

October 28, 2011

Mr. E. Kurt Hackmann,
Director Decommissioning Project
Westinghouse Electric Company
Nuclear Fuels
3300 State Road P
Festus, MO 63028

SUBJECT: NRC INSPECTION REPORT 070-00036/11-01(DNMS) – WESTINGHOUSE
ELECTRIC COMPANY (HEMATITE)

Dear Mr. Hackmann:

On October 14, 2011, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the Westinghouse Hematite facility located near Festus, Missouri. 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 management oversight, radioactive waste transportation, technician staff training and effluent monitoring program. The enclosed report presents the results of this inspection, which were discussed with you and members of your staff during a telephonic exit meeting on October 14, 2011.

The inspection consisted of an examination of decommissioning activities at the Westinghouse 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, and interviews with personnel.

Based on the results of the inspection, no violations were identified.

The NRC is continuing to review: (1) whether a change in the Licensing Manager violated NRC requirements; and (2) circumstances surrounding the identification of elevated Technetium-99 concentrations in onsite monitoring well BD-02. Detailed descriptions of these issues are discussed in the enclosed report.

In accordance with Title 10 Code of Federal Regulations (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 NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

E. Hackmann

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We will gladly discuss any questions you may have regarding this inspection. If you have questions, please feel free to contact Michael LaFranzo of my staff at (630) 829-9865.

Sincerely,

/RA/

Christine A. Lipa, Chief
Materials Control, ISFSI
and Decommissioning Branch

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

Enclosure:
Inspection Report No. 070-00036/11-01(DNMS)

cc w/encl: Hematite Distribution Service List

E. Hackmann

-2-

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cc w/encl: Hematite Distribution Service List

DISTRIBUTION w/encl:

Jenny Weil
Keith McConnell
Paul Michalak
John Hayes
Anne Boland
Patrick Loudon
Harral Logaras
Carole Ariano
MCID Branch

*See previous concurrence

DOCUMENT NAME: G:\DNMS\Work in progress\IR - Hematite\Letter11-01 r0 draft (2).docx

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No.:	070-00036
License No.:	SNM-00033
Report No.:	070-00036/11-01(DNMS)
Licensee:	Westinghouse Electric Company, LLC
Facility:	Former Hematite Fuel Manufacturing Facility
Location:	3300 State Road P Festus, Missouri
On-Site Inspection Dates:	August 22-24, 2011 and September 26-30, 2011
Inspectors:	Michael M. LaFranzo Senior Health Physicist
Approved by:	Christine A. Lipa, Chief Materials Control, ISFSI, and Decommissioning Branch Division of Nuclear Materials Safety

Enclosure

EXECUTIVE SUMMARY

Westinghouse Electric Company, LLC
Hematite Fuel Manufacturing Facility (Decommissioning)
NRC Inspection Report 070-00036/11-01(DNMS)

This routine decommissioning inspection evaluated the Westinghouse Electric Company's (WEC) on-going decommissioning activities at the Hematite Facility, Festus, Missouri. This routine decommissioning inspection focused on the licensee's management oversight, radioactive waste transportation, technician staff training and effluent monitoring program.

Management Organization and Controls

- Overall, management was adequately engaged in NRC licensed activities and provided appropriate oversight to ensure procedures were being adequately reviewed for decommissioning work to be performed in the future. NRC is reviewing whether a violation of NRC requirements occurred regarding a change in the Licensing Manager. (URI 070-00036/11-01-01) (Section 1.0)

Radiation Protection

- The licensee's technician training procedures appeared adequate to ensure technicians had appropriate knowledge of anticipated future decommissioning activities. (Section 2.0)

Transportation Activities

- The licensee's documentation of shipment packaging, radiation surveys, vehicle surveys, and licensee verification of shipment destination for shipments between January 1, 2010 and August 1, 2011 were adequate to ensure compliance with NRC and DOT regulations. (Section 3.0)

Effluent Control and Environmental Protection

- The licensee identified elevated Technetium-99 (Tc-99) contamination levels in on site Monitoring Well BD-02 and is continuing to determine the cause and methods to limit the spread of contamination through the underground strata. The NRC is continuing to perform independent monitoring and assessments to ensure the Tc-99 is properly controlled and the spread of contamination in the underground strata is limited and controlled. (URI 070-00036/11-01-02) (Section 4.0)

Report Details

1.0 Management Organization and Controls (88005)

a. Inspection Scope

The inspector observed various decommissioning activities to assess management involvement, management support and the level of engagement in NRC licensed activities. Specifically, the inspector reviewed the licensee's procedure approval process and evaluated management oversight of the radiological safety program.

b. Observations and Findings

The inspector determined that adequate processes were developed for procedure review and management approval. The inspector selectively verified that radiological safety procedures including those associated with training, environmental monitoring and future site remediation were approved, consistent with the licensee's process. The inspector selectively reviewed several generated Corrective Action Process (CAP) documents to determine management oversight in ensuring proper resolution of identified issues. Through observations and interviews, the inspector determined that licensee management was actively involved in NRC licensed activities and appropriately monitored ongoing building demolition work.

During the inspection, the NRC reviewed the licensee's CAP 11-098-W0003 with an Issue title of "Organizational Change Violates NRC License." The issue involves whether a change of the Licensing Manager, by the licensee, violated NRC requirements. Specifically on February 21, 2011, the licensee made changes within the management organizational structure which included a potential change to the Licensing Manager position whereby the Licensing Manager was retitled as the Acting Licensing Manager and a management position between the Licensing Manager and the Director titled "*Interim Licensing Criticality and MC&A Manager*" was added. On April 14, 2011, the licensee submitted a document Titled "Change in Hematite Licensing Manager" whereby changes were made in specific personnel as the former Acting Licensing Manager had left the facility for other employment.

Condition 16 of License No. SNM-33 states that the licensee shall conduct its program in accordance with the statement, representations, and procedures contained in the Application dated May 22, 2009 (Chapter 2 Sections 2.1-2.3 only). Section 2.1 of the Application dated May 22, 2009 requires, in part, that within 30 days of a change of the individual designated as Licensing Manager, the licensee shall submit to NRC written notification of the change. Section 2.1 also lists the experience and qualifications necessary as a Licensing Manager.

In August 2011, the licensee's corporate program developed and issued a report which addressed whether or not a violation of NRC requirements occurred. The corporate report stated that "*since February 21, 2011, contrary to the requirements of the NRC license, the criticality safety and MC&A management responsibilities have been removed from the Licensing Manager and assigned to the Interim Licensing Criticality and MC&A Manager.*" In addition, the corporate report stated that the "*...interim Licensing Criticality and MC&A Manager had not been verified to meet the licensing*

Manager experience and qualifications requirements of the license, including EH&S managerial experience and competency in criticality safety.”

On the week of September 26th, the licensee provided NRC information which responded to the corporate report and documented why a violation of NRC requirements had not occurred.

The NRC reviewed the experience and qualifications of the two individuals, as provided by the licensee, that had replaced the former Licensing Manager on or about April 13, 2011 and did not determine that there were significant deficiencies in the experience and qualifications requirements of those individuals. The NRC is continuing to review the licensee’s organizational change relating to the Licensing Manager to determine whether: (1) the licensing manager experience and qualifications are adequate to ensure radiological safety at the site and compliance with NRC requirements; and (2) the licensee made a timely notification of the Licensing Manager change (URI 070-00036/11-01-01).

c. Conclusions

Overall, management was adequately engaged in NRC licensed activities and provided appropriate oversight to ensure work was executed consistent with procedures. The NRC will continue to review the licensee’s change of the Licensing Manager to ensure the individuals have adequate knowledge to ensure radiological safety at the site and NRC regulatory compliance (URI 070-00036/11-01-01).

2.0 Radiation Protection (83822)

a. Inspection Scope

The inspectors reviewed the training program related to radiation protection activities to determine if the program was adequate to ensure appropriate knowledge of technicians to ensure safety and compliance with NRC requirements.

Radiation protection program procedures were reviewed to determine if they were consistent with regulatory requirements and included appropriate limits, precautions and controls.

b. Observations and Findings

The inspectors determined that the procedures for the licensee’s training program met the NRC commitments and requirements and technicians had received or were receiving training that was related to the anticipated future decommissioning activities at the site.

No findings of significance were identified.

c. Conclusions

Training procedures for technicians were adequately developed to meet regulatory requirements.

3.0 Transportation Activities (86740)

Shipment Radiological Surveys and Manifests

a. Inspection Scope

The inspector reviewed the documentation of shipment packaging, radiation surveys, vehicle surveys, and licensee verification of shipment destination for shipments between January 1, 2010 and August 1, 2011.

For these shipments, the inspector determined if the requirements of 10 CFR Parts 20 and 61 and those of the Department of Transportation (DOT) in 49 CFR Parts 170-189 were met. Specifically, the inspectors reviewed shipment records and interviewed staff regarding overall shipment preparatory activities and final disposition of shipment.

b. Observations and Findings

Between January 1, 2010 and August 1, 2011, in excess of 250 shipments were made by the licensee involving a relatively large volume of radiologically contaminated waste. The majority of those shipments involved the transportation of process building rubble (waste) which occurred between March and July 2011. The inspector took a representative documentation sample and verified the appropriate manifest documentation was complete, which included but was not limited to waste volume, total radionuclide activity and final disposition of the shipment, and radiological surveys were performed and completed consistent with licensee procedures and NRC requirements.

No findings of significance were identified.

c. Conclusions

The licensee's radioactive shipments, which included the process building waste, was prepared and manifested as provided by licensee procedure to meet NRC and DOT requirements.

4.0 Effluent Control and Environmental Protection (88045)

Environmental Monitoring

a. Inspection Scope

The inspector reviewed the licensee's environmental monitoring program associated with underground water sampling through monitoring wells. This included the licensee's identification of a radiologically elevated water sample. The inspector reviewed the circumstances surrounding the identification of elevated readings, the licensee's analysis of the information and their response.

b. Observations and Findings

During the inspection period, the licensee informed the inspector that a water sample collected on June 27, 2011, from Monitoring Well BD-02 contained elevated levels of the radionuclide Technetium-99 (Tc-99). The concentration reported by the independent

laboratory was approximately five times the historic levels for this well. The location of this well is within the footprint of the buildings that were demolished this spring and summer. The licensee has acknowledged that Tc-99 contamination exists in locations under the concrete pads of the buildings that were demolished this year. The licensee requested the sample be re-analyzed by the laboratory. The sample was re-analyzed by the laboratory and similar results were reported to the licensee.

A preliminary analysis by the licensee indicated that when the buildings were removed, water infiltrated the surrounding area which caused an increase in water pressure forcing contaminated water into the well. The licensee is currently reviewing: (1) the mechanism for which water infiltrated into the well; (2) whether Tc-99 contamination is being transferred between underground strata layers and, possibly, into ground water; (3) whether wells in the area have similar infiltration issues; and (4) whether Tc-99 contamination identified in the well BD-02 is being transferred to other wells in the area via ground water. At this time, the licensee has not identified elevated Tc-99 levels in other wells in the area.

The NRC will monitor the licensee's analysis and perform independent assessments to determine the cause of the elevated Tc-99 concentrations in Monitoring Well and to ensure that the licensee is taking all necessary actions limit the spread of the contamination to underground strata, including ground water, and limit the impact to the public and environment. (URI 070-00036/11-01-02)

c. Conclusions

The licensee identified elevated Tc-99 concentrations in onsite monitoring well BD-02 and was taking actions to identify and control the spread of radiological contamination to underground strata, including the ground water. NRC is monitoring the licensee's progress and performing independent assessments to ensure the public health and safety. (URI 070-00036/11-01-02)

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Westinghouse Electric Company

E. K. Hackmann, Director, Hematite Decommissioning Project
G. Rood, Radiation Safety Officer
K. Davis, Interim Manager, Licensing
K. Harris, Manager, Environmental Health & Safety
C. Cummin, Waste Management/Transportation Specialist
W. Mattern, Manager, Security Operations
D. Atchison, Training Supervisor

INSPECTION PROCEDURES USED

IP 88005	Management Organization and Controls
IP 83822	Radiation Protection
IP 86740	Inspection of Transportation Activities
IP 88045	Effluent Control and Environmental Protection

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened	<u>Type</u>	<u>Summary</u>
URI 070-00036/11-01-01	URI	Organizational Change May Violate NRC Requirements
URI 070-00036/11-01-02	URI	Elevated Tc-99 Concentration in One Sampling Well

<u>Closed</u>	<u>Type</u>	<u>Summary</u>
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None

Discussed

None

LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access and Management System
CAP	Corrective Action Process
CFR	Code of Federal Regulations
DNMS	Division of Nuclear Materials Safety
DOT	Department of Transportation
EH&S	Environmental Health & Safety
IP	Inspection Procedure
MC&A	Materials Control & Accountability
NRC	U.S. Nuclear Regulatory Commission
URI	Unresolved Issue

SNM Special Nuclear Material
WEC Westinghouse Electric Company

DOCUMENTS REVIEWED

HDP-PR-PSP-120 "HDP Staff, Subcontractor, Vendor Personnel In/Out Processing" Rev. 1

HDP-PR-HP-102 "Health Physics Technician Training" Rev. 4

HDP-PR-GM-020 "Training Material Development and Documentation of Training" Rev. 6

HDP-PR-WM-907, Radiological Surveys for Shipment and Receipt of Radioactive Material;
Revision 0

HDP-PR-WM-910 "Shipment of Radioactive Material" Rev. 0

HDP-PR-WM-911 "Shipment of Radioactive Waste" Rev. 2

HDP-PO-GM-002 "Training Plan" Rev. 4

HDP-PR-PSP-111 "Security Responsibilities of Site Personnel" Rev. 1

HDP-PR-QA-020 "HDP Corrective Action Process" Rev. 1

HDP-PR-LI-005 "Facility Change Management" Rev. 1

HDP-PO-EM-001, "Effluent and Environmental Monitoring Plan" Rev 1

CAP #11-098-W0003 "Organizational Change Violates NRC License"

CAP #11-242-W0004 "Elevated Tc-99 concentration in ground water"