December 29, 2005

Mr. Hank A. Sepp
Project Director, Decommissioning
Westinghouse Electric Company, LLC
Hematite Fuel Manufacturing Facility
3300 State Road P
Festus, MO 63028

SUBJECT: NRC INSPECTION REPORT 070-00036/05-002(DNMS) - WESTINGHOUSE ELECTRIC COMPANY, LLC (HEMATITE) AND NOTICE OF VIOLATION

Dear Mr. Sepp:

On December 20, 2005, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the Westinghouse Hematite decommissioning facility. The purpose of the inspection was to determine whether decommissioning activities were conducted safely and in accordance with NRC requirements. Specifically, the inspection focused on the implementation of the nuclear criticality safety and environmental protection programs, including the collection of water, vegetation, and soil samples for independent radiological analysis. The inspectors also evaluated Westinghouse's: (1) radioactive waste management, (2) low-level radioactive waste storage, (3) transportation activities, (4) physical inventory, (5) management organization and controls, (6) maintenance and surveillance testing, and (7) OSHA interface activities. At the conclusion of the on-site inspections on August 11, September 22, and October 13, 2005, the NRC inspectors discussed the preliminary findings with you and members of your staff. On December 20, 2005, the inspectors completed an in-office review of laboratory data results for the environmental samples that were collected during the inspection and conducted a telephone exit interview with Mr. Tracy Chance, of your staff.

This 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. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, the collection of environmental samples for analysis by the NRC's contract laboratory, and interviews with personnel.

Based on the results of this inspection, the NRC has determined that a Severity Level IV violation of NRC requirements occurred. The violation was evaluated in accordance with the Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at www.nrc.gov; select **What We Do**, **Enforcement**, then **Enforcement Policy**. The violation involved the failure to report the loss or degradation of required nuclear criticality safety controls to the NRC within 24 hours. The violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in the subject inspection report.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. For your consideration and convenience, an excerpt from NRC Information Notice 96-28, "SUGGESTED GUIDANCE RELATING TO DEVELOPMENT AND IMPLEMENTATION OF CORRECTIVE ACTION," is enclosed. 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 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.

Sincerely,

/RA by G. McCann Acting for/

Jamnes L. Cameron, Chief
Decommissioning Branch
Division of Nuclear Materials Safety

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

Enclosures: 1. Inspection Report 070-00036/05-002(DNMS)
2. NRC Information Notice 96-28 (Excerpt)

cc w/encls: A. J. Nardi, Supervisory Engineer Environment Health and Safety
D. Childers, Director, Missouri Department of Natural Resources
R. A. Kucera, Director, Intergovernmental Cooperation
Missouri Department of Natural Resources
B. Moore, Missouri Department of Natural Resources

See Attached Distribution:

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NOTICE OF VIOLATION

Westinghouse Electric Company-Hematite, LLC
Hematite, Missouri

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

During a Nuclear Regulatory Commission (NRC) inspection conducted from August 8, 2005, through December 20, 2005, a violation of NRC requirements was identified. In accordance with the Enforcement Policy, the violation is listed below:

> Condition 17 of License No. SNM-00033 requires, in part, that the licensee conduct its program in accordance with the statements, representations, and procedures contained in the referenced documents, including any enclosures. License Condition 17. A references Chapter 2 of the licensee's application, "Organization and Administration," Revision 0, dated September 7, 2004.
>
> Section 2.7 of Chapter 2 of the license application states, in part, that procedures are mandatory and followed during the work activities. Section 6.4 of Procedure PR-NC-003, "Nuclear Criticality Safety Event Reporting," Rev. 0, dated January 26, 2004, states, in part, Nuclear Criticality Safety (NCS) events meeting NRC Bulletin 91-01 reportability requirements shall be submitted to the NRC Operations Center within the applicable 4-hour or 24-hour time limit.
>
> The licensee's amended response to NRC Bulletin 91-01, Supplement 1: Reporting Loss of Criticality Safety Controls, dated November 12, 1993, establishes the conditions requiring reporting to the NRC. Under "Cases Requiring a 24-Hour Report," the licensee established that criticality safety events that result in a violation of the double contingency principle, and are not reported within four hours, shall be reported to the NRC within 24 hours from the initial observation of the event or condition. The licensee established that any event that results in the violation of the double contingency principle, and where the double contingency principle cannot be reestablished within four hours after the initial observation of the event, shall be reported to the NRC within four hours.
>
> Contrary to the above, on January 10, 2005, the licensee identified that one of two controlled parameters had not been maintained for objects contaminated with fissile materials that had been placed in storage arrays, and the licensee failed to report to the NRC within 24 hours an NCS event involving the loss of the double contingency principle that met the NRC Bulletin 91-01 reportability requirements. Specifically, the licensee's controlled parameters were limited to spacing and fissile mass determination, and the licensee did not determine the mass of fissile material of objects placed into the arrays.
>
> This is a Severity Level IV violation (Supplement VI).

Pursuant to the provisions of 10 Code of Federal Regulations (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 reply should be clearly marked as a "Reply to a Notice of Violation" and should include: (1) the reason for the violation,

or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, 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 a Demand for Information may be issued as to 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, United States 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 bases 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 29th day of December 2005

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No.:	070-00036
License No.:	SNM-00033
Report No.:	070-00036/05-002(DNMS)
Licensee:	Westinghouse Electric Company, LLC
Facility:	Hematite Fuel Manufacturing Facility
Location:	3300 State Road P Festus, Missouri
Dates:	August 8 through 11, 2005 (on-site inspection) September 19 through 22, 2005 (on-site inspection) October 11 through 13, 2005 (on-site inspection) December 20, 2005 (in-office review and telephone exit)
Inspectors:	Gene Bonano, Health Physicist, Decommissioning Branch, Division of Nuclear Materials Safety (DNMS), Region III Amy M. Snyder, Senior Project Manager, Materials Decommissioning Section, Division of Waste Management and Environmental Protection, Office of Nuclear Material Safety and Safeguards (NMSS) Dennis C. Morey, Senior Criticality Safety Specialist, Technical Support Group, Division of Fuel Cycle Safety and Safeguards (FCSS), NMSS
Approved by:	Jamnes L. Cameron, Chief Decommissioning Branch, DNMS, RIII

EXECUTIVE SUMMARY

Westinghouse Electric Company, LLC
HEMATITE FUEL MANUFACTURING FACILITY
NRC Inspection Report 070-00036/05-002(DNMS)

This team inspection evaluated the Westinghouse Electric Company's performance related to the implementation of the nuclear criticality safety and environmental protection programs. The inspectors collected well and surface water (split samples), vegetation, and soil samples to be analyzed by the NRC's contract laboratory in Oak Ridge, Tennessee. The inspectors also evaluated the licensee's: (1) radioactive waste management, (2) low-level radioactive waste storage, (3) transportation activities, (4) physical inventory, (5) management organization and controls, (6) maintenance and surveillance testing, and (7) OSHA interface activities.

Nuclear Criticality Safety

- The inspectors did not identify any nuclear criticality safety (NCS) concerns during plant walk downs. (Section 1.1)

- The inspectors identified a Severity Level IV violation regarding the licensee's failure to report an NCS event regarding the loss or degradation of required NCS controls to the NRC within 24 hours. (Section 1.2)

- The licensee's implementation of NCS controls designed for the primary interference removal project assured the safety of the operations. (Section 1.2)

Environmental Protection

- The inspectors concluded that the licensee conducted the environmental monitoring program, sample collection, analysis, and laboratory operation in accordance with their procedures. (Section 2.0)

Radioactive Waste Management, Storage, and Transportation

- The licensee managed, stored, and transported low-level radioactive waste in accordance with the license requirements and procedures, and NRC regulations. (Section 3.0)

Physical Inventory

- The licensee accounted for all special nuclear material through the use of the physical inventory binder and summary report and conducted the physical inventory according to procedures. (Section 4.0)

Management Organization and Controls

- The inspectors concluded that the licensee effectively implemented its audit, oversight, and corrective action process. (Section 5.0)

Maintenance and Surveillance Testing

- The inspectors concluded that licensee radiation detection instrumentation and criticality safety alarms important to safety were operational and appropriately calibrated. (Section 6.0)

OSHA Interface Activities

- The inspectors concluded that the licensee performed decommissioning activities safely and in accordance with applicable OSHA requirements. (Section 7.0)

Report Details[1]

1.0 Nuclear Criticality Safety (88015)

1.4 Plant Operations

a. Inspection Scope

The inspectors performed plant walk downs to determine whether the licensee conducted risk-significant fissile material operations safely and in accordance with regulatory requirements. The inspectors verified the adequacy of management measures for assuring the continued availability, reliability and capability of safety-significant controls relied upon by the licensee for controlling criticality risks to acceptable levels. The inspectors interviewed managers, supervisors, health physics technicians and Nuclear Criticality Safety (NCS) engineers both before and during the walk-downs. The inspectors reviewed selected aspects of the following documents: PO-NC-001, "Nuclear Criticality Safety Plan," Revision 0, dated January 21, 2004; PR-NC-001, "Nuclear Criticality Safety Parameters," Revision 1, dated February 1, 2005; PR-NC-002, "Nuclear Criticality Safety Evaluation," Revision 1, dated September 27, 2004; and PR-NC-003, "Nuclear Criticality Safety Event Reporting," Revision 0, dated January 21, 2004.

b. Observations and Findings

The licensee conducted fissile material operations in conjunction with the decommissioning of the plant and site. The most risk-significant operation taking place was the removal of interferences from the former fuel fabrication buildings, including low enriched uranium fabrication equipment, ventilation and duct work, and the removal of gross contamination from surfaces and equipment. During interference removal, the licensee collected fissile material for uranium recovery and also for disposal as waste.

As described in NRC Inspection Report No. 070-00036/05-001(DNMS), the results of the licensee's January 2005 internal NCS audit identified numerous deficiencies in the licensee's implementation of its NCS control program, including array infractions involving both spacing and mass determination. The inspectors reviewed array locations and observed that array infractions had been corrected and fissile material was removed or properly labeled. The licensee's internal audit had also identified NCS posting infractions and weaknesses. The inspectors observed that NCS postings were placed as required.

c. Conclusion

The inspectors did not identify any nuclear criticality safety (NCS) concerns during plant walk-downs.

[1]A list of acronyms used in the report is included at the end of the Report Details.

1.2 NCS Function

a. Scope of Inspection

The inspectors reviewed NCS evaluations to determine whether: (1) the licensee assured criticality safety of risk-significant operations through engineered features and human performance (controls) with adequate safety margin/certainty; (2) the evaluations were prepared and reviewed by capable staff; and (3) NRC Bulletin 91-01 reporting requirements were being followed. The inspectors reviewed selected aspects of the following documents: PR-NC-003, "Nuclear Criticality Safety Event Reporting," Revision 0, dated January 21, 2004; TR015, "NCS Determination for UF_6 Line Decontamination," Revision 0, (pending administrative approval); TR003, "NCS Evaluation for the use of Negative Air Machines," Revision 4, (pending administrative approval); ML-92-029, "Response to NRC Bulletin 91-01 - Additional Information," dated May 15, 1992; ML-93-049, "Amended Response to Bulletin 91-01, Supplement 1: Reporting Loss of Criticality Safety Controls," dated November 12, 1993; and Issue Report #05-007-W015, submitted on January 1, 2005.

b. Observations and Findings

The inspectors reviewed criticality safety analyses performed by the licensee's criticality safety engineers for the interference removal project. The inspectors determined that analyses were performed by qualified NCS engineers, that independent reviews were completed for the evaluations by other qualified NCS engineers, that sub-criticality of the systems and operations was assured through appropriate limits on controlled parameters, and that double contingency was assured for each credible accident sequence leading to inadvertent criticality. The inspectors determined that NCS controls designed for the primary interference removal project, as documented and implemented, would assure the safety of the operations.

Condition 17 of License No. SNM-00033 requires, in part, that the licensee conduct its program in accordance with the statements, representations, and procedures contained in the referenced documents, including any enclosures. License Condition 17. A references Chapter 2 of the licensee's application, "Organization and Administration," Revision 0, dated September 7, 2004.

Section 2.7 of Chapter 2 of the license application states, in part, that procedures are mandatory and followed during the work activities. Section 6.4 of Procedure PR-NC-003, "Nuclear Criticality Safety Event Reporting," Rev. 0, dated January 26, 2004, states, in part, that NCS events meeting NRC Bulletin 91-01 reportability requirements shall be submitted to the NRC Operations Center within the applicable 4-hour or 24-hour time limit.

The licensee's amended response to NRC Bulletin 91-01, Supplement 1: Reporting Loss of Criticality Safety Controls, dated November 12, 1993, established the conditions requiring reporting to the NRC. Under "Cases Requiring a 24-Hour Report," the licensee established that criticality safety events that result in a violation of the double contingency principle, and are not reported within four hours, shall be reported to the NRC within 24 hours from the initial observation of the event or condition. The licensee established that any event that resulted in the violation of the double contingency principle, and where the double contingency principle cannot be reestablished within

four hours after the initial observation of the event, shall be reported to the NRC within four hours.

As described in NRC Inspection Report No. 070-00036/05-001(DNMS), the results of the licensee's January 10, 2005 audit of its criticality safety control program identified numerous deficiencies in the licensee's implementation of its program, including several examples of the failure to determine the mass of fissile materials contaminating objects placed into storage arrays. In accordance with the licensee's nuclear criticality safety evaluations, the licensee committed to control two parameters for objects placed into storage arrays: maintaining minimum spacing between the objects and determining the mass of fissile materials that accompanied the objects. No other parameters were controlled and all uncontrolled parameters important to critically were assumed to be at their least conservative value. Examples included optimal moderation and enrichment of 5 percent by weight uranium-235. Since the licensee failed to determine the mass of fissile materials placed into the arrays, the licensee failed to maintain one of two controlled parameters, thereby losing double contingency.

The licensee evaluated the identified condition for reportability when the condition was identified in January 2005. At that time, the licensee erroneously determined that double contingency had not been lost; since, anecdotally, the quantity of fissile material was in the form of surface contamination, mass was considered to be minimal, and inadvertent criticality was considered to be unlikely. Although the inspectors agreed with the licensee's assertion that inadvertent criticality was unlikely, the licensee had not maintained one of the two controlled parameters on which its criticality safety evaluation was based to assure that inadvertent criticality remained highly unlikely. As a result, the inspectors determined that the licensee's failure to make a 24-hour notification to the NRC of the loss of one of two controlled parameters, which resulted in the loss of double contingency, constituted a violation of Section 6.4 of Procedure PR-NC-003, "Nuclear Criticality Safety Event Reporting," Rev. 0, dated January 26, 2004 **(Violation 070-00036/2005-002-001(VIO)).**

Following the August 8 -11, 2005 inspection, the licensee made the required notification. As of the end of this inspection, the licensee's long-term corrective actions had not been determined by the inspectors.

c. Conclusions

The inspectors identified a Severity Level IV violation regarding the licensee's failure to report an NCS event regarding the loss or degradation of required NCS controls to the NRC within 24 hours. The licensee's implementation of NCS controls designed for the primary interference removal project assured the safety of the operations.

1.3 **Unresolved Item (URI) 70-36/2005-001** - Review of the adequacy of the licensee's implementation of a 12-foot spacing for High Efficiency Particulate Air (HEPA) filter housings stored in Building Numbers 254 and 256-1.

As described in NRC Inspection Report No. 070-00036/05-001(DNMS), the inspectors identified that the licensee's staff applied a fissile material spacing requirement from NCS Evaluation No. E-76X-001-R0-S0, to a pair of HEPA filter housings which were being relocated to the former process buildings. The HEPA filter housings contained fissile materials. The licensee staff received approval and independent review by NCS

specialists to conduct the change affecting the storage of fissile material. Following the NCS Specialists' review, the staff placed postings, requiring a minimum of 12-foot spacing from other fissile material, on each HEPA filter housing located in Building Numbers 254 and 256-1. The inspectors determined that the relocation of the HEPA filter housings was performed under an Enhanced Work Plan which contained NCS requirements for the operation. The inspectors also determined through interviews that the proposed relocation and NCS requirements had been discussed with two NCS specialists who had approved and independently reviewed the proposed NCS controls, as required by the licensee's NCS program. This item is closed.

2.0 Environmental Protection (88045)

a. Inspection Scope

The inspectors toured the site and evaluated the licensee's environmental monitoring program. This included reviewing the licensee's technical basis for the monitoring program, the licensee's procedure PR-HP-011, "Environmental Sampling," Revision 1.1; the contractor's laboratory procedure TBE-2021, "Technetium-99 (Tc-99) Analysis by Eichrom Resin Separation," Revision 2; and TBE-2008, "Gross Alpha and/or Gross Beta Activity in Various Matrices," Revision 1. The inspectors interviewed management and technical staff concerning the management and technical basis for the location of monitoring wells, and collected split water samples, soil and vegetation samples to verify the adequacy of the contractor's laboratory analytical counting capability.

b. Observations and Findings

The inspectors observed the licensee's environmental monitoring technicians prepare sample collecting equipment, collect and document their quarterly samples in accordance with the environmental sampling procedure, PR-HP-011. The technicians demonstrated knowledge and competence during sample collection, and maintained the integrity and chain-of-custody of all samples. The inspectors did not have any concerns with the contractor's laboratory counting procedures.

The inspectors collected select split water samples (BR-1-RB, BR-4-JC, WS-4, WS-5, WS-6, WS-7, WS-8, WS-9, WS-13, WS-15, WS-16, WS-17B, WS-18), soil (SS-10, SS-11, SS-12, SS-13, SS-14, SS-15, SS-16), and vegetation (VS-12, VS-13, VS-14, VS-15) samples, and sent them to the NRC's contract lab, the Environmental Survey and Site Assessment Program (ESSAP) of the Oak Ridge Institute for Science and Education (ORISE), for analysis to verify the adequacy of the licensee's analytical counting capability. The analytical results of the samples collected by the NRC showed good agreement with the licensee's sample results. The results of the ORISE analyses are publicly available through NRC's Agencywide Documents Access and Management System (ADAMS) under Accession No. ML053540063.

The licensee conducted its environmental monitoring program in accordance with procedures PR-HP-011, TGE-2021, and TBE-2008.

c. Conclusions

The inspectors concluded that the licensee conducted the environmental monitoring program, sample collection, analysis, and laboratory operation in accordance with their procedures.

3.0 Radioactive Waste Management, Storage, and Transportation (88035) (84900) (86740)

a. Inspection Scope

The inspectors evaluated the licensee's activities involving the management, storage and transportation of low-level radioactive waste, and reviewed the licensee's procedures: MCP-HE-OP-205, "Radioactive Material Handling," Revision 2; PR-DO-019, "Packaging of Radioactive Waste," Revision 0; PR-WM-001, "Shipping and Receiving Radioactive Material," Revision 1; and PO-WM-001, "Hematite Former Fuel Cycle Facility Decommissioning," Revision 1. The inspectors also interviewed select management and technical staff to determine their knowledge and awareness of the management, storage, and transportation of radioactive material. The inspectors reviewed the licensee's radioactive airborne and liquid effluent emission reports.

b. Observations and Findings

All personnel demonstrated knowledge and awareness of Hematite's radioactive waste program and procedures. The licensee maintained supporting documentation for record keeping in a complete and detailed manner, such as the following two shipments: (1) low-level waste shipment dated September 19, 2005; Container Number: MHFU-010181, Manifest Number: 0674-11-0134. The shipment contained soil and debris with a total activity of 9.747 millicuries of U-234, U235, U-238, Pu-241, and Tc-99 loaded into an intermodal. The shipping papers, NRC Form 541 and 741 were complete and detailed with the required information. The documentation also included a Radiological Survey Report, WS-071305-01, dated July 13, 2005, to show compliance with the licensees procedures and with Envirocare shipping requirements. (2) Shipment of mixed powder, pellets, and vacuum sweeps contained in twenty-seven 55-gallon drums to Columbia, South Carolina; Shipment Number: CAE-2, dated: July 12, 2005. The licensee also loaded, in a safe manner, bulk waste into containers for disposal at the Envirocare of Utah, Inc. Bulk Waste Disposal and Treatment Facility in accordance with work instruction, WI-019, Revision 0.

The licensee's semi-annual summaries of radiological reporting of liquid effluent from monitoring wells, stack emissions, and perimeter air monitoring stations did not indicate levels above the 10 CFR Part 20 limits for effluent into unrestricted areas.

c. Conclusions

The licensee managed, stored, and transported low-level radioactive waste in accordance with the license requirements and procedures, and NRC regulations.

4.0 Physical Inventory (85404)

a. Inspection Scope

The inspectors reviewed the "2005 Physical Inventory Document Binder for Hematite Former Fuel Cycle Facility;" and the "Special Nuclear Material (SNM) and Source Material (SM) Physical Inventory Summary Report," dated August 25, 2005.

b. Observations and Findings

The physical inventory was completed on July 15, 2005, in accordance with 10 CFR 74.31(c)(5) and the licensee's Material Control and Accountability (MC&A) procedure PR-MCA-003, "Physical Inventory." The physical inventory document binder is complete and up to date. The summary report was thorough and accounted for all material in the facility. The licensee conducted their annual MC&A inventory training in accordance with PR-MCA-003. Operators conducting the physical inventory understood the requirements and procedures for physical inventory.

c. Conclusions

The licensee accounted for all special nuclear material through the use of the physical inventory binder and summary report and conducted the physical inventory according to procedures.

5.0 Management Organization and Controls (88005)

a. Inspection Scope

The inspectors evaluated the licensee's audit and corrective action process (CAPs). The inspectors reviewed the licensee's procedure PR-HP-015, "Health Physics Oversight," Revision 1; PR-EHS-012, "Environment, Health and Safety Oversight," Revision 2; and PR-QA-004, "Nonconformances," Revision 0.

b. Observations and Findings

The Hematite Criticality Safety Program Evaluation Audit Report Number A-0605-001, for the June 20-25, 2005 audit, documented the licensee's evaluation and confirmation of the radioactive waste transportation program. The audit was conducted in accordance with the policies and procedures at the Westinghouse Hematite facility, PO-QA-002, "Transportation Quality Assurance Plan," Revision 1; PO-WM-001, "Waste Management and Transportation Plan," Revision 1; and PR-WM-001, "Shipping and Receiving Radioactive Material." The licensee identified two findings out of 47 key functions of the Hematite transportation policies and procedures. The findings were tracked to completion by the CAPs system, Issue Report Number 05-209-W003.

The licensee performed a weekly oversight of radiation protection activities consisting of a review of: (1) radiological surveys, (2) radiological postings of areas, (3) Radiation Work Permits (RWPs), (4) radiation worker qualification and training, (5) radiological survey instrumentation, (6) HP procedures, work instructions, and technical basis documents, and (7) control of radioactive material. The inspectors noted that the licensee staff were thorough in their assessments of the radiation protection activities.

The inspectors observed licensee staff perform their walk down and surveillance of the Hematite facility and work areas to ensure that applicable environmental, health and safety practices and procedures were employed.

c. Conclusions

The inspectors concluded that the licensee effectively implemented its audit, oversight, and corrective action process.

6.0 Maintenance and Surveillance Testing (88025)

a. Inspection Scope

The inspectors reviewed selected licensee procedures and calibration records to evaluate whether licensee equipment important to safety was appropriately calibrated. The review included portable and stationary radiation detection instruments used to assess radiological and criticality conditions and to detect radioactive contamination on personnel. The inspectors also toured the licensee's former production facility.

b. Observations and Findings

The licensee analyzed radiological air and smear samples using a Tennelec, Model LB 5100 Series II, gas proportional counter. The licensee maintained a certificate demonstrating calibration within the specified frequency for the instrument and the health physics staff verified the instrument response to radiation daily, prior to conducting any analysis. Sources used to routinely verify the instrument response were traceable to the National Institute of Standards and Technology. The licensee's health physics staff controlled the sources to prevent degradation of the radioactive material affixed to the source surfaces.

The licensee's staff routinely performed radiological surveys of building surfaces, equipment, and personnel, using various portable radiation detection instruments. The inspectors observed that all the instruments in use by the licensee's staff had certificates demonstrating calibration within the specified frequency. In addition, the instruments available to the staff to perform radiological surveys were appropriate for the expected radiological conditions. The licensee's staff verified each instrument's response to radiation daily, prior to using the instrument to conduct surveys.

The inspectors verified that the licensee maintained certificates of calibration for each of its Eberline Model EC-1 criticality safety alarms. The criticality safety alarms were calibrated annually by the manufacturer in accordance with licensee procedure PR-HP-010, "Alarm Testing," Revision 0. In addition, the licensee's health physics staff performed a quarterly calibration verification of each criticality safety alarm in service.

The licensee maintained a current Westinghouse Hematite HP Surveillance listing that contained the location, type of test/surveillance, and frequency of testing.

c. Conclusion

The inspectors concluded that licensee radiation detection instrumentation and criticality safety alarms important to safety were operational and appropriately calibrated.

7.0 OSHA Interface Activities (93001)

a. Inspection Scope

The inspectors evaluated the licensee's conduct of decommissioning work activities to assess the licensee's compliance with Occupational Safety and Health Administration (OSHA) requirements.

b. Observations and Findings

The inspector did not identify any concerns associated with the licensee's implementation of industrial safety. The inspectors attended the licensee's morning safety briefings and determined that the licensee adequately briefed workers on the safety hazards involved with assigned decommissioning activities.

c. Conclusions

The inspectors concluded that the licensee performed decommissioning activities safely and in accordance with applicable OSHA requirements.

8.0 Exit Meeting Summary

The NRC inspectors presented preliminary inspection findings to members of the facility management team following each onsite inspection. On December 20, 2005, the inspectors completed an in-office review of laboratory data results for the environmental samples that were collected during the inspection and conducted a telephone exit interview with the radiation safety officer. The licensee acknowledged the findings presented and did not identify any documents or processes reviewed by the inspectors as proprietary.

PARTIAL LIST OF PERSONS CONTACTED

Westinghouse Electric Company, LLC
H. Sepp, Decommissioning Director
J. Nardi, Chairman, Project Oversight Committee
S. Welch, Administrative Assistant
K. Hayes, Manager Environment, Safety and Health
C. Werner, Operations Support Manager
G. Vytlacil, Licensing/QA Policies Manager
T. Chance, RSO/Radiation Protection Manager
J. Nowak, Field Operations Manager
H. Anagnostopoulos, Health Physics Supervisor (SAIC)
N. Lambha, Senior Criticality Safety Engineer (NYSIS Corporation)
T. Mock, Waste Management/Transportation Manager
J. Bennett, Assistant Environmental Engineering Manager
H. Doughty, Site Operations Manager
M. Cushman, Criticality/MCA Supervisor

State of Missouri
B. Moore, Missouri Department of Natural Resources
S. Lung, Missouri Department of Natural Resources

INSPECTION PROCEDURES USED

IP 84900	Low-Level Radioactive Waste Storage
IP 85404	Physical Inventory
IP 86740	Transportation Activities
IP 88005	Management Organization and Controls
IP 88015	Headquarters Nuclear Criticality Safety Program
IP 88025	Maintenance and Surveillance Testing
IP 88035	Radioactive Waste Management
IP 88045	Environmental Protection
IP 93001	OSHA Interface Activities

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened	Type	Summary
VIO 07000036/2005-202-01	VIO	Failure to report an NCS event per NRC Bulletin 91-01 to the NRC within 24 hours.

Closed

URI 07000036/2005-001-02	URI	NRC review of the adequacy of the licensee's implementation of a 12-foot spacing for HEPA filter housings stored in Building Nos. 254 and 256-1.

Discussed

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
CAPs	Corrective action process
CFR	Code of Federal Regulations
DNMS	Division of Nuclear Material Safety
FCSS	Division of Fuel Cycle Safety and Safeguards
HEPA	High Efficiency Particulate Air
MC&A	Material Control & Accountability
NCS	Nuclear Criticality Safety
NMSS	Office of Nuclear Material Safety and Safeguards
NRC	U.S. Nuclear Regulatory Commission
ORISE	Oak Ridge Institute for Science and Education
OSHA	Occupational Safety and Health Administration
PDR	Public Document Room
SNM	Special Nuclear Material
URI	Unresolved Item
VIO	Violation