

February 1, 2005

Mr. Hank Sepp  
Director, Decommissioning  
Westinghouse Electric Company, LLC  
3300 State Road P  
Festus, MO 63028

SUBJECT: NRC INSPECTION REPORT 07000036/2004-004(DNMS) AND NOTICE OF VIOLATION - WESTINGHOUSE ELECTRIC COMPANY, LLC (HEMATITE)

Dear Mr. Sepp:

On January 6, 2005, the NRC completed inspection activities at the Westinghouse Hematite facility. The purpose of the inspection was to determine whether decommissioning activities were conducted safely and in accordance with NRC requirements. Specifically, during onsite inspections from October 25 through 29, 2004, November 29 through December 3, 2004, and January 5 through 6, 2005, the inspector evaluated management organization and controls, decommissioning support activities, and radiological safety. At the conclusion of the onsite inspections on October 29, 2004, and December 3, 2004, the inspector discussed the preliminary inspection findings with you and members of your staff. On January 6, 2005, the inspector discussed the final inspection findings with you.

The inspection consisted of an examination of decommissioning activities at the Westinghouse Electric Company, LLC (Hematite) facility as they relate to safety and compliance with the Commission's rules and regulations. Areas examined during the inspection are identified in the enclosed report. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations of activities in progress, and interviews with personnel.

Based on the results of this inspection, the NRC has determined that a violation of NRC requirements occurred. The violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in the subject inspection report. The violation pertains to your staff's failure to implement nuclear criticality safety controls. You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure 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). The NRC's document system is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Please note that on October 25, 2004, the NRC terminated public access to ADAMS and initiated an additional security review of publicly available documents to ensure that potentially sensitive information is removed from the ADAMS database accessible through the NRC's web site. Interested members of the public may obtain copies of the referenced documents for review and/or copying by contacting the Public Document Room pending resumption of public access to ADAMS. The NRC Public Documents Room is located at NRC Headquarters in Rockville, MD, and can be contacted at (800) 397-4209.

We will gladly discuss any questions you may have regarding this inspection.

Sincerely,

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Jamnes L. Cameron, Chief  
Decommissioning Branch

Docket No. 070-00036  
License No. SNM-00033

Enclosures: 1. Notice of Violation  
2. Inspection Report 07000036/2004-004(DNMS)

cc w/encls: J. Nardi, Supervisory Engineer Environment Health and Safety

cc w/o encls: S. Mahfood, Director, Missouri Department of Natural Resources  
R. A. Kucera, Director, Intergovernmental Cooperation, Missouri Department of Natural Resources  
B. Moore, Missouri Department of Natural Resources

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## NOTICE OF VIOLATION

Westinghouse Electric Company-Hematite, LLC  
Hematite, Missouri

Docket No. 070-00036  
Licensee No. SNM-00033

During a Nuclear Regulatory Commission (NRC) inspection conducted from October 25, 2004, through January 6, 2005, a violation of NRC requirements was identified. In accordance with the "General Statements of Policy and Procedure for NRC Enforcement Actions" (NUREG-1600), the violation is listed below:

License Condition 17 of License No. SNM-00033 states, in part, that "Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below." License Condition 17.A references the licensee's approved Chapter 4, "Nuclear Criticality Safety, Revision 7, dated August 2, 2001."

Chapter 4, Section 4.1, entitled "Administrative Conditions," required that "Physical controls, e.g., favorable geometry and permanently engineered controls, shall be the preferred method of criticality control, to reduce dependence on administrative procedures. In some processes, types of control other than favorable geometry, e.g., moderation, concentration, and/or neutron absorbers may be used to achieve safe operations. In these cases, controlled parameters and their limits shall be clearly specified, approved by management as part of the review and approval of operating procedures, and communicated to affected personnel through postings, operating procedures, or training."

Global nuclear criticality safety evaluation (NCSE) No. NISYS-NCS-1180-TR001, Revision 1, Section 7.5, entitled "Administratively Controlled Limits and Conditions," specified the nuclear criticality safety requirements associated with the Building 254 dry decontamination table fissile material operations. Global NCSE administrative control number 14 required that, "No more than a single 4.49-gallon vacuum cleaner or a single 4.49-gallon container shall be stored within 5 feet of a dry decontamination table."

Contrary to the above, on November 30, 2004, a 4.49-gallon vacuum and a negative air machine (4.49-gallon container) were positioned within 5 feet of the Building 254 dry decontamination table during fissile material operations. The placement of two items within the 5 feet spacing requirement was prohibited by NCSE No. NISYS-NCS-1180-TR001, Revision 1.

This is a Severity Level IV violation (Supplement VI).

Pursuant to the provisions of 10 CFR 2.201, Westinghouse Electric Company-Hematite, LLC is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555, with a copy to the Regional Administrator, Region III, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This response should be clearly marked as a "Reply to Notice of

Violation” and should include: (1) the reason for the violation or, if contested, the basis for disputing the violation, (2) the corrective steps which have been taken and the results achieved, (3) the corrective steps taken to avoid future violation, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or Demand for Information may be issued to show cause why the license should not be modified, suspended or revoked, or why such other action, as may be proper, should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response 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>, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the basis for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days.

Dated this 1st day of February 2005

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No.: 070-00036

License No.: SNM-00033

Report No.: 07000036/2004-004(DNMS)

Licensee: Westinghouse Electric Company, LLC

Facility: Hematite Fuel Manufacturing Facility

Location: 3300 State Road P  
Festus, Missouri

Dates: October 25 through 29, 2004,  
November 29 through December 3, 2004, and  
January 5 through 6, 2005

Inspector: Christopher R. Martin, Reactor Inspector  
(Decommissioning)

Approved by: Jamnes L. Cameron, Chief  
Decommissioning Branch, DNMS

**EXECUTIVE SUMMARY**  
**Westinghouse Electric Company, LLC**  
**Hematite Fuel Manufacturing Facility**  
**NRC Inspection Report 07000036/2004-004(DNMS)**

This routine decommissioning inspection involved a review of the Westinghouse Electric Company's and its contractors' current performance related to decommissioning support activities and the nuclear criticality safety program. During the inspection period, major activities reviewed included the demolition and decontamination of former process equipment.

**Management Organization and Controls**

- The inspector concluded that the licensee's organizational structure and staffing was approved by the Decommissioning Director and that the management team executed their roles and responsibilities as described in regulatory requirements and license conditions. (Section 1.0)

**Radiation Protection Program**

- The inspector concluded that the licensee adequately implemented its radiation protection program and adequately informed the staff of current radiological conditions. (Section 2.0)

**Decommissioning Support Activities**

- The inspector identified a violation for failure to follow nuclear criticality requirements during fissile material operations, as required by its global nuclear criticality safety evaluation. (Section 3.0)

## Report Details<sup>1</sup>

### **1.0 Management Organization and Controls (88005)**

#### a. Inspection Scope

The inspector evaluated the licensee's organizational structure to verify that management personnel were aware of their roles and responsibilities. The inspector interviewed select licensee staff and reviewed select records to evaluate management changes in the organizational structure since the previous inspection.

#### b. Observations and Findings

In December 2004, the Decommissioning Director initiated a site-wide reorganization. The purpose of the reorganization was to address a lack of integration of contractor staff within the licensed organization and provide additional oversight in functional areas significant to safety. The inspector noted that the new organizational structure included several of the contractors' staff. The licensee's and contractors' staff were qualified commensurate with their assigned responsibilities. In addition, a new management position was created to provide oversight of the licensee's nuclear criticality safety program. Prior to the site-wide reorganization, nuclear criticality safety was a collateral responsibility.

#### c. Conclusions

The inspector concluded that the licensee's organizational structure and staffing was approved by the Decommissioning Director and that the management team executed their roles and responsibilities as described in regulatory requirements and license conditions.

### **2.0 Radiation Protection (83822)**

#### a. Inspection Scope

The inspector reviewed the licensee's radiation protection procedures, observed licensee staff implement the program requirements, and interviewed licensee staff to evaluate program effectiveness.

#### b. Observations and Findings

The inspector toured the licensee's facility and observed that postings of permanent and temporary radiological areas were in accordance with applicable radiation protection procedures. The licensee's radiation protection staff clearly posted radiological areas with the required three-bladed symbol and color scheme. The boundaries were visible from all approaches and fully encompassed the active work areas. The inspector also noted that the licensee's contractor posted facility radiological conditions (e.g., general area airborne concentrations, contamination levels, and radiation levels) at the entry to

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<sup>1</sup>A list of acronyms used in the report is included at the end of the Report Details.

the former process facility, which is the focus of a majority of the decommissioning activity.

Radiation detection instruments were appropriate for the types and quantity of radioactive material present at the facility. The inspector noted that the instruments were operable and within their calibration periodicity.

The inspector discussed the radiation protection program requirements with several newly qualified radiation workers. Those interviewed had a basic understanding of the program requirements. The inspector also observed radiation workers donning and doffing anti-contamination clothing. The donning and doffing technique used by the radiation workers was commensurate with the posted radiological conditions in their assigned work areas.

c. Conclusion

The inspector concluded that the licensee adequately implemented its radiation protection program and adequately informed the staff of current radiological conditions.

**3.0 Decommissioning Support Activities (88104)**

a. Inspection Scope

The inspector observed and evaluated work performed by the licensee and its contractors to verify that decommissioning activities proceeded in accordance with work plans, permits, and approved procedures. The inspector also interviewed select individuals engaged in decommissioning activities.

b. Observations and Findings

The inspector observed the licensee and its contractor staff perform decommissioning activities within the former fuel fabrication facility, which included Buildings 254, 255, and 256. The inspector observed the following work activities: demolition of former process equipment; dry decontamination table activities; and the preparation of waste for future shipment to an approved waste disposal facility.

The inspector noted that the staff performed work activities in radiologically controlled areas in accordance with an approved radiation work permits. The inspector observed daily briefings, which were conducted prior to the beginning of authorized work activities. The contractors' safety representatives conducted the initial all-hands morning briefing. Following the all-hands briefing, the individual work groups assembled for an additional job-specific briefing. The briefings contained information on the current industrial and radiological conditions within assigned work areas.

License Condition 17 of License No. SNM-00033 states, in part, that "Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below." License Condition 17.A references the licensee's approved Chapter 4, "Nuclear Criticality Safety, Revision 7, dated August 2, 2001."

Chapter 4, Section 4.1, entitled “Administrative Conditions,” required that “Physical controls, e.g., favorable geometry and permanently engineered controls shall be the preferred method of criticality control, to reduce dependence on administrative procedures. In some processes, types of control other than favorable geometry, e.g., moderation, concentration, and/or neutron absorbers may be used to achieve safe operations. In these cases, controlled parameters and their limits shall be clearly specified, approved by management as part of the review and approval of operating procedures, and communicated to affected personnel through postings, operating procedures, or training.”

The inspector toured the active decommissioning areas within the former process facility. During fissile material operations, the inspector observed the decontamination of previously dismantled former process equipment in Building 254. The inspector noted the requirements of the nuclear criticality safety (NCS) sign affixed to the dry decontamination table. The sign replicated requirements found in the licensee’s nuclear criticality safety evaluation (NCSE) No. NISYS-NCS-1180-TR001, Revision 1, dated July 2004, entitled “Global Nuclear Criticality Safety Evaluation for the Primary Interface Removal Project at the Westinghouse Electric Corporation Hematite Facility.” The sign contained, in part, the requirement that a “Vacuum or container (4.49 gallons maximum) must be at least 2 feet from the table. Only one vacuum or container is allowed within 5 feet of the table.” The inspector observed that there was a 4.49-gallon vacuum and a negative air machine (4.49-gallon container) each positioned at approximately 2 feet from the dry decontamination table while fissile material operations were in progress. The failure of the licensee to conduct fissile material operations in accordance with its nuclear criticality safety requirements is a Severity Level IV Violation (VIO 070-00036/2004-004-01).

The inspector engaged the contractors’ staff who conducted the dry decontamination table activities regarding the requirements of the NCSE and the physical location of the vacuum and the negative air machine. Based on these discussions, the licensee repositioned the negative air machine 5 feet from the dry decontamination table pending further evaluation by the licensee.

The inspector discussed typical fissile material operations scenarios with select staff to ascertain the general knowledge level of NCS program requirements. The inspector determined that the staff was not able to adequately recognize whether the proposed conditions were allowed under the global NCSE. The inspector discussed his finding with the licensee’s management team.

In response to the inspector’s concern, the licensee’s management team concluded that they had not fully implemented the requirements contained in the global NCSE. The licensee’s management team then suspended fissile material operations until such time as the staff could be retrained on the requirements of the global NCSE.

c. Conclusions

The inspector identified a violation for failure to follow nuclear criticality requirements during fissile material operations, as required by its global nuclear criticality safety evaluation.

#### **4.0 Inspector Follow-up Items**

- a. (CLOSED) VIO 07000036/2003-003-02: The licensee failed to provide adequate procedures for decommissioning activities.

The inspector observed and evaluated the licensee and its contractors' work activities and associated procedures, and determined that the procedures were adequate for current decommissioning activities.

- b. (CLOSED) VIO 07000036/2003-003-03: The licensee failed to obtain all required approvals prior to decommissioning activities.

The inspector observed and evaluated the licensee and its contractors' work activities and associated procedures, and determined that the procedures were approved prior to conducting decommissioning activities.

- c. (CLOSED) VIO 07000036/2004-003-02: This issue was closed under separate correspondence from the NRC to Westinghouse Electric Company, LLC, dated October 7, 2004.

#### **5.0 Exit Meeting Summary**

The NRC inspector presented preliminary inspection findings to members of the facility management team at the conclusion of onsite inspections on October 29, 2004, and December 3, 2004. On January 6, 2005, the inspector discussed the final inspection findings with the Decommissioning Director. The licensee acknowledged the findings presented. The licensee did not identify any documents or processes reviewed by the inspector as proprietary.

### **PARTIAL LIST OF PERSONS CONTACTED**

#### Westinghouse Corporation

- \*H. Sepp, Decommissioning Director
- \*K. Craig, Licensing and Regulatory Affairs Manager
- \*P. Malich, Project Manager
- \*C. N. Horton, Radiation Protection Manager
- \*T. Chance, Health Physics Supervisor
- \*K. Hayes, Manager Environment, Safety and Health
- \*C. Werner, Contracts Manager
- \*S. Welch, Document Control Administrator

#### State of Missouri

- \*B. Moore, Missouri Department of Natural Resources

\* Indicates those individuals present at the exit meetings.

## INSPECTION PROCEDURES USED

IP 88005 Management Organization and Controls  
IP 88104 Decommissioning Inspection Procedure For Fuel Cycle Facilities  
IP 83822 Radiation Protection

## ITEMS OPENED, CLOSED, AND DISCUSSED

<u>Opened</u>	<u>Type</u>	<u>Summary</u>
VIO 07000036/2004-004-01	VIO	Failure to Follow Nuclear Criticality Safety Requirements
<u>Closed</u>		
07000036/2003-003-02	VIO	Failure to Obtain Approval for Decommissioning Activities
07000036/2003-003-03	VIO	Failure to Provide Adequate Procedures
07000036/2004-003-02	VIO	Closed Under Separate Correspondence Dated October 7, 2004
<u>Discussed</u>		
None		

## PARTIAL LIST OF DOCUMENTS REVIEWED

Westinghouse Electric Company, Chapters 1-8, of SNM-00033 Materials License

## LIST OF ACRONYMS USED

ADAMS Agencywide Documents Access and Management System  
CFR Code of Federal Regulations  
DNMS Division of Nuclear Material Safety  
NCS Nuclear Criticality Safety  
NCSE Nuclear Criticality Safety Evaluation  
NRC Nuclear Regulatory Commission  
PDR Public Document Room