

August 2, 2012

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

SUBJECT: WESTINGHOUSE ELECTRIC COMPANY (HEMATITE) – NRC SECURITY  
INSPECTION REPORT NO. 07000036/2012002(DNMS)

Dear Mr. Copp:

On June 20, 2012, the U.S. Nuclear Regulatory Commission (NRC) completed an initial security inspection of the physical security program for the Westinghouse Hematite facility located near Festus, Missouri. At the conclusion of the on-site inspection on June 20, 2012, the inspectors discussed the inspection findings with you, and members of your project management, licensing, radiation safety and security staff.

The inspection also examined activities conducted under your license as they relate to security and compliance with the NRC's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel. The enclosed inspection report documents the inspection results.

No findings were identified during this inspection.

In accordance with Title 10 of the Code of Federal Regulations (CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter 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>. However, because of the security-related discussion contained in the enclosure, and in accordance with 10 CFR 2.390, a copy of this letter's enclosure will not be available for public inspection.

<p><b>Enclosure Contains Sensitive Unclassified Non-Safeguards Information. When separated from enclosure, this transmittal document is decontrolled.</b></p>
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R. Copp

-2-

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

Sincerely,

*/RA/*

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

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

Enclosures:  
IR 07000036/2012002(DNMS) (Non Public)

cc w/encl: B. Mattern, Security Manager  
D. Richardson, Licensing Manager

cc w/o encl: Hematite Distribution Service List

R. Copp

-2-

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cc w/encl: B. Mattern, Security Manager  
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cc w/o encl: Hematite Distribution Service List

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Rebecca Richardson  
Glenn Tuttle  
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\*see previous concurrence

**ADAMS Accession Number: ML12220A215**

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U.S. NUCLEAR REGULATORY COMMISSION  
REGION III

Docket Nos.: 070-00036

License Nos.: SNM-00033

Report Nos.: 07000036/2012002(DNMS) (Non Public)

Licensee: Westinghouse Electric Company, LLC

Facility: Former Hematite Fuel  
Manufacturing Facility

Location: 3300 State Road P  
Festus, Missouri

Dates: March 26 through 29, 2012;  
June 19 and 20, 2012

Inspectors: Eugene Bonano, M.S., Health Physicist  
Gary Purdy, Senior Program Manager (NSIR)  
Barry Wray, Security Specialist (NSIR)  
Rebecca Richardson, Physical Scientist (NSIR)  
Glenn Tuttle, MC&A Statistician (NMSS)

Approved by: Christine A. Lipa, Chief  
Materials Control, ISFSI, and  
Decommissioning Branch,  
Division of Nuclear Materials Safety

## SUMMARY OF FINDINGS

IR 07000036/2012002(DNMS); Westinghouse Electric Company, LLC (WEC); Former Hematite Fuel Manufacturing Facility; Physical Security Plan (PSP), MC&A Inspection Procedures (IP) 85401, 85402, 85403, and 85405.

The inspection was completed as the licensee was beginning to remediate burial pits at the site as part of the decommissioning project, and focused on the overall security capability to detect, assess, and delay unauthorized access and communicate with response forces to protect against loss of control of the facility which may allow for a radiological sabotage event to occur.

By letter dated November 9, 2011, the NRC approved the WEC Hematite PSP dated July 28, 2011, which also included the Category I Contingency Safeguards Contingency Response Plan (SCRCP) and Category I Contingency Security Training and Qualification Plan (T&QP). The U.S. Nuclear Regulatory Commission (NRC) staff found that the PSP and the Contingency Plans met the applicable requirements in Title 10 of the Code of Federal Regulations (CFR) Parts 11, 26, and 73. Therefore, the NRC issued Amendment 59 to the Hematite license to incorporate the July 28, 2011 Hematite PSP and associated Contingency Plans.

### Security - Category I Special Nuclear Material (SNM)

This was an initial security inspection of the physical security program for the Westinghouse Hematite facility. The purpose of this team inspection was to evaluate whether the protection of the Vault Type Room (VTR) and facility was in compliance with the NRC approved PSP and Contingency Plans for Category I SNM, and NRC regulations. At the time of the inspection, all security systems and equipment for the VTR and facility were serviceable, in operation and functioning properly. The inspectors observed physical security related activities to determine if the licensee was effectively implementing the requirements of the NRC approved PSP and Contingency Plans. The inspectors also reviewed the licensee's T&QP; interviewed personnel, and examined a select number of procedures and representative records.

- No findings were identified during this inspection. (Section 1.2)

### MC&A

The inspection verified that the licensee's material control and accounting (MC&A) program was consistent with NRC requirements and could adequately detect and protect against the loss, theft, or diversion of SNM.

- No findings were identified during this inspection. (Section 2.0)

### Protection of Safeguards Information

The inspectors evaluated the licensee's handling and storage of safeguards information in accordance with regulatory requirements. The inspectors used IP 81810, "Protection of Safeguards Information," to complete this part of the inspection.

- No findings were identified during this inspection. (Section 3.0)

## REPORT DETAILS

### 1.0 Security - Category I SNM

#### 1.1 Introduction

Appendix D of the PSP contains the Security Category I Contingency Plan that shall be implemented in the unlikely event a Category I Quantity of SNM is located during remediation activities. The Appendix D requirements would remain in effect until the discovered Category I material is shipped off site or more detailed measurements establish that the amount of SNM is below a Category I Quantity.

#### 1.2 Physical Security Requirements for Hematite Decommissioning Project (Physical Security Plan – Appendix D, Security Category I Contingency Plan)

##### a. Inspection Scope

###### Conduct of Security and Safeguards Activities:

The inspectors evaluated this area by: reviewing program and implementing procedures, and records; conducting interviews with responsible personnel; and performing walkdowns.

The inspectors verified the licensee's access authorization program's compliance with applicable requirements. In addition, the inspectors conducted the following specific inspection activities:

- verified that all personnel with unescorted site access were assessed and re-approved at the prescribed frequency to confirm that these personnel have a continued need for site access;
- verified that the licensee had an established and effective program to control personnel, package, and vehicle access to the protected area, owner-controlled, restricted, and security areas; and
- verified that on-site communication and alarm station activities were being effectively implemented.
- The inspectors toured the site's controlled access area (CAA) perimeter fence; Vault Type Room (VTR), on-site Security Monitoring Station (SMS), Jefferson County 9-1-1 Dispatch Center located in House Springs, Missouri, and the Contractor Alarm Station: CenterPoint Technologies located in Saint Louis, Missouri.

###### Status of Security Facilities and Equipment:

The inspectors evaluated this area by: reviewing program procedures, implementing procedures, and records; conducting interviews with responsible personnel; and performing walkdowns.

The inspectors verified that the status of security facilities and equipment complied with applicable requirements. The inspectors conducted the following specific inspection activities:

- verified the licensee established temporary vehicle barrier systems at appropriate locations to protect the VTR, equipment and certain security components;
- verified the licensee conducted required search and control activities of vehicles and personnel and that those activities were conducted in an appropriate manner;
- verified by observation that access roads are adequately controlled and, whenever practicable, prescribed barriers have been installed on operational access roads; and
- verified that detection and assessment aids were functional and performed as designed, and when necessary, compensatory measures were properly implemented.

Security and Safeguards Procedures and Documentation:

The inspectors reviewed program requirements, implementing procedures, records, security event reports, corrective action documents, and security-related event logs.

Specifically, the inspectors reviewed a sample of security procedures and verified that they were consistent with security plan commitments and practices.

The inspectors determined that security events were properly documented and logged.

Security and Safeguards Staff Knowledge, Performance and Training:

The inspectors evaluated this area by: reviewing program procedures, implementing procedures, and records; conducting interviews with responsible personnel; and observing personnel while performing their duties.

The inspectors conducted the following specific inspection activities:

- verified that the licensee maintained the prescribed minimum number of armed responders continuously at the site, and that those personnel possessed or had ready access to contingency equipment as prescribed by regulatory requirements; and
- verified that armed responders received appropriate training to conduct routine and reactive duties in an effective manner, including training for specific activities as prescribed by T&QP requirements.

Security Organization and Administration:

The inspectors evaluated this area by conducting interviews with responsible personnel and performed walkdowns of security-related activities. The inspectors conducted the following specific inspection activities:

- verified that the licensee has developed plans for site actions to be taken in the event of an imminent or occurring attack;
- verified that offsite communication systems exist in an alarm station to initiate a prearranged integrated response plan with the Local Law Enforcement Agencies (LLEA); and

- verified the licensee had actions in place to position armed response personnel at prescribed locations during maintenance and operational activities beyond routine activities, and ensured armed response personnel can retreat safely and survive to contact the LLEA.

Quality Assurance in Security and Safeguards Activities:

The inspectors evaluated this area by: conducting interviews with responsible personnel; reviewing audit reports and corrective action documents of security-related activities.

The inspectors reviewed security audit reports that were issued since the last inspection and a sample of documents the licensee used to identify problems. The inspectors verified problems were appropriately identified and that adequate corrective measures were implemented in an effective and timely manner.

b. Findings

No findings were identified during this inspection.

**2.0 MC&A**

2.1 Management Structure (IP 85401)

a. Inspection Scope

The inspectors reviewed the licensee's material control and accounting (MC&A) program to determine if the program was consistent with NRC requirements and could adequately detect and protect against the loss, theft, or diversion of special nuclear material (SNM). Specifically, the inspectors reviewed, and discussed with licensee MC&A staff, the licensee's MC&A system capabilities as described in the approved Fundamental Nuclear Material Control Plan (FNMCP) and implementing procedures. Procedures were reviewed and discussed related to: (1) material control and accounting; (2) scale calibration; (3) physical inventory; (4) DOE/NRC Form 741; (5) investigation of indicators of loss or theft of SNM; (6) item control; (7) collusion protection; and (8) use of tamper-indicating devices.

b. Observations and Findings

The inspectors determined that the FNMCP and implementing procedures adequately addressed the required MC&A system capabilities, and met the MC&A performance objectives specified in NRC requirements. The licensee's organizational structure, approved FNMCP, and implementing procedures were adequate to detect and protect against the loss, theft, or diversion of special nuclear material and met NRC MC&A requirements.

No findings were identified during this inspection.

2.2 Measurement Program (IP 85402), and Measurement Control Program (IP 85403)

a. Inspection Scope



The inspectors reviewed the licensee's measurement systems and control program to determine if the systems and programs ensured that all quantities of SNM in the accounting records were based on measured values, and that the measurement systems used were controlled as specified in NRC requirements and the approved FNMCP. The inspectors reviewed licensee procedures related to scale calibration and the operation of ISOCS. The inspectors reviewed completed scale calibrations to ensure the weighing systems were properly calibrated and that the standards used to calibrate the scales were traceable to national standards. The inspectors also verified that the in-house standards used for check weighings were traceable to national standards. The inspectors toured the burial pit area and the building containing the ISOCS equipment, and discussed with staff the process for characterization of material found. The discussion included operation of ISOCS, detector characterization, quality control checks, test measurements, and validation for use at Hematite.

b. Findings

No findings were identified during this inspection.

2.3 Item Control Program (IP 85405)

a. Inspection Scope

The inspectors reviewed the licensee's item control program to ensure that the program maintains current knowledge of SNM items, including identity, SNM content, and location of items, and that unauthorized removals of material from items will be detected. The inspectors reviewed and discussed with MC&A staff the item control program, including procedures and processes for item movement, storage, and modification, tamper-indicating devices, and item control audits. The inspectors also discussed the spreadsheet to be used for item tracking, and documents used to track item movements, including shipment offsite via DOE/NRC Form 741.

b. Observations and Findings

The licensee had established an item control program that is capable of maintaining current knowledge of the identity, SNM content, and location of items at the facility, and for detecting unauthorized removals of material from items.

No findings were identified during this inspection.

3.0 Protection of Safeguards Information (IP 81810)

a. Inspection Scope

The inspectors evaluated the licensee's handling and storage of safeguards information in accordance with regulatory requirements.

b. Findings

No findings were identified during this inspection.

#### **4.0 Exit Meeting**

The inspectors presented the inspection results to Mr. Robert D. Copp, HDP Project Director and members of the security, radiation safety, licensing, and decommissioning project management staff at the conclusion of the on-site inspection on June 20, 2012. The licensee did not identify any of the documents reviewed or statements referenced to specific processes as proprietary in nature.

ATTACHMENT: SUPPLEMENTAL INFORMATION

**SUPPLEMENTAL INFORMATION**

**KEY POINTS OF CONTACT**

Licensee

N. Bauman, QA Manager  
R. Copp, Project Director  
H. Eskridge, Licensing  
B. Ford, Engineering & Project Controls Manager  
J. Gearhart, QA Manager  
J. Guido, Health Physicist  
M. Malin, Environmental Manager  
B. Mattern, Security Manager  
A. Noack, Operations Manager  
D. Ridenhower, S&H Manager  
G. Rood, Radiation Safety Officer  
S. Welch, NMM&A Specialist

EnergySolutions (Contractor)

K. Pallagi, Licensing Engineer

CenterPoint Technologies (Contractor)

K. Brugger, Operations Manager

SAIC (Contractor)

K. Davis, Licensing Manager

Jefferson County Sheriff's Office

R. Brown, Captain, Law Enforcement  
Commander

Defender Services, Inc. (Contractor)

E. Gaddis, Security Contract Manager

Jefferson County 9-1-1 Dispatch

T. Williams, Chief

**INSPECTION PROCEDURES USED**

IP 85401	Management Structure
IP 85402	Measurement Program
IP 85403	Measurement Control Program
IP 85405	Item Control Program
IP 81810	Protection of Safeguards Information

**ITEMS OPENED, CLOSED, AND  
DISCUSSED**

Opened, Closed, and Discussed

None

## LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety but rather that selected sections or portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document, or any part of it, unless this is stated in the body of the inspection report.

Westinghouse HDP – PSP, Attachment 2 to HEM-11-102, dated 07/28/2011

- Appendix D – Security Category I Contingency Plan, dated 07/28/2011

Westinghouse HDP – Category I Contingency Safeguards Contingency Response Plan, Attachment 3 to HEM-11-102, dated 07/28/2011

Westinghouse HDP – Category I Contingency Security Training and Qualification Plan, Attachment 4 to HEM-11-102, dated 07/28/2011

Materials License: SNM-00033, Amendment No. 59

Letter from NRC to Westinghouse HDP, dated 11/09/2011

MOU from Jefferson County Sheriff's Office, dated 05/18/2011

Technical Basis Explanation for the VTR Internal Barrier as described in Section D-5-8.1.2 of the HDP PSP as submitted and approved, dated 05/24/2011

Four HDP Security Guard Assessments

Audit Report, No. A-1111-001, Internal Audit to Assess the Adequacy and Effectiveness of the HDP PSP and Dept. Policies and Procedures: Physical Security and Safeguards Information, dated 11/07/2011

Form HDP-PR-PSP-112-6, Security Incident Report #12-036 Security Alarm Panel Error Message, dated 06/11/2012

Issue Report #: 12-163-W002, Issue Title: Failure of System Component, dated 06/11/2012

Issue Report #: 12-172-W003, Issue Title: Observation of Need to Evaluate Training Status, dated 06/20/2012

Lesson Plan – Basic Security Orientation, Course Code: SEC-GEN-BSCOR, Rev. 0, dated 08/31/2011

Training Attendance Sheet, Form HDP-PR-GM -020-2, Written Exam Basic Security Orientation, dated 10/04/2011

Basic Security Orientation Examination, Rev. A, dated 10/07/2011

Basic Security Core Training, dated 12/20/2011

HDP-PO-PSP-002, Protection of Safeguards Information and Security-Related Information, Rev. 0, dated 02/16/2009

HDP-PO-QA-001, Project Quality Plan, Rev. 0

HDP-PR-GM-010, Document Requirements, Rev. 12, dated 03/07/2012

HDP-PR-PSP-013, Security NRC Event Reporting, Rev. 1, dated 05/24/2012

HDP-PR-PSP-101, Badge Description, Issue & Control, Rev. 1, dated 05/24/2012

HDP-PR-PSP-103, Security Searches, Rev. 2, dated 05/24/2012

HDP-PR-PSP-104, Security Records and Records Retention, Rev. 1, dated 05/21/2012

HDP-PR-PSP-107, Security Monitoring Station Duties and Response, Rev. 1, dated 05/24/2012

HDP-PR-PSP-109, Security Patrols, Rev. 2, dated 05/24/2012

HDP-PR-PSP-110, Compensatory Measures, Rev. 1, dated 05/24/2012

HDP-PR-PSP-111, Security Responsibilities of Site Personnel, Rev. 4, dated 02/16/2012

HDP-PR-PSP-112, Security Guard Responsibilities, Rev. 1, dated 05/24/2012

HDP-PR-PSP-113, Firearms, Rev. 2, dated 05/21/2012

HDP-PR-PSP-114, Security Equipment Testing, Rev. 1, dated 05/24/2012

HDP-PR-PSP-115, Security Respirator Use, Rev. 0, dated 09/27/2011

HDP-PR-PSP-116, Vault Type Room Access, Rev. 0, dated 10/31/2011

HDP-PR-PSP-118, Control of Keys and Locks, Rev. 1, dated 05/24/2012

HDP-PR-PSP-120, HDP Staff, Subcontractor, Vendor Personnel In/Out Processing, Rev. 2, dated 02/16/2012

HDP-PR-QA-005, QA Oversight/Surveillances and Audits, Rev. 0

Underwriters Laboratories, Inc. Certificate of Compliance for Alarm Service Company: CenterPoint Technologies LLC, expiration date: 03/31/2013

Master List Site Approved Weapons Inventory HDP, 01/14/2010 through 03/05/2012

Training records for two officers

HDP-FNMCP, Rev. dated: 02/18/2011

HDP-PR-MCA-001, Material Control and Accounting, Rev. 2, dated 01/11/2012

HDP-PR-MCA-002, Scale Calibration, Rev. 3, dated 02/09/2012

HDP-PR-MCA-003, Physical Inventory, Rev. 1, dated 01/31/2012

HDP-PR-MCA-004, DOE/NRC Form 741, Rev. 3, dated 01/31/2012

HDP-PR-MCA-005, Investigating Indications of SNM Loss or Theft, Rev. 0, dated 07/19/2010

HDP-PR-MCA-006, Item Control Auditing, Rev. 0, dated 07/19/2010

HDP-PR-MCA-007, Collusion Protection, Rev. 2, dated 01/10/2012

HDP-PR-MCA-008, Tamper-Indicating Devices, Rev. 1, dated 01/03/2012

HDP-TBD-HP-403, ISOCS Radioactivity Measurement, Rev. 1, dated 02/04/2011

HDP-TBD-HP-413, ISOCS Operation and Data Verification, Rev. 7, dated 02/01/2012

HDP-PR-HP-601, Remedial Action Support Surveys, Rev. 0, 03/14/2012

HDP-PR-HP-605, Visual Inspections and Radiological Surveys in the Waste Evaluation Area and Material Assay Area, Rev. 0, 03/14/2012

HDP – Biennial Assessment of the MC&A System, for the period from 01/08/2010 through 09/09/2011

CY2011 Certificates for Calibration of Reference Weights used for Scale calibration

CY2012 Calibration of Scales, Certificates of Calibration

**Westinghouse - Hematite Service List**

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