



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

R2/D1-21

contains  
security/MCA  
evaluation

March 5, 2002

Westinghouse Electric Company, L.L.C.  
ATTN: Mr. R. Monley, Manager  
Columbia Plant  
Commercial Nuclear Fuel Division  
Drawer R  
Columbia, SC 29250

SUBJECT: NRC PERFORMANCE REVIEW OF LICENSED ACTIVITIES

Dear Mr. Monley:

In February 2002, NRC managers and staff completed reviews of your performance in conducting NRC licensed activities. The review evaluated your performance for the period January 9, 2000 through December 29, 2001. This letter provides 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 24 months.

Your performance was evaluated in the five major areas of safety operations, safeguards, radiological controls, facility support, and special topics. An outline of the results of the NRC's review, in the form of strengths, areas needing improvement, and challenges, is enclosed. Please be aware that, due to the nature of the Licensee Performance Review (LPR) program, areas identified as strengths in the previous LPR were not emphasized during this inspection period. The result is that previously identified strengths you still possess may not be recognized due to the reduced inspection effort in those areas. The results of this period's review will be discussed with you at your facility in Columbia, South Carolina, during a meeting open to public observation on March 26, 2002. During that meeting, we expect you to discuss your view of your performance in the same major areas.

Our review found that you are operating the plant safely and, in general, in compliance with NRC requirements. Our review also noted that later in the LPR period, changes in management controls were made to target many of the areas needing improvement, and we have recognized that these actions are having positive impacts in those program areas.

Our review found that your item control program, an area identified as a challenge in the last performance review, is now an item needing improvement. The review also found that the implementation of your nuclear material transportation program, elements of which were identified in the 2000 performance review as an area needing improvement, did not receive sufficient attention to improve performance. In addition, the implementation of criticality safety controls has been an item needing improvement for the last two performance reviews. This area continues to need improvement through enforcement of clear and consistent procedures.

Information in this record was deleted  
in accordance with the Freedom of Information  
Act, exemptions 4  
FOIA 2006-0026

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Our review noted a strength in your program. In particular, we recognized senior management's pro-active approach in implementing additional security measures since the attacks on September 11, 2001.

Based upon the review, the NRC has decided to increase the level of inspection effort above our core inspection program in the areas of plant operations, nuclear criticality safety, maintenance, and transportation. This includes special focus on surveillance of the material condition of equipment and engineered safety controls, adherence to safety significant procedural controls, and the effectiveness of controls on your nuclear materials transportation program.

In accordance with 10 CFR 2.790 of NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in NRC's 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).

Should you have any questions or comments, I would be pleased to discuss them with you. You may contact me at (404) 562-4410.

Sincerely,

**/RA/ B. Mallett for**  
Luis A. Reyes  
Regional Administrator

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

Enclosure: Licensee Performance Review  
- Summary Outline

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

(cc w/encl cont'd - see page 3)

(cc w/encl cont'd)

R. Mike Gandy

Division of Radioactive Waste Mgmt.

S. C. Department of Health and

Environmental Control

Electronic Mail Distribution

Distribution w/encl:

D. Ayres, RII

P. Hiland, RIII

W. Britz, RIV

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M. Virgilio, NMSS

M. Weber, NMSS

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SIGNATURE	DMC 2/28/02	LW 2/28/02	DMC 3/1/02	BSM 3/5/02	
NAME	DAyres	LWert	DCollins	BMallett	
DATE	2/ /2002	2/ /2002	2/ /2002	2/ /2002	
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	

**LICENSEE PERFORMANCE REVIEW FOR WESTINGHOUSE**  
**ASSESSMENT PERIOD: January 9, 2000 to December 29, 2001**

**A. SAFETY OPERATIONS (Comprised of Chemical Safety, Criticality Safety, Plant Operations, Fire Safety, and Management Controls)**

**Safety Operations Program Strengths**

- None

**Safety Operations Needing Improvement**

- Enforcement of management expectations for implementation of safety significant administrative controls in procedures and postings.
- Consistency and clarity of procedures for safety related operations and functions.

**Projected Challenges to Performance in Safety Operations**

- Continued development and implementation of the corrective action program.

**B. SAFEGUARDS (Comprised of Material Control and Accounting (MC&A) and Physical Protection)**

Exempt 4

**C. RADIOLOGICAL CONTROL (Comprised of Radiation Protection, Environmental Protection, Waste Management, and Transportation)**

**Radiological Control Program Strengths**

- None

Enclosure

**Radiological Control Areas Needing Improvement**

- Implementation of the program for transportation of licensed materials, with attention to root causes for prevention of problems to assure the safety of shipped packages.

**Projected Challenges to Performance in Radiological Control**

- Maintaining contamination control and controlling worker exposures as low as is reasonably achievable.
- Maintain groundwater contamination below licensee action levels.
- Ensure the quality of the large number of transportation containers acquired from the Combustion Engineering Facility.

**D. FACILITY SUPPORT (Comprised of Maintenance and Surveillance, Training, and Emergency Preparedness)**

**Facility Support Program Strengths**

- None

**Facility Support Areas Needing Improvement**

- Maintaining the material condition of operating equipment to prevent failures that cause degradation of radiological and criticality safety controls.
- Ensuring staff are given needed safety-related training.

**Projected Challenges to Performance in Facility Support**

- None

**E. SPECIAL TOPICS (Comprised of Licensing, the Fundamental Nuclear Material Control (FNMC) Plan, and Security Plan)**

**Special Topics Program Strengths**

- None

**Special Topics Needing Improvement**

- None

**Projected Challenges to Performance in Special Topics**

- None

## Westinghouse Highlights

<p>Events (91-01 and other issues)</p>	<p><u>Events</u></p> <p>7/01 - Failure to remove material from container for shipment back to BWX-T.              8/01 - Errors found on CoC for the ANF-250 powder/pellet container              10/01- Failure of a shrink wrap seal on a rod shipment allowed pellets to escape              1/02 - Roof leak in Erbia area allowed moderation in a moderation control area              1/02 - Erbia Area roof leak.              1/02 - Powder spill into Erbia granulator hood.              2/02 - Procedure deficiency for UN Bulk tank.              3/02 - Oil on Bulk container              6/02 - Unanalyzed Polypacks in Erbia.              6/02 - Moisture in Dry ventilation system.              9/02 - Wet vent line material accumulation.              9/02 - Improper stacking of ductwork.              4/03- Processing of with-held Cylinders.              7/03- Temporary procedure not reviewed.              7/03- Pump out to the UNBST without sample results.              4/01-9/03- Improper scanning of lead rods.              10/03- Drum loading without scale.              10/03- ADU Dump Hood PLC interface malfunction              1/04- 13 polypacks emptied into bulk container without required visual inspection              3/04- incinerator operated outside safety basis/buildup of material in incinerator              6/04- material accumulation in 55-gallon drum</p> <p><u>Violations</u> (SL IVs unless noted otherwise)</p> <p>7/02- VIO 02-202-01: Failure to maintain spacing required for NCS control during floor storage.</p> <p>5/03-VIO 03-201-01: Failure to conspicuously post NCS postings              5/03- VIO 03-201-02: Failure to approve UNH Tank ISA              5/03- VIO 03-201-03: Failure to perform a compliance review for Erbia/blending              1/04- VIO 03-09-01: Failure to follow procedures for pump out of a batch of Uranyl Nitrate.              1/04- VIO 03-09-02: Failure to complete training prior to performing process operations in the ERBIA area.              1/04- VIO 03-203-01: Failure to comply with criticality postings</p>		
<p>Occupational Exposure</p>		<p><u>Collective Dose</u></p>	<p><u>Maximum TEDE</u></p>
	<p>1999 (ICRP 30) 305 person-rem              2000 (ICRP 30) 616 person-rem              2001 (ICRP 30) 725 person-rem              2001 (ICRP 68) 343 person-rem              2002 (ICRP 68) 279 person-rem              2003 (ICRP 68) 245 person-rem</p>		<p>3.04 rem              4.18 rem              4.10 rem              1.82 rem              1.57 rem              1.53 rem</p>
<p>Radioactive Liquid and Gaseous Effluent Releases</p>		<p><u>Liquid (mCi)</u></p>	<p><u>Gaseous (<math>\mu</math>Ci)</u></p>
	<p>1999 U 51.0              2000 U 124.0              2001 U 63.0              2002 U 65.0              2003 U 54.5</p>		<p>453              501              558              556              511</p>
<p>Maximum Offsite Dose due to Gaseous Releases</p>	<p>1999 &lt; 1 mrem              2000 &lt; 1 mrem              2001 &lt; 1 mrem              2002 &lt; 1 mrem              2003 &lt; 1 mrem</p>		
<p>Labor/Union Issues</p>	<p>None</p>		

Ex. 4

Ex. 4

**Additional Information:****New Programs Developed as a Result of Problems with Adherence to Procedures**

1. In 2003, the licensee initiated an enhanced training/requalification program in uranium recovery as a result of process upsets and events in this area. As part of this program, the licensee shutdown uranium recovery in October 2003, and did not restart processing until operators were retrained/requalified on their specific operations. The new training/requalification program consisted of three phases: a written examination on an operator's specific process area, an oral examination board, and an on-the-job demonstration of process knowledge. The enhanced program stressed procedure compliance, understanding the procedures and the process, and the importance of the process safety controls. Operators who did not pass the tests, boards or demonstrations, were allowed additional time to study and prepare for retesting. Operators who could not pass all three phases of the retraining/requalification program would be reassigned. The licensee indicated that new training program will be implemented plant wide.

2. The licensee is trying to improve operation by the implementation of the new Human Performance program and Procedure Improvement and Compliance (PIC) Program, with cognizant licensee managers. Approximately 100 managers and other individuals, who had received specialized training in the PIC Program, would go into the process areas and perform short interviews with operators to determine if procedures were user-friendly, and if the operators understood and were following their procedures. Behavior safety and human performance were also evaluated. The data were collected, trended, and evaluated, to determine where procedure, training, or behavioral enhancements were needed, and to identify good practices. The interviewees remained anonymous to encourage open communications and minimize any fear of reprisal. The program, which was ongoing, was slated to last for 12 weeks. The NRC concluded that the enhanced uranium recovery training/requalification program, the Human Performance Implementation Plan, and the Procedure Improvement and Compliance Programs have strong potentials for improving licensee problems with procedure compliance