Safety	
			<b>NCS - NCS</b>		<b>2</b>
1	01/31/2011	02/04/2011	IP 88015	Criticality Safety	
			<b>ESC ENF - ESC ENF</b>		<b>1</b>
1	02/07/2011	04/25/2011	IP 92702	Followup On Corrective Actions For Violations And Deviations	
			<b>2ND - 2ND QTR INTEGRATED INSPECTION</b>		<b>1</b>
1	04/01/2011	06/30/2011	IP 92701	Followup	
			<b>MCA - MCA</b>		<b>1</b>
1	04/25/2011	04/29/2011	IP 85401	Management Structure	
			<b>NCS - NCS</b>		<b>2</b>
1	04/25/2011	04/29/2011	IP 88015	Criticality Safety	
			<b>MS - MS</b>		<b>1</b>
1	05/02/2011	05/06/2011	IP 88025	Maintenance And Surveillance Testing	
			<b>EP EX - EP EX</b>		<b>3</b>
1	05/16/2011	05/20/2011	IP 88051	Evaluation of Exercises and Drills	
			<b>EP/ENV - EP / ENV</b>		<b>2</b>
1	06/13/2011	06/17/2011	IP 88045	Environmental Protection	
1	06/13/2011	06/17/2011	IP 88050	Emergency Preparedness	
			<b>3RD - 3RD QTR INTEGRATED INSPECTION</b>		<b>1</b>
1	07/01/2011	09/30/2011	IP 92701	Followup	
			<b>RP/WM/T - RP/WM/T</b>		<b>2</b>
1	08/08/2011	08/12/2011	IP 86740	Inspection Of Transportation Activities	
1	08/08/2011	08/12/2011	IP 88030	Radiation Protection	
1	08/08/2011	08/12/2011	IP 88035	Radioactive Waste Management	
			<b>NCS - NCS</b>		<b>2</b>
1	08/22/2011	08/26/2011	IP 88015	Criticality Safety	
			<b>OPS - OPS</b>		<b>1</b>
1	08/22/2011	08/26/2011	IP 88020	Operational Safety	

This report does not include MEETINGS and SHUTDOWN activities.  
This report shows only on-site and announced inspection procedures.

## 07001151 - WEST

## Inspection / Activity Plan

01/01/2011 - 12/31/2011

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
			<b>4TH</b>	<b>- 4TH QTR INTEGRATED INSPECTION</b>	<b>1</b>
1	10/01/2011	12/31/2011	IP 92701	Followup	
			<b>OP/FPAT</b>	<b>- OP/FPAT/RI OPS</b>	<b>4</b>
1	10/03/2011	10/07/2011	IP 88020	Operational Safety	
1	10/03/2011	10/07/2011	IP 88020	Operational Safety	
1	10/03/2011	10/07/2011	IP 88054	Fire Protection (Triennial)	
1	10/03/2011	10/07/2011	IP 88055	Fire Protection (Annual)	
			<b>PPM</b>	<b>- PPM</b>	<b>1</b>
1	10/17/2011	10/21/2011	IP 88070	Permanent Plant Modifications	
			<b>MCA</b>	<b>- MCA</b>	<b>2</b>
1	11/14/2011	11/18/2011	IP 85401	Management Structure	

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