



Westinghouse Electric Company LLC  
Hematite Decommissioning Project  
3300 State Road P  
Festus, MO 63028  
USA

ATTN: Document Control Desk  
Director, Division of Security Policy,  
Office of Nuclear Security and Incident Response  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Direct tel: 314-810-3355  
E-mail: fusselgm@westinghouse.com  
Our ref: HEM-16-48  
Date: April 25, 2016

Subject: Westinghouse Hematite Decommissioning Project – Written Notification of the Termination of the Hematite Physical Security Plan, Withdrawal of Westinghouse letter HEM-15-128, and License Amendment Request (License No. SNM-00033, Docket No. 070-00036)

Reference: 1) Westinghouse letter HEM-13-93, (Richardson) to NRC (Document Control Desk), dated September 12, 2013, “Westinghouse Hematite Decommissioning Project: Revision Dated September 11, 2013 to the Physical Security Plan”  
2) NRC letter (Persinko) to Westinghouse (Richardson) dated March 11, 2014, “Approval of Revision dated September 11, 2013 to the Physical Security Plan for Westinghouse Hematite Decommissioning Project and Issuance of Hematite Amendment 64 (SNM-33)” (ML14017A279)  
3) Westinghouse letter HEM-15-128, (Fussell) to NRC (Document Control Desk), dated December 3, 2015, “Westinghouse Hematite Decommissioning Project - Revision Dated December 3, 2015, to the Physical Security Plan”

In Reference 1 Westinghouse submitted to the United States Nuclear Regulatory Commission (NRC) a license amendment request that contained a revision to the Hematite Physical Security Plan (PSP) dated September 11, 2013. The revised PSP provided for a physical security plan to accommodate the de-escalation of security posture based upon probability, given changing site condition, of recovering SNM up to the time of termination of the PSP. The PSP provided that the Hematite Decommissioning Project (HDP) would reduce security posture based upon specific milestones. Westinghouse committed to notifying the NRC upon completion of the individual milestones corresponding to the proposed security protocol.

In Reference 2 the NRC approved the revision to the PSP dated September 11, 2013, and issued accompanying SNM-33 license amendment 64.

In accordance with the requirements of the HDP PSP dated September 11, 2013, the purpose of this letter is to notify the NRC that the HDP has achieved the milestone of completing all remediation activities described in the HDP Decommissioning Plan (DP) and associated documents, and has completed the associated Remedial Action Support Surveys. With the completion of this specific milestone the HDP PSP is terminated.

Attachment 1 contains technical basis document HDP-TBD-SEC-004, *Basis for the Termination of the HDP Physical Security Plan*. HDP-TBD-SEC-004 documents the evaluation conducted to demonstrate that the HDP met the specific milestone as stated in the PSP for termination of the PSP. As of the termination of the HDP PSP, HDP security procedures are maintained that are commensurate with license activities and the requirements of 10 CFR 20.1801 and 10 CFR 20.1802. Westinghouse will continue to comply with the applicable DP requirements and with license conditions.

In Reference 3 Westinghouse submitted to the NRC a license amendment request that contained a revision to the HDP PSP dated December 3, 2015. As approval of this revision of the PSP and the accompanying license amendment have not been issued, and there is no longer a requirement for the PSP as remediation activities are complete, Westinghouse withdraws the request for the PSP revision approval and license amendment request contained in Reference 3.

Attachment 2 contains a Special Nuclear Material License Amendment Application for the Hematite Decommissioning Project. Pursuant to 10 CFR 70.34 the amendment application contains the respects in which License SNM-33 is requested to be amended and the grounds for the amendment.

Should you have questions or need any additional information please contact Ken Pallagi, Licensing/Security Manager, of my staff at (314) 810-3353.

Sincerely,



Gay M. Fussell  
Deputy Director  
Hematite Decommissioning Project

Attachments: 1) HDP-TBD-SEC-004, Basis for the Termination of the HDP Physical Security Plan  
2) Special Nuclear Material License Amendment Application for the Hematite Decommissioning Project Festus, Missouri

cc: J. W. Smetanka, Westinghouse  
J. R. Tappert, NMSS DUWP  
M. A. Norato, NRC/DUWP/MDP  
J. A. Smith, NRC/ DUWP/MDP  
G. W. Purdy, NRC/NSIR/DSP/MWSB  
J. B. Giessner, NRC Region III/DNMS  
M. A. Kunowski, NRC Region III/DNMS/MCID  
E. A. Bonano, NRC Region III/DNMS/MCID

## **ATTACHMENT 1**

**HDP-TBD-SEC-004, Basis for the Termination of the HDP Physical Security Plan**



## Hematite Decommissioning Project

### Technical Basis Document

**NUMBER:** HDP-TBD-SEC-004

**TITLE:** Basis for the Termination of the HDP Physical Security Plan

**REVISION:** 0

**EFFECTIVE DATE:** APR 13 2016

#### Approvals:

Author/Owner:  Date: 4-13-2016  
Kenneth E. Pallagi

Reviewer:  for Date: 4-13-2016  
William G. Snell

Deputy Project:  Date: 4-13-2016  
Director  
Gay M. Fussell

REVISION LOG	
Revision No. Effect. Date	Change(s)
0 See Cover Page	This is a new technical basis document. The purpose of this Technical Basis Document (TBD) is to document the evaluation for the termination of the HDP Physical Security Plan.

Hematite Decommissioning Project	HDP-TBD-SEC-004, <i>Basis for the Termination of the HDP Physical Security Plan</i>	
	Revision: 0	Page 1 of 13
<p><b>1.0 PURPOSE</b></p> <p>The purpose of this Technical Basis Document (TBD) is to document the basis for the termination of the HDP Physical Security Plan that was implemented in support of the completion of remediation activities and termination of the U.S. Nuclear Regulatory Commission (NRC) License.</p>		
<p><b>2.0 APPLICABILITY</b></p> <p>This document is applicable to the Physical Security Plan for the Westinghouse Hematite Decommissioning Project (HDP).</p>		
<p><b>3.0 REFERENCES</b></p>		
<p>3.1 Hematite Decommissioning Project Physical Security Plan dated September 11, 2013</p>		
<p>3.2 HDP-TBD-SEC-001, Basis for Phased De-escalation of the HDP Physical Security Plan</p>		
<p>3.3 U.S. Nuclear Regulatory Commission letter dated March 11, 2014, “Approval of Revision Dated September 11, 2013 to the Physical Security Plan for the Westinghouse Hematite Decommissioning Project and Issuance of Hematite Amendment 64 (SNM-33)” {ML14017A279}</p>		
<p>3.4 HDP-TBD-SEC-002, Basis for Reduction in HDP Physical Security for SNM of Moderate Strategic Significance to SNM of Low Strategic Significance</p>		
<p>3.5 Westinghouse letter HEM-14-87 to the U.S. Nuclear Regulatory Commission dated November 20, 2014, “Phased De-escalation of the Hematite Decommissioning Project Physical Security Plan per the Hematite Decommissioning Project Physical Security Plan Revision Dated September 11, 2013” (License No. SNM-00033, Docket No. 070-00036) {ML14324A952}</p>		
<p>3.6 DO-08-004, Hematite Decommissioning Plan {ML092330123}</p>		
<p>3.7 DO-08-005, Historical Site Assessment</p>		
<p>3.8 Safety Evaluation Report by the Office of Nuclear Security and Incident Response Related to the Physical Security Plan for the Decommissioning of the Hematite Decommissioning Project (TAC J52964) Docket No. 070-00036 {ML14017A279}</p>		
<p><b>4.0 DEFINITIONS/ACRONYMS</b></p>		
<p><b>4.1 DEFINITIONS</b></p>		
<p><u>Burial Pit Area</u> – The area of the Hematite site that did or may have contained documented burial pits or undocumented burials and the Red Room Roof burial area as indicated by the HDP Decommissioning Plan Figures 2-2, 2-5, 2-6, 3-4, 3-10, 3-11, 4-1, 4-14, 8-1, 8-3, 8-5, 8-6, and 14-1. The figures were developed based upon the Historical Site Assessment.</p>		

Hematite Decommissioning Project	HDP-TBD-SEC-004, <i>Basis for the Termination of the HDP Physical Security Plan</i>	
	Revision: 0	Page 2 of 13

Diffuse Material – means:

- (a) Bulk material that is contaminated soil, surface contamination on buildings (including that which is on equipment, floors, walls, etc.), or surface contamination on objects (including buried materials, anti-contamination clothing, tools, etc.) that is sufficiently low to meet the fissile exempt criteria when packaged for shipment.
- (b) Bulk material that is volumetrically contaminated whose concentrations are sufficiently low to meet the fissile exempt criteria when packaged for shipment, or
- (c) Segregable material that contains sufficiently low amounts of SNM such that when the segregable material is commingled with bulk material identified in (a) and (b) above, the amount of SNM in the commingled material is sufficiently low to meet the fissile exempt criteria when packaged for shipment.

Discrete Quantity of SNM – means SNM that is not Diffuse Material, as defined in the Physical Security Plan, that would present a Category III Quantity of SNM.

Formula Quantity – means strategic special nuclear material in any combination in a quantity of 5,000 grams or more computed by the formula, grams = (grams contained U235) + 2.5 (grams U233 + grams plutonium). Also known as a Category I Quantity.

Historical Site Assessment – A document that provides the identification of potential, likely, or known sources of radioactive material and radioactive contamination based on existing or derived information for the purpose of classifying a facility or site, or parts thereof, as impacted or non-impacted.

Potentially Recoverable SNM – SNM in which (a) the  $U^{235}$  is in a form that facilitates handling separate from bulk or volumetric materials – forms such as uranium pellets, elements, assemblies, alloys, ingots, or metal, and (b) the quantity or concentration of  $U^{235}$  is sufficient to preclude it from meeting the definition of Diffuse Material.

#### 4.2 ACRONYMS

CAA	Controlled Access Area
DCGL	Derived Concentration Guideline Level
DP	Decommissioning Plan
FSS	Final Status Survey
HDP	Hematite Decommissioning Project
LEU	Low Enriched Uranium
MAA	Material Assay Area
NRC	U.S. Nuclear Regulatory Commission
ORAU	Oak Ridge Associated Universities
PSP	Physical Security Plan
RASS	Remedial Action Support Survey
SNM	Special Nuclear Material
SWTP	Sanitary Wastewater Treatment Plant
TBD	Technical Basis Document
WEA	Waste Evaluation Area

Hematite Decommissioning Project	HDP-TBD-SEC-004, <i>Basis for the Termination of the HDP Physical Security Plan</i>	
	Revision: 0	Page 3 of 13

## 5.0 BACKGROUND

By letter dated March 11, 2014, the U.S. Nuclear Regulatory Commission approved the September 11, 2013, revision to the HDP Physical Security Plan (PSP). This revision to the security plan provided the criteria for a phased reduction and the termination of the HDP Physical Security Plan based upon specific decommissioning status milestones and the completion of the associated activities. The specific milestones stated in the PSP are directly relatable to: 1) eliminating the plausibility of the identification of Potentially Recoverable SNM by completing remediation of the areas where there was an assessment of the plausibility of the material being present, and 2) by completing remediation within the Controlled Access Area (CAA) and the Site Pond Area where there was a plausibility of a Category III quantity of SNM being identified during remediation.

The plausibility was not predicated on known quantities of Potentially Recoverable SNM being present in the Burial Pit Area or known quantities of SNM being present in other areas of the site. Rather the plausibility was predicated on the precaution of an unknown, undetected process or human error being made which resulted in Potentially Recoverable SNM incorrectly being placed in the Burial Pit Area. As described in the Historical Site Assessment, documented burials which contained SNM had occurred in the Burial Pit Area in accordance with AEC regulations in affect at the time, which lent itself to the plausibility of Potentially Recoverable SNM being in that area. Interviews with former employees indicated general trash that had been radiologically surveyed and released had also been buried on the site. This, as well as the fact that the facility had subterranean process piping, sewage and septic systems and effluent systems, provided the plausibility of SNM in other areas of the site.

The relationship of completion of remediation in specific areas of the site is then directly relatable to the requirements in the PSP. With there being a plausibility of Potential Recoverable SNM on-site the security plan is compliant with the requirements for SNM of a moderate strategic significance with a contingency for a Category I quantity of material being identified. When there is no longer the plausibility of Potentially Recoverable SNM being on-site, then the security plan is compliant with the requirements of SNM of low strategic significance. Finally, when the site demonstrates that all areas, as indicated by the HDP Decommissioning Plan, have been remediated and the associated RASS have been completed, the PSP may be terminated. The final condition of the remediated site provides that the residual contamination in the soil and buildings at the time of license termination will meet the requirements of 10 CFR 20.1402, *Radiological criteria for unrestricted release*.

It is for this reason the September 11, 2013, PSP format contains corresponding subsections for moderate strategic significance and subsections for low strategic significance to provide requirements when compliance for that category is applicable.

To support the September 11, 2013, PSP revision HDP submitted to the NRC the technical basis for the phased approach reduction of the PSP which encompassed the current state, at that time, of remediation to the point of termination of the NRC license. That technical basis is contained in HDP-TBD-SEC-001, *Basis for Phased De-escalation of the HDP Physical Security Plan*.



Hematite Decommissioning Project	HDP-TBD-SEC-004, <i>Basis for the Termination of the HDP Physical Security Plan</i>	
	Revision: 0	Page 4 of 13
<p data-bbox="284 216 1437 577">The Hematite Decommissioning Project achieved the decommissioning status milestone as provided in the PSP (PSP Section 1.0) to de-escalate the security plan from that of SNM of a moderate strategic significance to a security plan for SNM of low strategic significance as detailed in the PSP in the last quarter of 2014. By Westinghouse letter HEM-14-87 dated November 20, 2014, Westinghouse notified the NRC of achieving the decommissioning milestone to de-escalate the security plan. Technical basis document HDP-TBD-SEC-002, <i>Basis for Reduction in HDP Physical Security for SNM of Moderate Strategic Significance to SNM of Low Strategic Significance</i>, documented the evaluation to de-escalate the security plan. The technical basis document was submitted to the NRC with Westinghouse letter HEM-14-87.</p> <p data-bbox="284 619 1437 798">As previously stated, Westinghouse anticipated that the “phased de-escalated” security plan would serve the purpose of meeting the security regulatory requirements up to the point in time when a security plan would no longer be required. Westinghouse had not anticipated making a major revision to the PSP other than necessary minor revisions pursuant to 10 CFR 70.32(e).</p> <p data-bbox="284 840 1437 1087">During NRC inspection activities related to completion of the Burial Pit Area it became evident that the location terminology of “documented and undocumented” used when referring to the Burial Pit Area, as written in the PSP and other site documents, was causing a lack of clarity when discussing site remediation and other activities in regards to achievement of decommissioning milestones. This culminated in the assertion that the de-escalation of the security plan may have been premature and the site was not in compliance with the PSP.</p> <p data-bbox="284 1129 1437 1377">In September, 2015, a teleconference call was held with NRC staff members of the Office of Nuclear Safety and Incident Response (NSIR) and NRC Region III with the HDP Licensing/Security Manager. During the teleconference NSIR conveyed that they had received information that the site was performing remediation near the natural gas transmission line and that a portion of the Haul Road still existed and therefore concluded there was still a possibility of the identification of a burial pit (aka, Potentially Recoverable SNM).</p> <p data-bbox="284 1419 1437 1675">HDP provided that it was not possible for a burial pit to exist under or near the natural gas transmission line as: 1) the installation of the natural gas transmission line predated any AEC/NRC licensed activities (previously farm land); 2) an attempted burial would have been in the right of way of the gas company and would have been prohibited; and 3) that the remediation in question was the remediation of residual contamination in soil near the gas line and was not the remediation of general trash or burial waste underneath the gas line.</p> <p data-bbox="284 1717 1437 1965">In regards to the fact that a portion of the Haul Road still existed, HDP provided to NSIR that the road was actually a northeasterly portion of the concrete floors of the former Process Buildings that had been left in place to support the movement of vehicle traffic around the site. The construction of this portion of the Process Buildings occurred after cessation of documented burials. This fact, along with the fact that building construction would have required excavation of the area for the pouring of building footers, foundation and floors provides that if a burial pit did exist outside of the Burial Pit Area</p>		

Hematite Decommissioning Project	HDP-TBD-SEC-004, <i>Basis for the Termination of the HDP Physical Security Plan</i>	
	Revision: 0	Page 5 of 13
<p>in a location under the former Process Buildings it would have been identified at the time of construction of the buildings. Building Codes and Building Inspection activities would not have allowed construction to occur on a waste burial area.</p> <p>Upon clarification, NSIR, Region III, and HDP concurred that, although in various HDP generated documents that the terminology of “Documented and Undocumented Burial Pit Area” and “Burial Pit Area” had been used interchangeably, that the geographic location as provided in the PSP and other HDP documents (i.e., Decommissioning Plan) was consistent and unchanged.</p> <p>During this clarification discussion it was agreed that the appropriate path forward for resolution of the assertion of premature de-escalation of the PSP as well as addressing any confusion that could be caused by the PSP containing the dual requirements for SNM of moderate strategic significance and SNM of low strategic significance would be a revision to the PSP.</p> <p>In Westinghouse letter HEM-15-128, dated December 3, 2015, Westinghouse submitted a revision to the Physical Security Plan, dated December 3, 2015. This revision removed the no longer applicable requirements for SNM of moderate strategic significance and clarified the terminology used for the Burial Pit Area.</p> <p>As of the writing of this Technical Basis Document the revision has not yet been approved by the NRC. Nevertheless, the currently approved Physical Security Plan dated September 11, 2013, and the proposed revision dated December 3, 2015, contain the identical criteria for termination of the Physical Security Plan.</p>		
<p><b>6.0 EVALUATION</b></p> <p>The previous assessments and evaluations (HDP-TBD-SEC-001 and HDP-TBD-SEC-002) utilized to develop the various revisions to the PSP were performed with the element of an unknown variable, such that until an area had undergone assessment through excavation, visual inspection, and the radiological survey process as described in the Decommissioning Plan, it could not be eliminated as an area of plausibility of containing Potentially Recoverable SNM or a Category III Quantity of SNM.</p> <p>As of the writing of this technical basis document all areas of the site that had a plausibility of containing Potentially Recoverable SNM or a Category III Quantity of SNM have been demonstrated to not be plausible areas. Therefore, the element of the unknown no longer exists and the evaluation can be performed based upon empirical data gathered from visual inspection and radiological surveys.</p>		
<p><b>6.1 Evaluation Basis</b></p> <p>The basis of the evaluation will be a comparison to the statements in the <i>Safety Evaluation Report by the Office of Nuclear Security and Incident Response Related to the Physical Security Plan for the Decommissioning of the Hematite Decommissioning Project (TAC J52964) Docket No. 070-00036</i>.</p>		

Hematite Decommissioning Project	HDP-TBD-SEC-004, <i>Basis for the Termination of the HDP Physical Security Plan</i>	
	Revision: 0	Page 6 of 13
<p>The SER page 5, section (U) 10 CFR 73.67(f) contains the decommissioning milestone to be met to terminate the Physical Security Plan; “Upon completion of all remediation activities described in the HDP Decommissioning Plan and the associated RASS for Final Status Survey units, which demonstrates compliance with 10 CFR 20.1402, Radiological Criteria for Unrestricted Use, HDP would no longer maintain a security plan.”</p> <p><b>6.2 Evaluation Methodology</b></p> <p>To demonstrate compliance with the criteria to terminate the PSP each type of survey unit area (land, buildings, and piping) will be evaluated against the remediation activities as described in DP Chapters 8 and 14.</p> <p><b>6.2.1 <u>Land Survey Areas</u></b></p> <p>Land survey areas will be evaluated by categorizing each of the site’s final configuration survey units based upon Figure 14-14 of DP Chapter 14 (see page 14 of 14) and assessing the outcome of the associated RASS. The categories are as follows:</p> <p>FSS Class 1 Area Remediation Required – These survey units are those areas in which remediation and a Class 1 FSS is required. These are the areas as described above in which there was a plausibility of the identification of Potentially Recoverable SNM.</p> <p>FSS Class 1 Area Remediation Not Required – These survey units were previously designated as non-impacted when site characterization was completed but were to become impacted due to planned decommissioning activities (e.g., the construction of a lay down area northeast of the Burial Pits for the storage of reuse soil). As these survey units did not require remediation, a RASS to demonstrate the absence of Potentially Recoverable SNM or a Category III quantity of SNM is not applicable.</p> <p>FSS Class 2 Area – Survey units that have, or had, prior to approval of the DP a potential for radioactive contamination or known contamination, but are not expected to exceed the Derived Concentration Guideline Level (DCGL). The fact that these survey units were not expected to exceed the DCGL inherently implies from a physical security plan perspective that these survey units would neither contain Potentially Recoverable SNM or a Category III quantity of SNM. Therefore a RASS is not applicable to these survey units.</p> <p>FSS Class 3 Area - Any survey units designated as an impacted area that are not expected to contain any residual radioactivity, or are expected to contain levels of residual radioactivity at a small fraction of the DCGL, based on the site operating history and previous radiation surveys. The fact that these survey units were not expected to contain any residual radioactivity inherently implies from a physical security plan perspective that these survey units would neither contain Potentially Recoverable SNM or a Category III quantity of SNM. Therefore a RASS is not applicable to these survey units.</p>		

Hematite Decommissioning Project	HDP-TBD-SEC-004, <i>Basis for the Termination of the HDP Physical Security Plan</i>	
	Revision: 0	Page 7 of 13

### 6.2.2 Building Survey Areas

It is not necessary to develop a methodology to demonstrate compliance with the criteria to terminate the PSP. Rather a summary of the condition of the building to remain on-site will be provided.

### 6.2.3 Piping Survey Areas

It is not necessary to develop a methodology to demonstrate compliance with the criteria to terminate the PSP. Rather a summary of the condition of the piping to remain on-site will be provided.

## 6.3 **Evaluation**

### 6.3.1 Evaluation of Land Survey Areas

The table below provides the results of the evaluation of each land survey unit. The evaluation is based upon the results of documented radiological surveys and inspections conducted during remediation activities and the associated RASS.

Survey Unit	Description	Remediation Per the DP Complete	Associated RASS (for Security) Purposes Complete
LSA-01-01	Site Creek/Joachim Creek	FSS Class 3 Remediation Not required	Not Applicable
LSA-01-02	South Section of Site Creek	FSS Class 2 Remediation Not required	Not Applicable
LSA-01-03	North Section of Site Creek	Yes	Yes
LSA-02-01	North Section of Site Pond	Yes	Yes
LSA-02-02	Central Section of Site Pond	Yes	Yes
LSA-02-03	South Section of Site Pond	Yes	Yes
LSA-03-01	Area West of Site Pond	FSS Class 3 Remediation Not required	Not Applicable
LSA-03-02	Area Southwest of Site Pond	FSS Class 2 Remediation Not required	Not Applicable
LSA-04-01	Area between Buildings 230/231 and Site Pond	FSS Class 3 Remediation Not required	Not Applicable
LSA-04-02	Area East of North Section of Site Pond (west soil laydown area)	FSS Class 1 Remediation Not required	Not Applicable
LSA-04-03	Area East of Central Section of Site Pond (west soil laydown area)	FSS Class 1 Remediation Not required	Not Applicable
LSA-04-04	Area South of Building 231	Yes	Yes
LSA-04-05	Wooded Area South of Building 231	FSS Class 3 Remediation Not required	Not Applicable
LSA-05-01	Site Spring Area adjacent to State Road P	Yes	Yes
LSA-05-02	Tile Barn and Red Room Roof	Yes	Yes
LSA-05-03	Wood Barn	Yes	Yes
LSA-05-04	Site Spring and Cistern	Yes	Yes
LSA-06-01	Main Parking Lot	FSS Class 3 Remediation Not required	Not Applicable
LSA-06-02	West Parking Lot	FSS Class 2 Remediation Not required	Not Applicable

Hematite Decommissioning Project	HDP-TBD-SEC-004, <i>Basis for the Termination of the HDP Physical Security Plan</i>		
	Revision: 0		Page 8 of 13

Survey Unit	Description	Remediation Per the DP Complete	Associated RASS (for Security) Purposes Complete
LSA-07-01	Truck Scale Area	FSS Class 2 Remediation Not required	Not Applicable
LSA-08-01	Process Building Area Section 1	Yes	Yes
LSA-08-02	Process Building Area Section 2	Yes	Yes
LSA-08-03	Process Building Area Section 3	Yes	Yes
LSA-08-04	Process Building Area Section 4	Yes	Yes
LSA-08-05	Process Building Area Section 5	Yes	Yes
LSA-08-06	Process Building Area Section 6	Yes	Yes
LSA-08-07	Process Building Area Section 7	Yes	Yes
LSA-08-08	Process Building Area Section 8	Yes	Yes
LSA-08-09	Process Building Area Section 9	Yes	Yes
LSA-08-10	Process Building Area Section 10	Yes	Yes
LSA-08-11	Process Building Area Section 11	Yes	Yes
LSA-08-12	Process Building Area Section 12	Yes	Yes
LSA-08-13	Process Building Area Section 13	Yes	Yes
LSA-08-14	Process Building Area Section 14	Yes	Yes
LSA-08-15	Process Building Area Section 15	FSS Class 2 Remediation Not required	Not Applicable
LSA-08-16	Process Building Area Section 16	Yes	Yes
LSA-08-17	Process Building Area Section 17	Yes	Yes
LSA-09-01	East Rail Spur Area	FSS Class 2 Remediation Not required	Not Applicable
LSA-09-02	Central Rail Spur Area	FSS Class 1 Remediation Not required	Not Applicable
LSA-09-03	West Rail Spur Area	FSS Class 1 Remediation Not required	Not Applicable
LSA-10-01	Burial Pit Area Section 1	Yes	Yes
LSA-10-02	Burial Pit Area Section 2	Yes	Yes
LSA-10-03	Burial Pit Area Section 3	Yes	Yes
LSA-10-04	Burial Pit Area Section 4	Yes	Yes
LSA-10-05	Burial Pit Area Section 5	Yes	Yes
LSA-10-06	Burial Pit Area Section 6	Yes	Yes
LSA-10-07	Burial Pit Area Section 7	Yes	Yes
LSA-10-08	Burial Pit Area Section 8	Yes	Yes
LSA-10-09	Burial Pit Area Section 9	Yes	Yes
LSA-10-10	Burial Pit Area Section 10	Yes	Yes
LSA-10-11	Burial Pit Area Section 11	Yes	Yes
LSA-10-12	Burial Pit Area Section 12	Yes	Yes
LSA-10-13	Burial Pit Area Section 13	Yes	Yes
LSA-10-14	Burial Pit Area Section 14	Yes	Yes
LSA-11-01	Northeast Site Creek	FSS Class 2 Remediation Not required	Not Applicable
LSA-11-02	Rail Road Line	FSS Class 3 Remediation Not required	Not Applicable
LSA-11-03	East Site Wooded Area	FSS Class 3 Remediation Not required	Not Applicable
LSA-11-04	Small East Site Wooded area	FSS Class 3 Remediation Not required	Not Applicable
LSA-11-05	Northeast Site Creek East Section	FSS Class 2 Remediation Not required	Not Applicable
LSA-12-01	Reuse Soil Laydown Area Section 1	FSS Class 2 Remediation Not required	Not Applicable

Survey Unit	Description	Remediation Per the DP Complete	Associated RASS (for Security) Purposes Complete
LSA-12-02	Reuse Soil Laydown Area Section 2	FSS Class 2 Remediation Not required	Not Applicable
LSA-12-03	Reuse Soil Laydown Area Section 3	FSS Class 1 Remediation Not required	Not Applicable
LSA-12-04	Reuse Soil Laydown Area Section 4	FSS Class 1 Remediation Not required	Not Applicable
LSA-12-05	Reuse Soil Laydown Area Section 5	FSS Class 1 Remediation Not required	Not Applicable
LSA-12-06	Reuse Soil Laydown Area Section 6	FSS Class 1 Remediation Not required	Not Applicable
LSA-12-07	Reuse Soil Laydown Area Section 7	FSS Class 1 Remediation Not required	Not Applicable
LSA-12-08	Reuse Soil Laydown Area Section 8	FSS Class 1 Remediation Not required	Not Applicable
LSA-12-09	Reuse Soil Laydown Area Section 9	FSS Class 1 Remediation Not required	Not Applicable

Based upon the evaluation of each individual land survey area survey unit the results are that all FSS Class 1 survey units that were required to be remediated were remediated and the associated RASS results were acceptable. Individually or in the aggregate none of the land survey units present the possibility of the presence of Potentially Recoverable SNM or a Category III quantity of SNM.

### 6.3.2 Evaluation of Building Survey Areas

For those buildings that are to remain, activities that were required to be completed prior to FSS included the assessment and remediation/decontamination of the building slabs, foundations, drains, subterranean piping, and ventilation systems. Radiological contamination in excess of the DCGL had to be remediated from interior and exterior floors, walls, ceilings and other remaining structural components or system lines and equipment remaining in service such as electrical, gas, and water. Four buildings remain to be released for unrestricted use at the time of license termination: Building 110 (Office and Security), Building 115 (Fire Pump House), Building 230 (Rod Loading) and Building 231 (Warehouse).

#### 6.3.2.1 Building 110

The historical information that was compiled and documented for Building 110 did not indicate that radioactive material was used in this building. However, radiological characterization survey results for the development of the DP indicated that Building 110 was impacted, and contained slightly elevated levels of radioactivity in excess of background levels on the interior and exterior horizontal surfaces, as well as the ventilation ducts. The result of the RASS conducted to support FSS indicates that it will meet the release criteria.

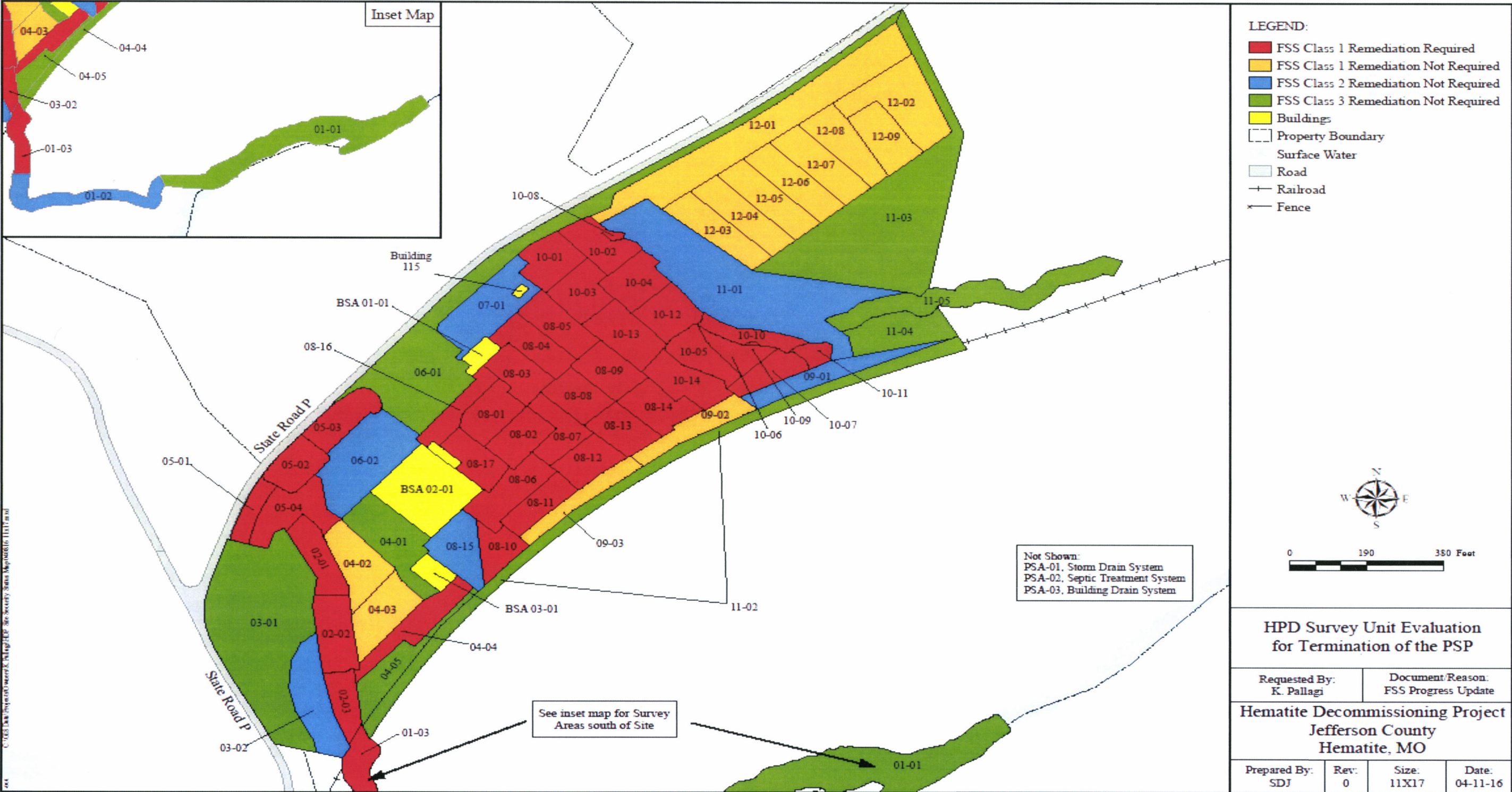
The fact that Building 110 did not have radioactive material in it, and the RASS indicates it will successfully meet the FSS criteria inherently implies from a physical security plan

Hematite Decommissioning Project	HDP-TBD-SEC-004, <i>Basis for the Termination of the HDP Physical Security Plan</i>	
	Revision: 0	Page 10 of 13
<p data-bbox="284 216 1433 285">perspective that Building 110 does not contain Potentially Recoverable SNM or a Category III quantity of SNM.</p> <p data-bbox="188 323 475 359">6.3.2.2 Building 115</p> <p data-bbox="284 399 1433 762">During remediation efforts from 2012, through 2015, a portion of Building 115 was utilized as a Material Assay Area and the remaining portion of Building 115 was utilized as a Waste Evaluation Area. The Material Assay Area (MAA) consisted of a gamma spectroscopy unit and associated equipment for the assay of field and waste containers. The Waste Evaluation Area (WEA) was an isolated area that consisted of a sorting table and portable HEPA ventilation unit. At the conclusion of the need for a MAA/WEA all equipment was removed from the building. Routine contamination surveys and air samples of Building 115 were taken throughout the duration of site remediation and after all equipment was removed. The survey and sample results indicated that Building 115 was not contaminated during the course of its use.</p> <p data-bbox="284 800 1433 945">The fact that Building 115 does not contain radioactive material and the RASS indicates it will successfully meet the FSS criteria this inherently implies from a physical security plan perspective that Building 115 does not contain Potentially Recoverable SNM or a Category III quantity of SNM.</p> <p data-bbox="188 982 475 1018">6.3.2.3 Building 230</p> <p data-bbox="284 1056 1433 1274">Building 230 was constructed in 1992, and was designed and utilized to support the rod loading and fuel assembly operations in one half of the building as well as providing a warehouse area in the other half of the building. During site operations fabricated fuel pellets were transported to Building 230 where they were loaded into empty fuel rods, plugged, and seal-welded. Upon cessation of manufacturing operations rod loading equipment was removed from the building.</p> <p data-bbox="284 1312 1433 1566">During site remediation the former rod loading area of Building 230 was utilized for project personnel offices, the Health Physics Count Room, and consumable supplies storage. The warehouse area of Building 230 contains the Water Treatment System used during site remediation and an indoor waste container staging area. As described in DP Chapter 14 the Water Treatment System will be decommissioned and removed prior to conducting FSS of this portion of Building 230. The warehouse area of Building 230 also serves as a site vehicle parking area during the cold weather months.</p> <p data-bbox="284 1604 1433 1749">Building 230 remediation is complete and is currently in the process of FSS with the exception of the area which houses the Water Treatment System. Building rooms that supported rod loading operations underwent drywall removal to allow for the inspection for fuel pellets. None were identified.</p> <p data-bbox="284 1787 1433 1969">The fact that Building 230 remediation is complete and the RASS of those areas indicate it will successfully meet the FSS criteria and the additional step of removing drywall and inspecting to validate the absence of previously unidentified fuel pellets inherently implies from a physical security plan perspective that Building 230 does not contain Potentially Recoverable SNM or a Category III quantity of SNM.</p>		

Hematite Decommissioning Project	HDP-TBD-SEC-004, <i>Basis for the Termination of the HDP Physical Security Plan</i>	
	Revision: 0	Page 11 of 13
<p data-bbox="191 216 472 247">6.3.2.4 Building 231</p> <p data-bbox="285 289 1433 575">Building 231 was erected in 1996, and during site operations it was used to store radioactive material shipping containers. Some shipping container refurbishment was also performed in this building and the building was also used for temporary storage of contaminated items. After site operation ceased, Building 231 has primarily been a clean storage area for supplies/equipment, and also has been used to store containerized waste. The general arrangement of Building 231 is an open rectangular metal warehouse which provides ease of survey and inspection. RASS indicates that Building 231 will meet the FSS release criteria.</p> <p data-bbox="285 617 1433 760">The fact that Building 231 did not require remediation and the RASS indicates it will successfully meet the FSS criteria inherently implies from a physical security plan perspective that Building 231 does not contain Potentially Recoverable SNM or a Category III quantity of SNM.</p> <p data-bbox="191 802 730 833">6.3.3 <u>Evaluation of Piping Survey Areas</u></p> <p data-bbox="285 875 1433 1234">Overall, the approach applied in regards to disposition of piping by the HDP resulted in a minimal amount of remaining subterranean piping. A large percentage of the storm water drain piping and a portion of the Sanitary Wastewater Treatment plant (SWTP) discharge line will remain at license termination and will meet the release criterion. All other Class 1 piping and SWTP piping was removed and disposed as waste. In September, 2015, all remaining piping was subject to clean out by a stormwater piping cleaning contractor. Subsequent visual inspection by remote camera indicated that no debris remained in the pipes. As such, the fact that the pipes were made debris free and will meet the release criteria inherently implies from a physical security plan perspective that subterranean piping does not contain Potentially Recoverable SNM or a Category III quantity of SNM.</p> <p data-bbox="191 1276 1027 1308"><b>6.4 Introduction/Receipt of SNM from an Offsite Location</b></p> <p data-bbox="285 1350 1433 1417">NRC License SNM-33 precludes the receipt of SNM other than returned SNM such as samples from an analytical laboratory.</p> <p data-bbox="285 1459 1433 1635">Any samples that would be returned are designated as waste and would be in license possession category H (residual contamination). There are no outstanding laboratory samples that would be in license possession category A, B, C or D. Therefore, HDP cannot and will not receive any Potentially Recoverable SNM or a Category III quantity of SNM.</p> <p data-bbox="191 1677 1433 1749"><b>7.0 Evaluation of Security Requirements after Termination of the HDP Physical Security Plan applicable to HDP</b></p> <p data-bbox="285 1791 1433 1896">As provided in License SNM-33 the following applicable parts of Title 10 were reviewed to provide the security requirements after termination of the HDP Security Plan (10 CFR 73).</p>		



Hematite Decommissioning Project	HDP-TBD-SEC-004, <i>Basis for the Termination of the HDP Physical Security Plan</i>	
	Revision: 0	Page 12 of 13
<p>For 10 CFR parts 19, 30, 31, 32, 33, 34, 35, 36, 39, 40, 51, and 71 there are no security requirements applicable to HDP.</p> <p><u>10 CFR 20.1801 Security of stored material and 10 CFR 20.1802 Control of material not in storage</u></p> <p><i>The licensee shall secure from unauthorized removal or access licensed materials that are stored in controlled or unrestricted areas.</i></p> <p><i>The licensee shall control and maintain constant surveillance of licensed material that is in a controlled or unrestricted area and that is not in storage.</i></p> <p>At the time of termination of the HDP PSP, HDP security procedures will be maintained that are commensurate with license activities and the security requirement of 10 CFR 20.1801 and 10 CFR 20.1802.</p> <p>In regards to the remaining radioactive waste material on-site that will be shipped for disposal, it will remain secure within the confines of the former Controlled Access Area Boundary. This boundary precludes inadvertent entry by a member of the general public. The radioactive material contained within the matrix of the waste as residual contamination is controlled in accordance with the HDP Radiation Protection Plan.</p> <p><b>8.0 CONCLUSION</b></p> <p>The HDP has achieved the decommissioning milestone as provided in the HDP Physical Security Plan for termination of the security plan.</p> <p>Upon termination of the PSP, HDP will be compliant with the applicable security requirements for radioactive material.</p>		



**ATTACHMENT 2**

**Special Nuclear Material License Amendment Application for the  
Hematite Decommissioning Project Festus, Missouri**

**U. S. Nuclear Regulatory Commission License Number  
SNM-33**

**U. S. Nuclear Regulatory Commission  
Docket 70-36**

In accordance with 10 CFR 70.34 and 10 CFR 70.21 the Westinghouse Electric Company LLC requests the following amendment to NRC License SNM-33:

### **NAME, ADDRESS AND CORPORATE INFORMATION**

The name of the applicant is Westinghouse Electric Company LLC. The applicant is a limited liability company under the laws of the state of Delaware with principal offices located at 4350 Northern Pike, Monroeville, PA 15146. The address at which the licensed activities will be conducted is:

Westinghouse Electric Company LLC  
3300 State Road P  
Festus, Missouri 63028

### **SITE LOCATION**

The Hematite facility of Westinghouse Electric Company LLC is located on a site of about 228 acres in Jefferson County, Missouri, approximately 3/4 mile northeast of the unincorporated town of Hematite, Missouri and 35 miles south of the city of St. Louis, Missouri. Activities involving special nuclear material are conducted within the fenced controlled area near the center of the site and adjacent to the access road, State Road P. These activities include preparation and shipment of scrap and wastes, and related processes incident to the decommissioning of the facility.

### **LICENSE NUMBER AND PERIOD OF LICENSE**

This application is for Special Nuclear Material License (SNM) No. SNM-33 (NRC Docket 70-36). The expiration date for License No. SNM-33 was revised in Amendment No. 50, issued March 23, 2006, to specify that the license is continued until decommissioning is complete and the NRC notifies Westinghouse Electric Company LLC in writing that the license is terminated.

### **REQUESTED AMENDMENT AND GROUNDS FOR THE AMENDMENT**

#### **Possession Limits - Uranium 235**

Westinghouse requests that the License SNM-33 Possession Limits be reduced for the Uranium 235 isotope such that they are below the quantity specified in 10 CFR 70.4 Definitions, Special Nuclear Material of Low Strategic Significance and 10 CFR 70.24, Criticality Accident Requirements as follows:

- Uranium enriched to a maximum of less than 10 weight percent in the U-235 isotope – 700 grams U-235.
- Uranium enriched greater than or equal to 10 weight percent and less than 20 weight percent in the U-235 isotope – 700 grams U-235.



April 25, 2016

---

Westinghouse requests that the License SNM-33 Possession Limits be reduced for the Uranium 235 isotope such that it is below the quantity specified for Uranium enriched greater than or equal to 20 weight percent as provided by the 10 CFR 70.4 Definitions, Special Nuclear Material of Low Strategic Significance, as follows:

- Uranium enriched greater than or equal to 20 weight percent in the U-235 isotope – 14 grams.

On April 11, 2016, Westinghouse completed radiological remediation of the site and has completed the associated Remedial Action Support Surveys for those areas that required remediation. As such, it is no longer plausible that the site could discover Potentially Recoverable SNM, accumulate SNM in a quantity greater than or equal to that of SNM of Low Strategic Significance, or accumulate a quantity of U-235 specified in 10 CFR 70.24(a).

#### Possession Limits - Uranium (natural or depleted)

Westinghouse requests that the License SNM-33 Possession Limit for Uranium (natural or depleted) be reduced from 2000 kilograms to 100 grams.

On April 11, 2016, Westinghouse completed radiological remediation of the site and has completed the associated Remedial Action Support Surveys for those areas that required remediation. As such, it is no longer plausible that Westinghouse will encounter a large quantity of Uranium. A possession limit of 100 grams is sufficient to allow completion of licensed activities in support of license termination.

#### Possession Limits – Foot Note

Westinghouse requests that the footnote associated with the possession limit 6.C of License SNM-33 be amended by deleting the reference to the Physical Security Plan.

By Westinghouse letter HEM-16-48 the NRC was notified that the HDP Physical Security Plan has been terminated as the project has completed the necessary decommissioning milestone associated with the NRC approval to terminate the Physical Security Plan.

#### License Condition 12

Westinghouse requests that License SNM-33 License Condition 12, regarding the Physical Security Plan, Category I Contingency Safeguards Contingency Response Plan, and the Category I Contingency Security Training and Qualification Plan be amended by deleting the entirety of the license condition.

By Westinghouse letter HEM-16-48 the NRC was notified that the HDP Physical Security Plan has been terminated as the project has completed the necessary decommissioning milestone associated with the NRC approval to terminate the Physical Security Plan.

#### License Condition 13

Westinghouse requests that License SNM-33 License Condition 13, regarding permission to demolishing or dismantling buildings including building slabs and foundations be amended by deleting the entirety of the license condition.

Westinghouse has completed site remediation, which includes the completion of demolition and dismantlement (including building slabs and foundations) of site buildings in accordance with the HDP Decommissioning Plan.

#### License Condition 14

Westinghouse requests that License SNM-33 License Condition 14, regarding the license SNM-33 exemption from the "monitoring system" requirements of 10 CFR 70.24, be amended by deleting the entirety of the license condition.

With approval of this license amendment application, License SNM-33 will no longer allow possession of U-235 in a quantity exceeding 700 grams. Therefore, as provided in 10 CFR 70.24(a), the requirements of 10 CFR 70.24 would no longer be applicable to the Hematite Decommissioning Project.

#### License Condition 16

Westinghouse requests that License SNM-33 License Condition 16, regarding the exemption from the possession limit requirements of 6.C, 7.C and 8.C with respect to the SNM covered by the Settlement Agreement, Consent Order and Final Judgment entered by the United States District Court for the Eastern District of Missouri - Eastern Division in Westinghouse Electric Company, LLC v. the United States of America, be amended by deleting the reference to handling SNM (as specified in the Consent Order) in accordance with the approved Physical Security Plan, Fundamental Nuclear Material Control Plan, and Nuclear Criticality Contingency Plan for Remediating Contingency Hot Spots.

On April 11, 2016, Westinghouse completed radiological remediation of the site and has completed the associated Remedial Action Support Surveys for those areas that required remediation. As such, it is no longer plausible that the site could discover Potentially Recoverable SNM (SNM as specified in the Consent Order).

#### License Condition 18

Westinghouse requests that License SNM-33 License Condition 18, regarding the licensee evaluating the impact of any change to its methods or procedures for performing surveys or visual inspection of buried or exhumed waste and/or contaminated soil, whether in situ or ex situ, on its ability to comply with the applicable criticality safety mass and concentration limits and associated controls established in a nuclear criticality safety assessment/evaluation or in Condition 14, be amended by deleting the entirety of the license condition.

On April 11, 2016, Westinghouse completed radiological remediation of the site and has completed the associated Remedial Action Support Surveys for those areas that required

remediation. As such, there no longer exists buried waste and/or the resulting exhumed waste and/or contaminated soil.

### **Proposed Amended Text**

The proposed text for the requested amendment is indicated by strikeout and underline.

6.	Byproduct, Source, and/or Special Nuclear Material	7.	Chemical and/or Physical Form	8.	Maximum Amount That Licensee May Possess At Any One Time Under This License
A	Uranium enriched to a maximum of less than 10 weight percent in the U-235 isotope	A	Any (including only metal powders existing at the Hematite Site on July 1, 2001)	A	<del>10,000 kilograms</del> <u>700 grams</u> U-235
B	Uranium enriched greater than or equal 10 weight percent and less than 20 weight percent in the U-235 isotope	B	Any (including only metal powders existing at the Hematite Site on July 1, 2001)	B	<del>9,999</del> <u>700</u> grams U-235
C	Uranium enriched greater than or equal to 20 weight percent in the U-235 isotope	C	Any (including only metal powders existing at the Hematite Site on July 1, 2001)	C	<del>4,999</del> <u>14</u> grams* U-235
D	Uranium (natural or depleted)	D	Any (including only metal powders existing at the Hematite Site on July 1, 2001)	D	<del>2,000 kilograms</del> <u>100 grams</u>
E	Co-60	E	Sealed sources	E	40 millicuries
F	Cs-137	F	Sealed sources	F	500 millicuries
G	Byproduct material, including Americium 241	G	Any	G	400 microcuries
H	Special, Source, and Byproduct Material as residual contamination	H	Any (residual contamination)	H	Existing at the Hematite site on July 1, 2001

\*~~License conditions for~~ Category III HEU (for less than 1000 grams U-235) and Category II HEU (1000 to 4999 grams of U-235) ~~are~~ is defined in the Fundamental Nuclear Material Control Plan ~~and the Physical Security Plan.~~

9. Authorized Use: Items A through H. Uses as described in August 12, 2009 Decommissioning Plan and associated supporting documents noted in Hematite Decommissioning Plan SER (ADAMS Accession No. ML112101630) and July 5, 2011 License Application (ADAMS Accession No. ML111880290).

CONDITIONS

10. The licensee is hereby granted the following special authorization from Chapter 1, Section 1.6.1 of the July 5, 2011, License Application.

Release of equipment and materials from restricted areas to controlled areas or offsite in accordance with the NRC's "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," dated April 1993.

11. The licensee shall follow the revision dated February 18, 2011 of its Fundamental Nuclear Material Control Plan. This Plan may be further revised in accordance with, and pursuant to, the provisions of either 10 CFR Part 70.32(c) or 70.34.

- ~~12. The licensee shall follow the physical protection plans entitled, Physical Security Plan, dated September 11, 2013, Category I Contingency Safeguards Contingency Response Plan, dated July 28, 2011 and Category I Contingency Security Training and Qualification Plan, dated July 28, 2011.~~

- ~~13. Licensee is hereby granted permission to demolish or dismantle buildings including building slabs and foundations.~~

- ~~14. Notwithstanding the requirement of 10 CFR 70.24, the licensee shall be exempted from the "monitoring system" requirements in the areas, and under the conditions specified below.~~

~~A. Low concentration materials (1.4 g U-235/L for solids, and 11.6 g U-235/L for liquids) that are safely subcritical by virtue of their low concentration, irrespective of any other physical conditions, including mass, geometry, moderation, reflection, etc.~~

~~B. Materials that are contained in authorized packages as defined in NRC/DOT regulations, including 10 CFR 71 and 49 CFR 173.~~

~~C. Materials within neutronically separate areas containing less than the following isotopic mass amount per separate area:~~

- ~~1. 700 g U-235 in uranium enriched to more than 5 wt.% U-235/U, and~~
- ~~2. 1640 g U-235 in uranium enriched to no more than 5 wt.% U-235/U.~~



Notes: (1) ~~Structure surfaces within the separate area that contain residual U-235 surface contamination below an areal density of 10 g U-235/ft<sup>2</sup> are not included in the mass amount for the separate area.~~

(2) ~~Any U-235 in undisturbed subsurface areas is not included in the isotopic mass amount for the separate area.~~

(3) ~~Neutronically separated areas are to be considered effectively neutronically isolated from all other areas used to store fissile material when either of the following conditions are satisfied:~~

- ~~a. A minimum edge-to-edge separation distance of 12 feet is maintained between each area used to store fissile material; or~~
- ~~b. The configuration of each area used to store fissile material, in conjunction with any fixed shielding that may be present (e.g., concrete block walls) between the areas, is demonstrated by neutron transport calculations to result in effective neutron isolation between each area.~~

~~D. Residual materials on surfaces of the site buildings or installed equipment in those buildings including removal and transit of those SNM-bearing materials from the buildings. (Any SNM-bearing materials brought into site buildings must satisfy another provision in this Section 1.6.2 to meet the exemption.)~~

~~E. A Contingency Hot Spot that is in secure storage, is neutronically isolated from other SNM, and is intrinsically safe due to two of its physical parameters (e.g., mass, volume, enrichment, geometry, moderation) being in a known state that is sufficient to render the item safely subcritical. The term 'Contingency Hot Spot' is defined in the Nuclear Criticality Safety Contingency Plan for Remediating Contingency Hot Spots. The term 'secure storage' is defined as an area in which dual controlled entry is required as well as tandem operations with oversight.~~

~~F. NCS Exempt Materials not otherwise exempted by paragraph 14.A above. NCS Exempt Materials are defined as: "Unless otherwise defined and justified within a nuclear criticality safety evaluation, NCS Exempt Material is conservatively defined as material containing <sup>235</sup>U with an average nuclide fissile concentration not exceeding 0.1 g <sup>235</sup>U/L, or material that comprises no greater than 15 g <sup>235</sup>U and is enclosed within a container with a volume of at least 5liters."~~

~~G. Non-NCS Exempt Materials in the process of exhumation from a burial area and characterization (e.g., in a Waste Evaluation Area and/or Material Assay Area), that have an unknown or indeterminate fissile material content (e.g., intact drums), provided the following criteria are met:~~

- ~~1. In-situ radiological survey equipment does not identify the item as a Contingency Hot Spot, and~~

April 25, 2016

---

- ~~2. The item is not consistent with the calibration basis of the radiological survey equipment used (e.g., dense shielded items, intact drums), and~~
  - ~~3. A 12 foot separation distance (effective neutronic isolation) is maintained between the exhumed item and other exhumed items that are not exempt from Nuclear Criticality Safety (NCS) control (distance may be between 3 feet and 12 feet if effective neutronic isolation at the smaller distance is demonstrated by neutron transport calculations), and~~
  - ~~4. The item is moved from exhumation to a Waste Evaluation Area and/or Material Assay Area without being placed in a storage area in between, and~~
  - ~~5. Only one container (or one item if it is too large for a collared drum) not exempt from NCS control is allowed at a time in a Waste Evaluation Area or Material Assay Area with minimum separation of 12 feet from other Non-NCS Exempt material (distance may be between 3 feet and 12 feet if effective neutronic isolation at the smaller distance is demonstrated by neutron transport calculations), and~~
  - ~~6. Controls for a Contingency Hot Spot per Condition 16 are applied if the additional characterization (e.g., shielding removed) determines that a Contingency Hot Spot is present.~~
152. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and the following correspondence are more restrictive than the regulations.
- A. Westinghouse HEM-11-96, "Final Supplemental Response to NRC Request for Additional Information on the Hematite Decommissioning Plan and Related Revision to a Pending Licensing Action", July 5, 2011 except for Attachment 18. (ADAMS Accession Nos. ML111880290 and ML111880292)
  - B. Documents identified in Chapter 1 of NRC Decommissioning Plan SER. (ADAMS Accession No. ML112101630)
  - C. Westinghouse HEM-11-56, "Evaluation of Technetium-99 Under the Process Buildings", May 5, 2011. (ADAMS Accession No. ML111260624)
  - D. Documents identified in the NRC's 10 CFR 20.2002 SERs associated with Amendment Nos. 58, 60, 63, and 65. (ADAMS Accession Nos. ML111441087, ML12158A401, ML132804368, and ML150864364)
  - E. Westinghouse HEM-12-101, "Special Nuclear Material License Application for the Hematite Decommissioning Project", August 16, 2012. (ADAMS Accession No. ML12233A362)
163. Notwithstanding the requirement of 10 CFR 70.22(a)(4), the licensee shall be exempted from the possession limit requirements of requirements of 6.C, 7.C and 8.C above with

April 25, 2016

---

respect to the SNM covered by the Settlement Agreement, Consent Order and Final Judgment entered by the United States District Court for the Eastern District of Missouri - Eastern Division in Westinghouse Electric Company, LLC v. the United States of America, et al, Case 4:03-cv-00861-CDP (ML112630111), ~~subject to the conditions specified below:~~

~~If the licensee discovers any such SNM during decommissioning, the SNM shall be handled in accordance with the approved Physical Security Plan, Fundamental Nuclear Material Control Plan, and Nuclear Criticality Contingency Plan for Remediating Contingency Hot Spots.~~

174. Pursuant to 10 CFR 20.2002, the licensee may dispose of solid materials [consisting of a total of 126,306 m<sup>3</sup> of soils, soil-like material (dewatered sanitary sludge) and associated debris and 28,451 m<sup>3</sup> of concrete/asphalt, piping, soil and miscellaneous equipment] provided the total inventory of Tc-99 based on the average concentration and total mass shipped remains below 1.3 Ci or 2.05 Ci based upon the 95<sup>th</sup> upper confidence limit as waste at the US Ecology Idaho facility in Grand View, ID. Pursuant to 10 CFR 30.11 and 10 CFR 70.17, this material is exempt from the requirements in 10 CFR 30.3 and 10 CFR 70.3. Any waste material which will be chemically treated at the US Ecology Idaho facility in Grand View Idaho will be shipped in a rail car and total U-235 content per rail car will be limited to 700 grams or less. In addition, Westinghouse will ensure that any chemical treatment which occurs at US Ecology Idaho is limited so that no treated batch contains more than the contents of one railcar.
18. ~~The licensee SHALL evaluate the impact of any change to its methods or procedures for performing surveys or visual inspection of buried or exhumed waste and/or contaminated soil, whether in situ or ex situ, on its ability to comply with the applicable criticality safety mass and concentration limits and associated controls established in a nuclear criticality safety assessment/evaluation or in Condition 14. If, based upon this evaluation, the licensee determines that the change has the potential to increase or decrease the effectiveness or efficiency of the licensee's methods for complying with these limits, then the licensee SHALL provide the NRC a copy of the procedure and the evaluation within 48 hours after its approval.~~