September 25, 2009

CAL 3-08-005
NMED 090025
NMED 090479

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

SUBJECT: NRC INSPECTION REPORT 070-00036/09-01(DNMS) - WESTINGHOUSE ELECTRIC COMPANY (HEMATITE)

Dear Mr. Hackmann:

This refers to the U.S. Nuclear Regulatory Commission (NRC) inspection conducted between August 24-26, 2009, at the Westinghouse Hematite decommissioning facility (Inspection Report No. 070-00036/09-01(DNMS), enclosed). 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 organization and controls, radiation protection, corrective action, and effluent control and environmental protection. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel. The enclosed report presents the results of this inspection, which were discussed with you during an exit meeting on August 26, 2009.

Based on the results of this inspection, one violation was identified, which is being cited as a Non-Cited Violation (NCV), consistent with Section VI.A of the Enforcement Policy. The NCV is described in the subject inspection report. If you contest the violation or significance of the NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001, with copies to: (1) the Regional Administrator, Region III; and (2) the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response, 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. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Sincerely,

/ RA /

Christine Lipa, Chief
Materials Control, ISFSI and Decommissioning Branch

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

Enclosure:
Inspection Report 070-00036/09-01(DNMS)

cc w/encl: M. Templeton, Director, Missouri Department of Natural Resources
D. Buntin, Director, Intergovernmental Cooperation
Missouri Department of Natural Resources
E. Gilstrap, Project Manager, Missouri Department of Natural Resources

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No.:	070-00036
License No.:	SNM-00033
Report No.:	070-00036/09-01(DNMS)
Licensee:	Westinghouse Electric Company, LLC
Facility:	Former Hematite Fuel Manufacturing Facility
Location:	3300 State Road P Festus, Missouri
Dates:	August 24-26, 2009
Inspectors:	William Snell, Senior Health Physicist, Region III Dr. Peter Lee, Health Physicist, Region III
Approved by:	Christine Lipa, Chief Materials Control, ISFSI, and Decommissioning Branch, DNMS, RIII

Enclosure

EXECUTIVE SUMMARY

Westinghouse Electric Company, LLC
HEMATITE FUEL MANUFACTURING FACILITY
NRC Inspection Report 070-00036/09-01(DNMS)

This inspection evaluated the Westinghouse Electric Company's (WEC) performance related to decommissioning of the Hematite facility, including management organization and controls, radiation protection, corrective action, and effluent control and environmental protection. The inspection also included a review of three licensee 30-day Event Reports and actions taken per Confirmatory Action Letter 3-08-005.

Management Organization and Controls

The licensee has made improvements in the implementation of its Corrective Actions Process. All nine Root Cause Analyses that were open during the previous inspection have been closed, while metrics used to track the CAPs program performance have improved from one green and six red in June 2008 to five green and one red in July 2009. No concerns were identified. (Section 1.0)

Environmental Monitoring

Soil and sediment samples collected by the licensee in the vicinity of Outfall #1 are consistent with samples previously collected by the NRC. The licensee has addressed remediation of this area in its Decommissioning Plan. (Section 2.0)

Radiation Protection Program

The inspector determined that the installation of the rail spur and loading pad meet NRC regulatory requirements, and the doses to the workers and members of the public are within regulatory limits. (Section 3.0)

Report Details[1]

1.0 Management Organization and Controls (88005)

a. Inspection Scope

The inspectors evaluated the licensee's implementation of its corrective actions process (CAPs) and interviewed the Corrective Actions Manager (CAM) to assess the licensee's progress since the previous inspection in addressing open CAPs issues and completing Root Cause Analyses (RCAs). The inspectors also reviewed the licensee's RCA Report CAPS-RCA-07-256-W002, *Failure to Label Containers of Radioactive Waste*, Rev. 0, and Hematite Decommissioning Procedure (HDP) PR-GM-010, *Document Requirements*, Rev. 3.

b. Observations and Findings

Since the previous inspection the licensee had implemented a number of positive changes in its CAPs program. One change was to establish a staff level Team Leader position in each Department who was trained to enter issues reports (IRs) into the CAPs data base. Previously, access to the Westinghouse computer system in which the CAPs software resided was essentially limited to supervisory personnel. As a result a staff member with an issue had to enlist a manager to enter that issue into CAPs system. With the Team Leader positions, workers will be able to approach a peer as opposed to a manager to have issues and concerns documented in CAPs for follow-up and potential corrective action. Another program improvement initiated by the licensee was to wait to close out IRs until after the Corrective Action Review Board (CARB) had an opportunity to review the corrective actions implemented. In the past the CARB was periodically reopening closed IRs that it felt had not been adequately addressed or documented since these issues had been closed out prior to the final review by the CARB.

The licensee tracked the overall state of the CAPs program through seven monthly metrics which included items such as the percent of issues self identified, the number of issues screened in less than seven days, the percent of commitments completed on time, etc. In June of 2008, six of the seven metrics were colored red, indicating they were not meeting the program goals, with only one colored green, indicating the goal was being met. In July 2009, six of the seven metrics were green, with the goal to complete the RCAs in less than 75 days the only red metric. In this case, the only two RCAs in the metric had already exceeded the 75 day goal prior to the beginning of the metric assessment period.

During the previous inspection it was noted that of the nine open RCAs, the completion dates for all except one of the RCAs significantly exceeded the licensee's 75 day goal for completion. During this inspection the licensee stated that all nine of the RCAs had been completed and there had been no new ones initiated. The inspector reviewed the last RCA closed out by the licensee, CAPs-RCA-07-256-W002, and found the scope and depth adequate, and identified no concerns with the conclusions. Currently the licensee

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

has six site personnel who are trained as RCA Analysts, which should ensure that any future RCAs will be completed within 75 days.

The inspector reviewed computer printouts regarding the licensee's progress in reviewing and revising site procedures and policy documents. Since January 2008, the licensee has completed 164 revisions out of 278 scheduled to be conducted. This represented 129 procedures and policies since some had received more than one revision. Each planned revision has an assigned priority to ensure that the most important revisions are conducted first. A review of HDP-PR-GM-010 regarding the process of documenting procedures and policies, the inspector noted it had been revised to better clarify definitions such as "Quality Record," "shall," "should," and "HDP Document." The procedure also added provisions for validation of calculations, and added verbatim compliance requirements in documents "to reflect the expectation that work is conducted as planned, or stopped if the plan needs change."

c. Conclusion

The licensee has made improvements in the implementation of its Corrective Actions Process. All nine Root Cause Analyses that were open during the previous inspection have been closed, while metrics used to track the CAPs program performance have improved from one green and six red in June 2008 to five green and one red in July 2009. No concerns were identified.

2.0 Environmental Monitoring (88045)

a. Inspection Scope

The inspectors evaluated the results of soil and sediment samples collected by the licensee in the vicinity of Outfall #1, the discharge location from the site sanitary wastewater treatment plant to the tributary downstream of the Site Pond on the southwest side of the site. The samples were collected in response to samples collected by the NRC during inspection activities in January 2009, and documented in Inspection report 070-000036/2008-02(DNMS) dated July 23, 2009.

b. Observations and Findings

Surveys of the Outfall #1 area performed by the NRC during January 5-8, 2009, identified radiation levels of 8,000 counts per minute (cpm) above background, including two hot spots of 10,000 cpm above background. Two soil samples collected and analyzed by alpha spectroscopy identified uranium-235 of 18.4 and 3.3 picocuries per gram (pCi/g) and uranium-238 of 475 and 85.5 pCi/g.

The licensee conducted surveys and collected soil/sediment on March 10, 2009 and April 24, 2009. The inspector reviewed the licensee's survey and sample results collected in the vicinity of and downstream from the Outfall #1 discharge location. The licensee measured radiation levels up to 7,000 cpm above background with the sample with the highest concentrations measuring 31.9 pCi/g uranium-235 and 122 pCi/g uranium-238. All samples were at approximately 4 percent enrichment.

The licensee has outlined its plans for remediating the soil in the Site Pond and Site Creek, including in the area of Outfall #1, in the Decommissioning Plan submitted to the NRC on August 12, 2009.

c. Conclusion

Soil and sediment samples collected by the licensee in the vicinity of Outfall #1 are consistent with samples previously collected by the NRC. The licensee has addressed remediation of this area in its Decommissioning Plan.

3.0 Radiation Protection Program (83822, 88035)

a. Inspection Scope

The inspectors reviewed the work package *Install Rail Spur to Hematite Site* (WP-2009-005) to assure the work activities were in compliance with regulatory requirements, and the doses to the workers and member of the public would be within the regulatory limits. The inspectors toured and observed the rail spur work activities.

b. Observations and Findings

The licensee plans to ship a majority of decommissioning waste to an off-site disposal facility by rail. To accomplish this, the licensee is installing a rail spur and rail car loading pad on the northeast side of the site, parallel to the existing Union Pacific rail line. The rail spur will connect to the Union Pacific rail line approximately 350 feet northeast of the site Controlled Access Area fence and extend parallel to that rail line southwest approximately 1000 feet. The rail car loading pad will extend from the location approximately 50 feet northeast of the Evaporation Ponds, and will parallel the rail spur northeast for approximately 500 feet.

During the inspection, the licensee was preparing for the rail spur and rail car loading pad installations. The location of the rail spur does not encroach on the burial pit locations or soil areas associated with the processing buildings. Rail spur installation will require removal of soil to a maximum depth of approximately four feet and placement of non-contaminated fill materials. The estimated volume for removal is about 620 cubic yards. The rail car loading pad installation will require removal of soil to an average depth of approximately one foot. After removal of the soil a geotextile fabric will be installed and the area will be filled with clean fill. The estimated volume for removal is about 950 cubic yards.

The monitoring well in the area which is required by the License Application, Well # GW-WS-17B is not impacted by the work.

A final status survey of the rail spur and railcar loading pad conducted during June 2008 indicated low concentrations of residual activity. All the excavated soil will be shipped off-site for disposal.

The primary radiological hazard to the workers and members of the public associated with the work is from inhalation of the airborne radioactive materials suspended in the air during work activities. A review of the licensee dose assessments indicated that the

average dose to the worker would be only a few millirem while dose to the general public was not measureable.

c. Conclusions

The inspector determined that the installation of the rail spur and loading pad meet NRC regulatory requirements, and the doses to the workers and members of the public are within regulatory limits.

4.0 Review of Licensee Commitment per Confirmatory Action Letter No. 03-08-005

On November 19, 2008, the licensee submitted a 24-hour report to the NRC (Event Notification Report 44668) regarding the identification of residual U-235 contamination in the Process Buildings, with a follow-up report provided on November 21, 2008. In response to the report, on December 15, 2008, the NRC issued Confirmatory Action Letter (CAL) No. 03-08-005 that identified specific actions that the licensee intended to implement. The implementation of the licensee's commitments as described in the CAL were evaluated by the NRC during onsite inspections in January 2009, and documented in Inspection Report 070-00036/08-02(DNMS), dated July 23, 2009. In addition, a revision to the CAL was issued by NRC letter, dated July 9, 2009. The July 9 revision was issued following the NRC's June 22, 2009, approval of an exemption for the licensee to access the Process Buildings without a criticality monitoring system.

As amended by the July 9, 2009 letter, the CAL contained a provision to temporarily withdraw a Stop Work Order on all activities associated with the Process Buildings and allow entry to the Process Buildings subject to: completing the characterization activities as described in the Characterization Plan submitted by letter dated December 18, 2008; keeping the NRC informed of scheduled characterization activities so that NRC inspectors could be present to observe activities, as determined by the NRC; ensuring the internals of the Process Building remained in their present state, and; reinstating the Stop Work Order at the completion of the characterization.

The inspectors toured the Process Buildings to observe and assess characterization activities that were underway, and verify the licensee was implementing the commitments described with the CAL. The inspectors observed that the licensee was being very thorough in the identification and characterization of piping and equipment that contained residual U-235 contamination. Prior to lifting the Stop Work Order and continuing with the characterization the licensee thought they would need to cut piping or equipment to gain sufficient access to some areas, and also to avoid measuring radiation from other nearby piping. With most of the characterization completed, the licensee has so far been able to complete its characterization activities through actions such as the use of lead blankets for shielding, so that no cutting has been necessary. Consistent with the specifics and intent of the CAL, the licensee had also almost finished with roof repairs, and had performed a safety walkdown of the Process Building to ensure the areas were safe for the workers, and had verified with the inspectors the acceptability of using a pry bar to remove a steel cover plate from a conveyor belt and drilling out a lock on a file cabinet for which there was no key. No concerns were identified with the licensee's implementation of the CAL.

5.0 30-Day Event Reports

(Closed) NMED Item Number 090025. By letter dated May 2, 2008, (ML081270389) Westinghouse Electric Company LLC (WEC) made a required 30 day written report to the NRC per 10 CFR 20.2203(a)(3)(ii) involving the identification of radioactive material in an unrestricted area that exceeded 10 times the applicable limits in 10 CFR 20, Appendix C. Specifically, the licensee discovered two depleted uranium pellets installed in two gamma detectors in Building 230. A radiation survey of the detectors showed a contact dose rate of about 0.04 millirem per hour (mrem/hr). The pellets were used to provide an indication of continuous operability of the detectors, which were mounted on a vertical I-beam. There was no measureable dose to the public or licensee personnel from this material. The inspectors reviewed the NMED report, the licensee's 30-day report, and discussed corrective actions taken with the licensee.

(Closed) NMED Item Number 090479. By letter dated April 24, 2009, (ML0911804782) WEC made a required 30 day written report to the NRC per 10 CFR 20.2203(a)(3)(ii) involving the identification of radioactive material in an unrestricted area that exceeded 10 times the applicable limits in 10 CFR 20, Appendix C. Specifically, the licensee found a wire cage and a diaphragm pump in an unposted area outside the radiologically controlled area. The highest levels measured of fixed total beta and alpha contamination were about 66,000 disintegrations per minute per 100 square centimeters (dpm/100 cm^2) and 3,400 dpm/100 cm^2, respectively. The highest levels measured of removable total beta and alpha contamination were 242 dpm/100 cm^2 and 350 dpm/100 cm^2, respectively. There was no measureable dose to the public or licensee personnel from this material. The inspectors reviewed the NMED report, the licensee's 30 day report, and discussed corrective actions taken with the licensee.

(Closed) 30-Day Event Report. By letter dated June 18, 2009, (ML091730267) WEC made a required 30 day written report to the NRC per 10 CFR 20.2203(a)(3)(ii) involving the identification of radioactive material in an unrestricted area that exceeded 10 times the applicable limits in 10 CFR 20, Appendix C. Specifically, the licensee found an area of less than one square foot on a concrete pad in an unposted area outside the radiologically controlled area. The highest levels measured of fixed total beta and alpha contamination were 25,118 dpm/100 cm^2 and 3,491 dpm/100 cm^2, respectively. The highest levels measured of removable total beta and alpha contamination were 43 dpm/100 cm^2 and 51 dpm/100 cm^2, respectively. There was no measureable dose to the public or licensee personnel from this material. The inspectors reviewed the licensee's 30 day report and discussed corrective actions taken with the licensee.

The above three events are violations of 10 CFR 20.1802, for failing to control and maintain constant surveillance of licensed material that is in a controlled or unrestricted area and that is not in storage. All of the events were identified by the licensee as part of an ongoing characterization effort to locate contaminated equipment and surfaces throughout the site. The licensee entered the events into its corrective action process and took prompt corrective actions to remediate or properly store the contaminated material, as appropriate. Since this violation was non-repetitive, licensee identified and corrected, it is being treated as a Non-Cited Violation, consistent with Section VI.A.8 of the NRC Enforcement Policy. (NCV 070-00036/2009001-01)

6.0 Exit Meeting Summary

The NRC inspectors presented inspection findings to members of the facility management team following the onsite inspection on August 26, 2009. The licensee acknowledged the findings presented.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Westinghouse Electric Company

E. Kurt Hackmann, Director, Hematite Decommissioning Project
D. Ridenhower, Manager, Environmental Health & Safety/Community Relations
G. Rood, Radiation Safety Officer
K. Harris, Manager, Environmental Engineering
R. Reynolds, Manager, Quality Assurance

INSPECTION PROCEDURES USED

IP 83822	Radiation Protection
IP 88005	Management Organization and Controls
IP 88035	Radioactive Waste Management
IP 88045	Effluent Control and Environmental Protection

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed	Type	Summary
NCV 07000036/2009-01-01	NCV	Failed to control and maintain constant surveillance of licensed material that is in a controlled or unrestricted area and that is not in storage.

Closed

NMED Item Number 090025
NMED Item Number 090479

Discussed

CAL 3-08-005

LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access and Management System
CAL	Confirmatory Action Letter
CAM	Corrective Actions Manager
CAPs	Corrective Actions Process
CARB	Corrective Actions Review Board
CFR	Code of Federal Regulations
cpm	counts per minute
DNMS	Division of Nuclear Materials Safety
HDP	Hematite Decommissioning Project
NCV	Non-Cited Violation
NMED	Nuclear Material Events Database
NRC	U.S. Nuclear Regulatory Commission
pCi/g	picocuries per gram
PDR	Public Document Room
RCA	Root Cause Analysis
WEC	Westinghouse Electric Company