January 20, 2012

Mr. Robert Copp Director, Decommissioning Project Westinghouse Electric Company Nuclear Fuels 3300 State Road P Festus, MO 63028

# SUBJECT: NRC INSPECTION REPORT 07000036/11-002(DNMS) AND NOTICE OF VIOLATION – WESTINGHOUSE ELECTRIC COMPANY (HEMATITE)

Dear Mr. Copp:

On December 22, 2011, the U.S. Nuclear Regulatory Commission (NRC) completed and 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 organization and controls, radiation protection, effluent control and environmental protection, and waste management. The enclosed report presents the results of this inspection, which were discussed with Mr. Rood and other members of your staff during a telephonic exit meeting on December 22, 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 this inspection, the NRC has determined that a Severity Level IV violation of NRC requirements occurred concerning the failure to lock monitoring wells in accordance with the licensee's procedures. The violation was evaluated in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at (<u>http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html</u>). 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. The violation is being cited in the Notice because it was identified by the NRC.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. If you have additional information that you believe the NRC should consider, you may provide it in your response to the Notice. The NRC review of your response to the Notice will also determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

R. Copp

The NRC is continuing to review: (1) adequacy of transport modeling and effluent calculations from TC-99 release from monitoring well BD-02; (2) adequacy of WTS secondary containment structure to perform intended design function; (3) adequacy and consistency of effluent release limits in procedures; and (4) adequacy of process for classification of radioactive waste. 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 <a href="http://www.nrc.gov/reading-rm/adams.html">http://www.nrc.gov/reading-rm/adams.html</a>.

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 Division of Nuclear Materials Safety

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

Enclosures:

- 1. Notice of Violation
- 2. Inspection Report No. 07000036/11-002(DNMS)

cc w/encls: Hematite Distribution Service List

R. Copp

The NRC is continuing to review: (1) adequacy of transport modeling and effluent calculations from TC-99 release from monitoring well BD-02; (2) adequacy of WTS secondary containment structure to perform intended design function; (3) adequacy and consistency of effluent release limits in procedures; and (4) adequacy of process for classification of radioactive waste. Detailed descriptions of these issues are discussed in the enclosed report.

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cc w/encls: Hematite Distribution Service List

Harral Logaras
Carole Ariano
Linda Linn
MCID Branch

#### ADAMS Accession Number: ML12024A029

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# NOTICE OF VIOLATION

Westinghouse Electric Company LLC Festus, Missouri

Docket No. 07000036 License No. SNM-00033

During the U.S. Nuclear Regulatory Commission (NRC) site inspections conducted on November 1 - 4, 2011, and November 28 – December 2, 2011, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Condition 16 of License SNM-33, Amendment 56 dated December 29, 2010, states that the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in application dated October 5, 2004. This Amendment was effective until October 13, 2011.

Section 6 of Application dated October 5, 2004 states, in part, that effluent samples are collected in accordance with site procedures.

Condition 16 of License SNM-33, Amendment 57 dated October 13, 2011 and Amendment 58 dated October 27, 2011, states, in part, that the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in Documents identified in Chapter 1 of NRC Decommissioning Plan SER (ML112101630).

Section 1.1 of the Documents identified in Chapter 1 of NRC Decommissioning Plan SER (ML112101630), titled Background, states, in part, that WEC submitted an Effluent and Environmental Monitoring Plan (ML110330371) in support of the Decommissioning Plan.

Section 8.7 of the Effluent and Environmental Monitoring Plan (ML110330371) in support of the Decommissioning Plan states, in part, that effluent samples are collected and analyzed in accordance with site procedures.

Section 8.2.7 of Effluent Monitoring Procedure HDP-PR-EM-011, Rev. 1, "Low Flow Well Sampling," effective December 4, 2009, and Rev. 2, effective October 27, 2011, states, in part, that "upon completion of sampling, disconnect the flexible tubing, remove non-dedicated sampling tubing, if used, and close and lock well cap."

Contrary to the above, on November 1, 2011, the licensee tested the locking mechanism for wells BD-02, BD-03, BD-04, BD-06, BD-08, LF-09, NB-54 and NB 57A and identified that the well caps were not locked. Additionally, these well caps had not been locked for the ten month period preceding November 1, 2011.

This is a Severity Level IV violation (Section 6.3).

Pursuant to the provisions of Title 10 of the Code of Federal Regulations (CFR) 2.201, Westinghouse Electric Company LLC (Hematite) is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, 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 for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation

#### Notice of Violation

or severity level; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken; 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 Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <a href="http://www.nrc.gov/reading-rm/adams.html">http://www.nrc.gov/reading-rm/adams.html</a> to the extent possible, it should not include any personal privacy, or proprietary 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. 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).

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

Dated this 20th day of January 2012.

# U.S. NUCLEAR REGULATORY COMMISSION

# **REGION III**

Docket No.:	07000036
License No.:	SNM-00033
Report No.:	07000036/11-002(DNMS)
Licensee:	Westinghouse Electric Company, LLC
Facility:	Former Hematite Fuel Manufacturing Facility
Location:	3300 State Road P Festus, Missouri
On-Site Inspection Dates:	November 1 - 4, 2011 and November 28 – December 2, 2011
Exit Meeting (Telephonically):	December 22, 2011
Inspectors:	Michael LaFranzo, Senior Health Physicist Lionel Rodriguez, Reactor Engineer
Approved by:	Christine A. Lipa, Chief Materials Control, ISFSI, and Decommissioning Branch Division of Nuclear Materials Safety

# EXECUTIVE SUMMARY

# Westinghouse Electric Company, LLC Hematite Fuel Manufacturing Facility (Decommissioning) NRC Inspection Report 07000036/11-002(DNMS)

This routine decommissioning inspection evaluated the Westinghouse Electric Company's (WEC) on-going decommissioning activities at its Hematite facility, Festus, Missouri. This routine decommissioning inspection focused on licensee's management organization and controls, radiation protection, effluent control and environmental protection, and waste management.

# Management Organization and Controls

• The NRC did not identify regulatory issues regarding a Licensing Manager change on February 21, 2011 and considers unresolved item (URI) 070-00036/11-01-01 closed. As of November 30, 2011, the licensee notified NRC of a management change to the Director, Hematite Decommissioning Project and Radiation Safety Officer. (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)

# Effluent Control and Environmental Protection

- The NRC has reviewed the circumstances surrounding the release of Tc-99 from monitoring well BD-02 and does not have any further questions regarding the licensee's transport analysis. Therefore, NRC considers URI 07000036/11-01-02 closed. The NRC is continuing to review the licensee's dose calculations relating to the release of Tc-99 to ensure compliance with NRC requirements. (URI 07000036/11-02-01) (Section 3.1)
- A violation of NRC requirements occurred related to the failure to lock eight well caps in accordance with procedure HDP-PR-EM-011, Rev. 1 titled "Low Flow Well Sampling" (VIO 07000036/11-02-01). The inspectors determined that the immediate corrective actions were adequate to prevent short term recurrence. (Section 3.2)
- The licensee had an adequate approach to validate the Water Treatment System (WTS) before making it fully operational. Future inspections will review additional information related to the secondary containment structure for the WTS to ensure it can perform its design function adequately. (IFI 07000036/11-02-01) The inspectors will also review the licensee's procedures related to effluent releases to ensure they contain adequate and consistent effluent release limits. (IFI 07000036/11-02-02) (Section 3.3)

# Waste Management

• The licensee was not ready to begin using the Box Counter system for classification of radioactive waste on site. Future inspections will review the licensee's process for classifying radioactive waste to ensure that it is done in accordance with applicable NRC regulations (IFI 07000036/11-02-03). (Section 4.0)

# Report Details

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

## a. Inspection Scope

The inspectors reviewed the licensee's notification of a management change of the Director, Hematite Decommissioning Project and Radiation Safety Officer.

# b. Observations and Findings

During the previous inspection, the NRC reviewed the licensee's corrective action program (CAP) 11-098-W0003 with an issue title of "Organizational Change Violates NRC License." The issue involved whether a change of the Licensing Manager, by the licensee, violated NRC requirements. An unresolved item (URI 07000036/11-01-01) was opened to track the issue.

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 has reviewed the licensee corporate report, notifications, and licensee regulatory commitments related to experience and qualifications of the two individuals. Based upon the information provided, the two individuals had adequate experience and qualifications per the commitments made to the NRC. Notifications to the NRC of those changes were timely.

In a letter received by the NRC on December 1, 2011, the licensee notified the NRC that on November 30, 2011 Mr. E. Kurt Hackmann was re-assigned to another position and that Mr. Gerald Rood was assigned the position of interim Director, Hematite Decommissioning Project. As Mr. Rood was the former Radiation Safety Officer, the licensee assigned Mr. Joseph Guido as the interim Radiation Safety Officer. The licensee did not elaborate on when the interim positions would be filled permanently. The inspectors reviewed the qualifications of the individuals and timeliness of the notification and did not identify any regulatory issues.

No findings of significance were indentified.

# c. <u>Conclusions</u>

The inspectors determined that the licensee had made changes to its staffing and notified the NRC in a timely manner. The NRC did not identify a violation of NRC requirements and has no additional questions at this time. Consequently, the NRC considers URI 07000036/11-01-01 closed.

The NRC did not identify any regulatory issues regarding the licensee's assignment of an interim Director, Hematite Decommissioning Project and an interim Radiation Safety Officer.

# 2.0 Radiation Protection (83822)

# a. Inspection Scope

The inspectors reviewed the training program related to radiation protection activities to determine if technicians had adequate knowledge 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. <u>Conclusions</u>

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

# 3.0 Effluent Control and Environmental Protection (88045)

#### 3.1 Monitoring Well Effluent Release

#### a. Inspection Scope

The NRC inspectors reviewed circumstances, transport modeling and effluent calculations regarding an unanticipated and unevaluated release of Tc-99 from Monitoring Well BD-02, which was tracked as URI 07000036/11-01-02.

#### b. Observations and Findings

On June 27, 2011, the licensee obtained a water sample from Monitoring Well BD-02 for which the analysis noted substantially higher levels of Tc-99 (30,300 pCi/l) and total uranium (32.26 pCi/l) than in previous samples. Historically, the licensee's water

samples from Monitoring Well BD-02 averaged approximately 5,723 pCi/L for Tc-99 and 1.0 pCi/L for total uranium. A re-analysis of the sample yielded equivalent results.

On December 1, 2011, the licensee provided NRC document titled "Fate and Transport Modeling for Well BD-02 at the Westinghouse Hematite Site" concerning possible release mechanisms of the Tc-99 to monitoring well BD-02 and pathway of the contamination from the well through the ground water.

On December 7, 2011, the licensee developed a draft document which provided, based upon licensee modeling of water intake to a member of the public, a dose estimate of 0.035 mrem/year for Tc-99 and 0.05 mrem/year for uranium at 165 feet, within the aquifer, downstream of the monitoring well BD-02.

The NRC has identified several licensee assumptions concerning the transport modeling and effluent release estimates that require additional review. Therefore, the NRC will be reviewing the licensee's transport modeling assumptions and effluent calculations to ensure compliance with NRC regulations.

No findings of significance were identified.

c. Conclusions

As a result of the follow up of NRC's regulatory review URI 07000036/11-01-02 is closed. However, the NRC is continuing to review the licensee's transport modeling and effluent calculations to ensure compliance with NRC regulations (URI 07000036/11-02-01).

# 3.2 Monitoring Well Procedural Implementation

a. Inspection Scope

The inspectors reviewed the licensee's procedures and observed activities associated with monitoring well sampling.

#### b. Observations and Findings

On November 2, 2011, the inspectors observed activities surrounding the implementation of HDP-PR-EM-011, Rev. 1 titled "Low Flow Well Sampling." The inspectors noted that the licensee did not lock the well caps of wells BD-02, BD-03, BD-04, BD-06, BD-08, LF-09, NB-54 and NB 57A.

Condition 16 of License SNM-33, Amendment 56 dated December 29, 2010, states that the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in application dated October 5, 2004. This Amendment was effective until October 13, 2011 when Amendment 57 was issued removing the above application from the license.

Section 6 of Application dated October 5, 2004 states, in part, that effluent samples are collected in accordance with site procedures.

Condition 16 of License SNM-33, Amendment 57 dated October 13, 2011 and Amendment 58 dated October 27, 2011, states, in part, that the licensee shall conduct

its program in accordance with the statements, representations, and procedures contained in Documents identified in Chapter 1 of NRC Decommissioning Plan SER (ML112101630).

Section 1.1 of the Documents identified in Chapter 1 of NRC Decommissioning Plan SER (ML112101630), titled Background, states, in part, that WEC submitted an Effluent and Environmental Monitoring Plan (ML110330371) in support of the Decommissioning Plan.

Section 8.7 of the Effluent and Environmental Monitoring Plan (ML110330371) in support of the Decommissioning Plan states, in part, that Effluent samples are collected and analyzed in accordance with site procedures.

Section 8.2.7 of Effluent Monitoring Procedure HDP-PR-EM-011, Rev. 1, effective date of December 4, 2009, and Rev. 2, effective date of October 27, 2011, titled "Low Flow Well Sampling" states, in part, that "upon completion of sampling, disconnect the flexible tubing, remove non-dedicated sampling tubing, if used, and close and lock well cap." Procedure HDP-PR-EM-011, Rev. 3, became effective November 11, 2011.

The NRC requested the licensee test the locking mechanism for wells BD-02, BD-03, BD-04, BD-06, BD-08, LF-09, NB-54 and NB 57A which found none were locked at the time of testing. In addition, the licensee determined that only one locking mechanism was functional at the time of the inspection. The wells noted above were "flushed mounted" for which a standard key/pad lock system was too large to install. Instead, the licensee was using a well cap/expanding lock which, when an appropriate tool was used, expanded the well cap so that it could not be easily removed (locked). All wells noted above were within the licensee's fenced perimeter and the licensee did not identify any unauthorized tampering of the well. In discussions with four technicians, three were not aware that the wells could be locked nor had access to the tool to lock/unlock the well cap. One technician had brought the issue to the attention of his supervisor sometime in the last 10-12 months; however, the issue was not entered into the licensee's CAP and it was not followed up by management to correct the issue.

The licensee's failure to lock a monitoring well cap is a violation of procedure HDP-PR-EM-011; Rev. 1 titled "Low Flow Well Sampling" which requires the licensee to close and lock the well cap upon completion of the sampling. The violation is being cited as it was identified by the NRC and the licensee had opportunities to identify and correct the issue but failed to ensure compliance with the procedure. The violation is categorized at Security Level IV because it involved a procedural violation of more than minor safety significance.

The licensee committed to evaluate and install locking mechanisms to comply with the procedure and train technicians on the locking mechanisms used to secure the wells. On November 30, 2011, the inspectors verified that the licensee had installed new locking mechanisms and that the mechanisms were functioning as appropriate. The inspectors interviewed several technicians and determined that each had adequate knowledge and equipment to lock the wells in accordance with the procedure.

One violation of regulatory requirements was identified.

# c. <u>Conclusions</u>

The inspectors identified one violation of NRC requirements related to the failure to lock eight well caps in accordance with procedure HDP-PR-EM-011, Rev. 1 titled "Low Flow Well Sampling" (VIO 07000036/11-02-01). The inspectors determined that the immediate corrective actions were adequate to prevent short term recurrence.

# 3.3 <u>Water Treatment System</u>

## a. <u>Inspection Scope</u>

The inspectors reviewed the licensee's Water Treatment System (WTS) to determine if the licensee's use of the system met DP commitments for the control of radioactive material on site and the regulatory requirements for effluent controls. At the time of the inspection, the system was not yet required, nor fully operational, and portions of the system had not yet been assembled. The inspectors performed a walk down of the portions of the system that were in place. The inspectors also reviewed procedures associated with the operation of the WTS system and interviewed licensee personnel with responsibilities for the safe and effective operation of the WTS system.

#### b. Observations and Findings

The NRC inspectors reviewed the licensee's compliance with commitments made to the NRC through the DP approval process for the WTS. Specifically, the inspectors reviewed how the licensee would control radioactive material while using the WTS. A review of the licensee's procedure on the WTS and interviews with licensee personnel demonstrated an adequate understanding of the need to perform daily inspections of WTS components during operation of the system. The interviews also indicated that training for operation of the WTS would highlight the requirement to perform the daily inspections. The training on the operations of the WTS was scheduled for a future date.

The inspectors also reviewed the design of the WTS to ensure that the licensee constructed the system in such a way as to minimize the spread of radioactive contamination on site. The inspectors noted, during a walk down of the system in building 230, that the construction of the secondary containment structure was different than the original design as described in the Water Treatment System Design Report, design drawings, and design calculations. The secondary containment structure consisted of a berm with a wooden frame intended to contain potentially contaminated water inside the structure if the WTS leaked. The structure is required per the NRC DP Safety Evaluation Report (SER) which is a license condition in the Westinghouse-Hematite license. The NRC inspectors asked the licensee whether the secondary containment structure, as constructed, could perform its intended design function. The licensee committed to provide additional information to the NRC to ensure that the secondary containment structure for the WTS could perform its intended design function if the WTS were to develop a significant leak. This issue will be reviewed during a future inspection.

During the review of the licensee's procedures related to the WTS, the inspectors noted a discrepancy in water effluent release limits in different site procedures. The inspectors asked the licensee if there was a reason for the inconsistencies in the procedures. The inspectors also asked the licensee to describe what the actual administrative effluent

release limits were. The licensee committed to provide answers to these questions to the NRC. The NRC inspectors will review the answers to these questions during a future inspection to ensure that the licensee is adequately controlling effluent releases in accordance with site procedures and 10 CFR Part 20 regulations for effluent releases.

No findings of significance were identified.

# c. <u>Conclusions</u>

The NRC inspectors determined that the licensee had an adequate approach to validate the WTS before making it fully operational. The inspectors will review, during a future inspection, additional information related to the secondary containment structure for the WTS to ensure it can perform its design function adequately (IFI 07000036/11-02-01). The inspectors will also review the licensee's procedures related to effluent releases to ensure they contain adequate and consistent effluent release limits (IFI 07000036/11-02-02).

# 4.0 Waste Management (88035)

# a. Inspection Scope

The NRC inspectors reviewed the licensee's Box Counter (Gardian III) system to determine whether the system could be adequately used to characterize onsite soils for radioactive waste disposal. The NRC inspectors toured the Box Counter system and reviewed procedures related to the operation of the system. The inspectors also interviewed licensee personnel with oversight of the system and contractor personnel with the responsibility of operating the system.

# b. Observations and Findings

The NRC inspectors reviewed the proposed use of the Box Counter system and what quality assurance processes were in place to ensure adequate classification of the waste. The NRC inspectors also reviewed procedures related to the licensee's radioactive waste classification process. Although some information on waste classification was provided by the licensee, the licensee could not provide the inspectors detailed descriptions of the process for classifying radioactive waste to determine compliance with NRC requirements. The licensee committed to provide the additional information requested on the classification of radioactive waste on site.

No findings of significance were identified.

# c. Conclusions

The NRC inspectors determined, based on the lack of information available during this inspection, that the licensee was not ready to begin using the Box Counter system for classification of radioactive waste on site. The inspectors will review, during a future inspection, the licensee's process for classifying radioactive waste to ensure that it is done in accordance with applicable NRC regulations (IFI 07000036/11-02-03).

# 5.0 Exit Meeting

The inspectors presented the results of the inspection to licensee management following the conclusion of the onsite inspection on December 2, 2011 and during a telephonic exit meeting on December 22, 2011.

ATTACHMENT: SUPPLEMENTAL INFORMATION

# SUPPLEMENTAL INFORMATION

# PARTIAL LIST OF PERSONS CONTACTED

#### Westinghouse Electric Company

- E. Kurt Hackmann, Former Director, Hematite Decommissioning Project
- G. Rood, Radiation Safety Officer and Former Interim Director, Hematite Decommissioning Project
- K. Davis, Interm Manager, Licensing
- K. Harris, Environmental, Health & Safety Manager
- C. Cummin, Waste Management/Transportation Specialist
- W. Mattern, Manger, 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
- IP 88035 Radioactive Waste Management Inspection of Waste Generator Requirements of 10 CFR Part 20 and 10 CFR Part 61

#### ITEMS OPENED, CLOSED, AND DISCUSSED

#### Opened

VIO 07000036/11-02-01	VIO	Failure to lock Eight Monitoring Well caps
URI 07000036/11-02-01	URI	Adequacy of transport modeling and effluent calculations from TC-99 release from monitoring well BD-02
IFI 07000036/11-02-01	IFI	Adequacy of WTS secondary containment structure to perform intended design function
IFI 07000036/11-02-02	IFI	Adequacy and consistency of effluent release limits in procedures
IFI 07000036/11-02-03	IFI	Adequacy of process for classification of radioactive waste

Attachment

<u>Closed</u>	Type	Summary
URI 07000036/11-01-01	URI	Organizational Change May Violate NRC Requirements
URI 07000036/11-01-02	URI	Elevated Tc-99 Concentration in Groundwater Sample

# Discussed

None

# LIST OF ACRONYMS USED

Agencywide Documents Access and Management System Corrective Action Process Code of Federal Regulations Division of Nuclear Materials Safety Decommissioning Plan Environmental Health & Safety Inspection Procedure U.S. Nuclear Regulatory Commission Special Nuclear Material Unresolved Issue Westinghouse Electric Company
Westinghouse Electric Company water treatment system

## **DOCUMENTS REVIEWED**

Calculation, "Secondary Containment Calculation Water Treatment System" Rev. 0 (November 7, 2011 and December 9, 2011)

CAP #11-242-W0004 "Elevated Tc-99 Concentration in Ground Water"

CS-IN-PR-015 "Calibration of GARDIAN-III For Use at Hematite Decommissioning Project"

CS-IN-PR-016 "Operation of GARDIAN-III at Hematite Decommissioning Project"

Drawing T-1, "WTS Tank Placement at Loading Dock" Rev. 0 (November 18, 2011)

ECC-WP-2010-505 "Excavation and Exhumation"

EO-10-001, "Water Treatment System Design Report" Rev. 0

- EPA/540/S-95/503 dated July 1995 "Nonaqueous Phase Liquids Compatibility with Materials Use in Well Construction, Sampling, and Remediation"
- "Fate and Transport Modeling for Well BD-02 at the Westinghouse Hematite Site;" Prepared by GEO Consultants (December 1, 2011)

Form HDP-PR-EHS-34-1, "Water Treatment Plant Operations Activity Hazard Analysis Form "

Form HDP-PR-GM-010-1 Record Note Rev. 10, Approval by Hematite Decommissioning Project of EnergySolutions Procedures (November 16, 2011)

HDP-ENG11-WP-017 Rev. 1, "Repair of Baker Tank T-3 at the Water Treatment Plant"

HDP-PO-EM-001, "Effluent and Environmental Monitoring Plan" Rev 1 and Rev 3

HDP-PO-EM-004, "Water Management Plan" Rev. 1

HDP-PO-WM-900, "Waste Management and Transportation Plan" Rev. 2

HDP-PR-EM-003, "Surface Water Sampling" Rev. 0

HDP-PR-EM-009, "Sanitary Wastewater Treatment Plant Operations" Rev. 2

HDP-PR-EM-011, "Low Flow Well Sampling" Rev. 3

HDP-PR-EM-015, "Water Treatment Plant Operation" Rev. 1 and Rev. 2

HDP-PR-EM-016, "Pumping of Accumulated Surface Water" Rev. 0

HDP-PR-FSS-710 "Final Status Surveys and Radiological Sampling of Re-Use Soil"

HDP-PR-FSS-711 "Final Status Surveys and Sampling of Soil and Sediment"

HDP-PR-HP-202, "Radioactive Source Control and Accountability" Rev. 1

HDP-PR-HP-413, "ISOCS Operation and Data Verification" Rev. 5

HDP-PR-HP-601 "Remedial Action Support Surveys"

HDP-PR-HP-603, "Radiological Surveys of the Water Treatment System" Rev. 1

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

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

HDP-PR-WM-903 Rev. A Proposed 1 "Waste Material Control and Tracking"

- 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. 2HDP-TBD-HP-504, Rev. 0, "Assessment of Conditions During Process Building Demolition"HDP-TBD-WM-905 "Burial Pit Waste Shipment Classification"
- HDP-TBD-EHS-002, Rev 0 "Evaluation of Monitoring Well BD-02 and Wells within the Contaminated Areas"
- HRP-3750-EEP "Excavation and Exhumation Plan REVISED"
- Memorandum, "Evaluation of the Conduit Installation below the Existing Truck Scale as part of HDP-ENG11-WP-003, Box Counter Installation" (December 9, 2011)
- NSA-TR-10-12 Rev. 2 "Calibration Analysis for 235U Response from Burial Pit Waste Materials at the Hematite Facility"
- NSA-TR-09-15 Rev. 1 "Nuclear Criticality Safety Assessment of Buried Waste Exhumation and Contaminated Soil Remediation at the Hematite Site"

Technical Basis Document for use of GARDIAN-III for Survey of WEC/Hematite Soils

US NRC SER on Westinghouse Amendment Request for Approval of Hematite DP and Associated Supporting Documents (October 2011)

WP-2009-031 Rev. 3, "Work plan for Pumping of Accumulated Storm Water"

- WP-ECC-2010-501 Rev. 0 "Waste Staging, for approval by the Hematite Decommissioning Project (HDP)"
- WP-ECC-2010-504 Rev. 0 "Waste Loading and Handling, for approval by the Hematite Decommissioning Project (HDP)"

WP-ECC-2010-508 Rev. 0 "Handling and Transport of Fissile Material"

WP-ECC-2010-509 Rev. 0 "Fissile Material Handling in the Collared Drum Repack Area (CDRA)"

WP-ECC-2010-510, Rev. 0 "Material Handling in the Waste Evaluation Area (WEA)"

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