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Our ref: HEM-10-122
Date: November 17, 2010

Subject: Revision to Hematite License Application for Decommissioning and Exemption Requests (License No. SNM-00033, Docket No. 070-00036)

References:
1) Westinghouse (E. K. Hackmann) letter to NRC (Document Control Desk), HEM-09-94, dated August 12, 2009, "Decommissioning Plan and Revision to License Application"
2) Westinghouse (E. K. Hackmann) letter to NRC (Document Control Desk), HEM-09-140, dated December 4, 2009, "Hematite Decommissioning Project Criticality Alarm Exemption Request"

In Reference 1, Westinghouse Electric Company LLC (Westinghouse) submitted the Hematite Decommissioning Plan, a revised License Application (LA), and other Decommissioning related documents. Enclosure 2 of Reference 1, "Special Nuclear Material License Application for the Hematite Decommissioning Project, Revision 8/12/09", provided the revised Hematite License Application.

Please find as Enclosure 1 a new LA revision that replaces the LA previously submitted in Reference 1. This new LA revision incorporates exemptions identified in Reference 2 and changes resulting from discussions supporting the Westinghouse - U.S. Government Settlement Agreement-In-Principle. This new LA revision includes requests for exemptions from certain regulatory requirements related to that Agreement-In-Principle.

Changes to the Reference 1 LA are denoted by vertical lines in the right margin of Enclosure 1. Westinghouse requests the issuance of regulatory exemptions for items 1.6.3, 1.6.5, and 1.6.6 provided in Section 1.6 of Enclosure 1. The requested exemptions are in accordance with 10 CFR §§ 70.17(a) and 73.5, as applicable, in that they are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.

Also, Enclosure 2 contains explanations of the changes to the LA, including justifications for the requested exemptions.

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Please contact Mark Michelsen, Acting Licensing Manager, of my staff at (314) 810-3376 should you have questions or need any additional information.

Sincerely,

E. Kurt Hackmann
Director, Hematite Decommissioning Project

Enclosures
1) Special Nuclear Material License Application for the Hematite Decommissioning Project, Revision 11/17/2010
2) License Application Explanation of Changes and Justification of Exemption Requests

cc: J. J. Hayes, NRC/FSME/DWMEP/DURLD
J. W. Smetanka, Westinghouse, w/o enclosures
J. E. Tapp, NRC Region III/DNMS/MCID, w/o enclosures

ENCLOSURE 1

SPECIAL NUCLEAR MATERIAL LICENSE APPLICATION FOR THE HEMATITE DECOMMISSIONING PROJECT

REVISION 11/17/2010

WESTINGHOUSE ELECTRIC COMPANY LLC

SPECIAL NUCLEAR MATERIAL LICENSE APPLICATION FOR THE HEMATITE DECOMMISSIONING PROJECT

REVISION 11/17/2010

FESTUS, MISSOURI

LICENSE NUMBER SNM-00033

U. S. NUCLEAR REGULATORY COMMISSION DOCKET 070-00036

Table of Contents

1 STANDARD CONDITIONS AND SPECIAL AUTHORIZATIONS

1.1 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 1000 Westinghouse Drive, Cranberry Township, PA 16066 USA. The address at which the licensed activities will be conducted is:

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

1.2 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.

1.3 LICENSE NUMBER AND PERIOD OF LICENSE

This application is for Special Nuclear Material License (SNM) No. SNM-00033 (NRC Docket 070-00036). The expiration date for License No. SNM-00033 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.

1.4 POSSESSION LIMITS

Westinghouse Electric Company LLC requests authorization to possess the following quantities of byproduct, source and special nuclear material under License No. SNM-00033 (see also the possession limit exemption requested in Section 1.6.6 below). The licensee may possess any Special Nuclear Material (SNM), either Category I or Category II, during decommissioning if handled in accordance with the approved Physical Security Plan, Fundamental Nuclear Material Control Plan, and Nuclear Criticality Contingency Plan for Remediating Contingency Hot Spots.

Item	Material	Form	Maximum Quantity
A	Uranium enriched to a maximum of less than 10 weight percent in the ^{235}U isotope	Any (including only metal powders existing at the Hematite Site on July 1, 2001)	10,000 kilograms ^{235}U
B	Uranium enriched greater than or equal to 10 weight percent and less than 20 weight percent in the ^{235}U isotope	Any (including only metal powders existing at the Hematite Site on July 1, 2001)	9,999 grams ^{235}U
C	Uranium enriched greater than or equal to 20 weight percent in the ^{235}U isotope	Any (including only metal powders existing at the Hematite Site on July 1, 2001)	4,999 grams ^{235}U*
D	Uranium (natural or depleted)	Any (including only metal powders existing at the Hematite Site on July 1, 2001)	2,000 kilograms
E	Cobalt 60	Sealed Sources	40 millicuries total
F	Cesium 137	Sealed Sources	500 millicuries total
G	Byproduct Material including ^{241}Am	Any	400 microcuries total
H	Special Nuclear Material, Source and Byproduct Material as residual contamination	Any	All residual contamination existing at the Hematite site on July 1, 2001

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

1.5 AUTHORIZED ACTIVITIES

This license application requests authorization for Westinghouse Electric Company LLC to conduct the following activities at the Hematite Decommissioning Project:

1) Receive, possess, use, store and transfer Special Nuclear Material under Part 70 of the Regulations of the Nuclear Regulatory Commission
2) Receive, possess, use, store, and transfer Source Material under Part 40 of the Regulations of the Nuclear Regulatory Commission
3) Receive, possess, use, store, and transfer Byproduct Material under Part 30 of the Regulations of the Nuclear Regulatory Commission

The authorized principal licensed activity is to decommission the site in accordance with the Decommissioning Plan (DP) to reduce residual radioactivity to a level that permits termination of the license. With the cessation of all nuclear fuel manufacturing operations on the site, authorized activities are limited to those associated with decommissioning in accordance with 10 CFR 70.38(d). These activities are being undertaken to allow termination of License No. SNM-00033 and release of the site for unrestricted use in accordance with NRC Regulations (10 CFR 20, Subpart E, Radiological Criteria for License Termination). These authorized activities are conducted at any location on the Hematite site.

With respect to the specific possession limits of Section 1.4:

1) Items A, B, C and D – use of this Special Nuclear Material and Source Material is limited to those activities necessary to process and package the materials into forms suitable for transfer to other licensed operations or approved recipients. Receipt of any additional materials in these categories is limited to that necessary to complete the decommissioning of the site and facilities. Examples of such receipts would be calibration sources and residual contamination on shipping containers and packages.
2) Item E – for instrument calibration and testing.
3) Item F – for instrument calibration and testing.
4) Item G – for instrument calibration and testing and as residual contamination on shipping containers and packages.
5) Item H – for possession of residual contamination on building and equipment surfaces or contaminated waste/materials or contaminated soil/sediment.
6) SNM is either Diffuse Material or Potentially Recoverable SNM; these terms are defined in the Fundamental Nuclear Material Control Plan. Diffuse Material is counted in the Line Item H category. Potentially Recoverable SNM is counted against the appropriate Line Item A, B, or C limit.

1.6 EXEMPTIONS AND SPECIAL AUTHORIZATIONS

The following are specific exemptions and special authorizations of this license application:

1.6.1 Release of equipment and materials from restricted areas to controlled areas or off-site 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.

1.6.2 Release of calcium fluoride (spent limestone) for use as fill materials on site, providing the average total uranium alpha activity is less than 30 picocuries per gram. Spent limestone with an average activity greater than 30 picocuries per gram shall be dispositioned as low level radioactive waste.

1.6.3 Notwithstanding the requirements of 10 CFR 70.24, the licensed activity involving any materials described below shall be exempted from the "monitoring system" requirements under any of the conditions specified below:

- Low concentration materials (1.4 $g^{235}U/L$ for solids, and 11.6 $g^{235}U/L$ for liquids) that are safely subcritical by virtue of their low concentration, irrespective of any other physical conditions, including mass, geometry, moderation, reflection, etc.
- Residual materials in shipping containers for shipment in accordance with NRC/DOT regulations, such as 10 CFR §71.15.
- Materials within neutronically separate areas containing less than the following isotopic mass amount per separate area:
  - 700 $g^{235}U$ in uranium enriched to more than 5 wt.% $^{235}U/U$, and
  - 1640 $g^{235}U$ in uranium enriched to no more than 5 wt.% $^{235}U/U$;

  Note: (1) Structure surfaces within the separate area that contain residual ^{235}U surface contamination below an areal density of 10 $g^{235}U/ft^2$ are not included in the mass amount for the separate area.

  (2) Any ^{235}U in undisturbed subsurface areas is not included in the isotopic mass amount for the separate area.
- Residual materials within site buildings, such as Buildings 240, 253, 254, 255, 256, 260, including removal and transit of SNM from the buildings and the buildings themselves, provided that no additional SNM is introduced into the buildings from sources external to the buildings.
- 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*.

1.6.4 All commitments made to NRC Staff prior to the approval date of this License Application shall be no longer binding upon Westinghouse, following approval of this License Application, unless re-imposed as License Conditions.

1.6.5 Notwithstanding the requirements of Title 10, Code of Federal Regulations, Part 73, §§73.20, 73.25. 73.45 and 73.46, the licensed activity shall be exempted from the security requirements of those cited sections with respect to the SNM covered by the Westinghouse - U. S. Government Settlement Agreement-In-Principle. 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.

1.6.6 Notwithstanding the requirements of Title 10, Code of Federal Regulations, Part 70, §70.22(a)(4), the licensed activity shall be exempted from the possession limit requirements of Section 1.4 Item C above with respect to the SNM covered by the Westinghouse - U. S. Government Settlement Agreement-In-Principle. 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.

1.6.7 Dismantlement and demolition of site buildings down to building slabs and foundations at grade.

1.7 FREQUENCIES

When audit, measurement, surveillance, and/or other frequencies are specified in license documents, the following time spans apply:

- *Daily* means once each 24-hour period
- *Weekly* means once each 7-consecutive-days
- *Monthly* means 12-per-year, with each covering a span of 40-days or less
- *Quarterly* means 4-per-year, with each covering a span of 115-days or less
- *Semiannual* means 2-per-year, with each covering a span of 225-days or less
- *Annual* means 1-per-year, with each covering a span of 15-months or less
- *Biennial* means once every 2-years, with each covering a span of 30-months or less
- *Triennial* means once every 3-years, with each covering a span of 45-months or less
- For unspecified time periods, an extension of 0.25 times the period will apply

1.8 DECOMMISSIONING CHANGES

Changes to decommissioning activities shall be evaluated to ensure they are consistent with license conditions and the intent of the NRC approved Decommissioning Plan (DP) and may be made without prior NRC approval subject to the following condition. Revision of any of the following activities described in Chapter 14 of the DP requires NRC approval prior to implementation:

- Increasing the approved radionuclide-specific DCGLs or area factors;
- Increasing the probability of making a Type I decision error above the level stated in the DP;
- Increasing the investigation level thresholds for a given survey unit classification;
- Changing the classification of a survey unit from a more restrictive classification to a less restrictive classification (e.g., Class 1 to Class 2);
- Reducing the coverage requirements for scan measurements; and
- Using statistical tests other than the Sign test or Wilcoxon Rank Sum test for data evaluation.

2 ORGANIZATION AND ADMINISTRATION

See Chapter 9, Project Management and Organization, and Chapter 13, Quality Assurance, of the DP.

3 RADIATION PROTECTION

See DP Chapter 10, Health and Safety Program During Decommissioning.

4 NUCLEAR CRITICALITY SAFETY

See Chapter 10, Health and Safety Program During Decommissioning, and specifically 10.9.1, of the DP.

5 EFFLUENT CONTROL AND MONITORING PROGRAM AND ENVIRONMENTAL MONITORING PROGRAM

See Chapter 11, Environmental Monitoring Program, of the DP.

6 RADIOACTIVE WASTE MANAGEMENT

See Chapter 12, Radioactive Waste Management, of the DP.

7 DECOMMISSIONING PLAN

Westinghouse Electric Company LLC has submitted for NRC approval a DP for the Hematite facility, including a Decommissioning Funding Plan, as required by 10 CFR 70.38, License Conditions 9.E. and 15 (e.g., of SNM-00033, Amendment 53) and §70.25.

8 EMERGENCY MANAGEMENT

The Westinghouse Hematite site is in the progress of decommissioning and has ceased manufacturing operations. Westinghouse has submitted an analysis of the consequences associated with postulated accidents (Westinghouse letter dated August 22, 2002; approved by the NRC in License SNM-00033, Amendment 43). That evaluation showed that the maximum dose to a member of the public due to the release of radioactive material would not exceed the provisions of 10CFR70.22(i)(1)(i). An Emergency Plan is therefore not required to meet the provisions of 10CFR70.22(i)(1)(ii).

ENCLOSURE 2

LICENSE APPLICATION EXPLANATION OF CHANGES AND JUSTIFICATION OF EXEMPTION REQUESTS

License Application Explanation of Changes and Justification of Exemption Requests

Section	Revision	Basis
1.1, 2nd Sentence	Was: "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." Now: "The applicant is a limited liability company under the laws of the state of Delaware with principal offices located at 1000 Westinghouse Drive, Cranberry Township, PA 16066 USA."	This revision is needed since headquarters for Westinghouse Electric Compary LLC have moved.
1.4	Was: "Westinghouse Electric Company LLC requests authorization to possess the following quantities of byproduct, source and special nuclear material under License No. SNM-33." Now: "Westinghouse Electric Company LLC requests authorization to possess the following quantities of byproduct, source and special nuclear material under License No. SNM-00033 (see also the possession limit exemption requested in Section 1.6.6 below). The licensee may possess any Special Nuclear Material (SNM), either Category I or Category II, during decommissioning if handled in accordance with the approved Physical Security Plan, Fundamental Nuclear Material Control Plan, and Nuclear Criticality Contingency Plan for Remediating Contingency Hot Spots."	This revision is needed to point to an exemption request in the LA which concerns the possession limits and to address the unlikely event of Westinghouse discovering and possessing a Category II or Category I quantity. Since Westinghouse is currently licensed (Amendment 55 to SNM-33) to only possess a Category III quantity of SNM, a new sentence was added to address the unlikely event of Westinghouse discovering and possessing a Category II or Category I quantity. Westinghouse has prepared for these contingency events by revising or preparing the Physical Security Plan, Fundamental Nuclear Material Control Plan, and Nuclear Criticality Contingency Plan for Remediating Contingency Hot Spots; these documents have been submitted to the NRC. This change is part of incorporating the discussions supporting the Westinghouse-U.S. Government Settlement Agreement-in-Principle.

Section	Revision	Basis
1.4 Table Rows A, B, C, D; Column "Form"	Was: "Any (excluding metal powders)." Now: "Any (including only metal powders existing at the Hematite Site on July 1, 2001)."	This revision is needed to address the unlikely event that remediation of burial areas recovers an intact container of metal powder from historical operations. The prior language excluding possession of uranium in metal powder form was an appropriate limitation during the production of commercial fuel of less than five percent enrichment. However, Westinghouse understands that prior Licensees handled uranium metal powder for work for the U.S. Government. Although unlikely, Westinghouse cannot rule out that such metal powder was placed in on-site burial areas. In the event that such metal powder is discovered in the burial areas (e.g., the powder is in an intact container and in an immersion agent, such as oil), then Westinghouse will need to be allowed to possess such metal powder. This revision uses the language from Row H of the same table to accommodate in the possession limits the potential for discovery of uranium metal powder already existing at the Hematite Site on July 1, 2001.
1.4 Table, row C, right column	Was: "999 grams ^{235}U, for Category III HEU*; OR more than or equal to 1,000 grams, but less than or equal to 4,999 grams ^{235}U, for Category II HEU*" with footnote of "*License conditions for Category III HEU and Category II HEU are defined in the Fundamental Nuclear Material Control Plan and the Physical Security Plan." Now: "4,999 grams ^{235}U*" with footnote of "*License conditions for Category III HEU (for less than 1000 grams ^{235}U) and Category II HEU (1000 to 4999 grams of ^{235}U) are defined in the Fundamental Nuclear Material Control Plan and the Physical Security Plan."	This revision is needed to clarify the intent of this limit. The previous representation of this entry implied 2 different limits. This clarification states the maximum overall limit, with amplifying information contained in the footnote.

Section	Revision	Basis
1.5 Para. 6)	Was: N/A. Now: "SNM is either Diffuse Material or Potentially Recoverable SNM; these terms are defined in the Fundamental Nuclear Material Control Plan. Diffuse Material is counted in the Line Item H category. Potentially Recoverable SNM is counted against the appropriate Line Item A, B, or C limit."	This revision is needed to ensure the proper application of the possession limits in Section 1.4 in conjunction with requirements in the Fundamental Nuclear Material Control Plan. Otherwise, the possession limits table could be misunderstood such that: (1) SNM is identified as belonging in both Line Item H and another Line Item (Line Items A, B, or C), or (2) SNM is inconsistently assigned between Line Item H and Line Items A, B, or C. The Fundamental Nuclear Material Control Plan defines the terms "Diffuse Material" and "Potentially Recoverable Material." The Fundamental Nuclear Material Control Plan was submitted by Westinghouse letter dated September 24, 2010, (Westinghouse [E. K. Hackmann] letter to NRC [Document Control Desk], HEM-10-103, "Revision to Hematite Fundamental Nuclear Material Control Plan for Decommissioning"). This change is part of incorporating the discussions supporting the Westinghouse-U.S. Government Settlement Agreement-in-Principle. Diffuse Material is defined as: (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 set forth below when packaged for shipment. (b) Bulk material that is volumetrically contaminated whose concentrations are sufficiently low to meet the Fissile Exempt Criteria set forth below when packaged for shipment. (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/or (b) above, the amount of SNM in the commingled material is sufficiently low to meet the Fissile Exempt Criteria set forth below when packaged for shipment.

Section	Revision	Basis
		(Fissile Exempt Criteria are defined as low concentrations of solid fissile material commingled with solid nonfissile material, provided that: (a) there is at least 2000 grams of solid nonfissile material for every gram of fissile material, and (b) there is no more than 180 grams of fissile material distributed within 360 kg of contiguous nonfissile material.) Potentially Recoverable SNM is SNM (as defined by Section 70.4, Title 10, Code of Federal Regulations) in which: • The U-235 is in a form that facilitates handling separate from bulk or volumetric materials – forms such as uranium fuel pellets, elements, assemblies, alloys, ingots, or metal, and • The quantity or concentration of U-235 is sufficient to preclude it from meeting the definition of Diffuse Material.
1.6	Was: Paragraphs numbered '1)', '2)', '3)', and '4)'. Now: Paragraphs numbered '1.6.1', '1.6.2', '1.6.3', and '1.6.4'.	This revision is needed to improve organization of text and ease of reference.
1.6.3	Was: "Notwithstanding the requirements of Title 10, Code of Federal Regulations, Part 70.24, the licensed activity shall be exempted from the "monitoring system" requirements in the areas, and under any or all of the conditions specified below:" Now: "Notwithstanding the requirements of 10 CFR 70.24, the licensed activity involving any materials described below shall be exempted from the "monitoring system" requirements under any of the conditions specified below:"	This revision is needed to clarify discussion of the bullets and make regulation citation consist with others in the document.

Section	Revision	Basis
1.6.3, 1st bullet	Was: "Low concentration materials (4.0 grams ^{235}U/Liter for solids, and 11.6 grams ^{235}U/Liter for liquids) that are safely subcritical by virtue of their low concentration, irrespective of any other physical conditions, including mass, geometry, moderation, reflection, etc." Now: "Low concentration materials (1.4 g^{235}U/L for solids, and 11.6 g^{235}U/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."	This exemption is needed based on ANSI/ANS-8.3 Section 4.1.1, which is endorsed by the NRC in Regulatory Guide 3.71. ANSI/ANS-8.3 Section 4.1.1 states that a CAAS should only be installed when it will result in a reduction in total risk. Stated conversely, a CAAS should not be installed when it will result in an increase in personnel risk. ANSI/ANS-8.3 also makes it clear that the hazards associated with false alarms are an important consideration. Given that there is no credible risk of a criticality accident associated with the concentrations of SNM specified in this bullet, the hazards associated with personnel evacuating from false alarms increases personnel risk. Thus an active CAAS would be inconsistent with the guidance in this standard, and this fact supports the issuance of the requested exemption. The supporting analysis for this exemption request is contained in Westinghouse letter dated December 4, 2009, (Westinghouse [E. K. Hackmann] letter to NRC [Document Control Desk], HEM-09-140, "Hematite Decommissioning Project Criticality Alarm Exemption Request"). In summary, this revised concentration limit corresponds to the subcritical infinite sea concentration for solid waste-like materials and is based on a fictitious bounding medium consisting of only SiO_2 and ^{235}U (NUREG/CR-6505 Vol. 1). This limit is bounding of solid remediation wastes (contaminated soils, contaminated materials and structures, exhumed buried wastes, etc.) because SiO_2 represents a conservative media on which to base a minimum critical concentration limit due to its very small neutron capture cross-section compared to expected remediation wastes. Added 'or' to ensure understanding that satisfaction of a single bullet was sufficient for the exemption.

Section	Revision	Basis
1.6.3 2nd bullet	Was: "Contaminated materials in shipping containers for shipment in accordance with NRC/DOT regulations, including 10 CFR 71.15." Now: "Residual materials in shipping containers for shipment in accordance with NRC/DOT regulations, such as 10 CFR §71.15."	This revision is needed to clarify that the exclusion is for residual contamination on the interal surfaces of shipping containers and not for containerized items with contamination. The revision also clarifies the cited regulation is an example.
1.6.3 3rd bullet	Was: "Buildings and separate areas containing less than 700 grams of ^{235}U per building or separate area. This limit applies to all aspects of the operation, including credible upset conditions." Now: "Materials within neutronically separate areas containing less than the following isotopic mass amount per separate area: "– 700 $g^{235}U$ in uranium enriched to more than 5 wt.% $^{235}U/U$, and "– 1640 $g^{235}U$ in uranium enriched to no more than 5 wt.% $^{235}U/U$. "Notes: (1) Structure surfaces within the separate area that contain residual ^{235}U surface contamination below an areal density of 10 $g^{235}U/ft^2$ are not included in the mass amount for the separate area. (2) Any ^{235}U in undisturbed subsurface areas is not included in the isotopic mass amount for the separate area."	This exemption is needed based on ANSI/ANS-8.3 Section 4.1.1, which is endorsed by the NRC in Regulatory Guide 3.71. ANSI/ANS-8.3 Section 4.1.1 states that a CAAS should only be installed when it will result in a reduction in total risk. Stated conversely, a CAAS should not be installed when it will result in an increase in personnel risk. ANSI/ANS-8.3 also makes it clear that the hazards associated with false alarms are an important consideration. Given that there is no credible risk of a criticality accident associated with the amounts of SNM specified in this bullet, the hazards associated with personnel evacuating from false alarms increases personnel risk. Thus an active CAAS would be inconsistent with the guidance in this standard, and this fact supports the issuance of the requested exemption. The supporting analysis for this exemption request is in Westinghouse letter dated December 4, 2009, (Westinghouse [E. K. Hackmann] letter to NRC [Document Control Desk], HEM-09-140, "Hematite Decommissioning Project Criticality Alarm Exemption Request"). In summary, the specified mass limits do not exceed the maximum subcritical mass limits for the corresponding ^{235}U enrichment. These mass limits are set at or below the subcritical mass limits specified in Table 1 and Table 6 of ANSI/ANS-8.1-1998. In addition, the notes are based on: (1) The peak areal density established for the surfaces of the buildings

Section	Revision	Basis
		at the Hematite site is less than 10 $g^{235}U/ft^2$. Due to the very large margin between this peak value and the maximum safe areal density of ^{235}U identified in Table 1 of ANSI/ANS-8.1, it is assured that any neutron interaction between building surfaces and items located within the buildings will be insignificant. (2) The years of material being in subsurface areas empirically demonstrate that the undisturbed material is subcritical. Material located in undisturbed subsurface areas can only be quantified after it is disturbed.
1.6.3, 4th bullet	Was: N/A. Now: "Residual materials within site buildings, such as Buildings 240, 253, 254, 255, 256, 260, including removal and transit of SNM from the buildings and the buildings themselves, provided that no additional SNM is introduced into the from sources external to the former process buildings."	This exemption is needed based on ANSI/ANS-8.3 Section 4.1.1, which is endorsed by the NRC in Regulatory Guide 3.71. ANSI/ANS-8.3 Section 4.1.1 states that a CAAS should only be installed when it will result in a reduction in total risk. Stated conversely, a CAAS should not be installed when it will result in an increase in personnel risk. ANSI/ANS-8.3 also makes it clear that the hazards associated with false alarms are an important consideration. Given that there is no credible risk of a criticality accident associated with the former process buildings, the hazards associated with personnel evacuating from false alarms increases personnel risk. Thus an active CAAS would be inconsistent with the guidance in this standard, and this fact supports the issuance of the requested exemption. The supporting analysis for this exemption request is in Westinghouse letter dated December 4, 2009, (Westinghouse [E. K. Hackmann] letter to NRC [Document Control Desk], HEM-09-140, "Hematite Decommissioning Project Criticality Alarm Exemption Request"). In summary, the extensive measurements of the amount and location of ^{235}U in the process buildings areas supported nuclear criticality safety analyses that demonstrate that the remaining ^{235}U is of such a small amount and is so widely dispersed that there is no credible scenario for achieving the highly idealized conditions required for a critical state.

Section	Revision	Basis
		The process buildings analyzed in the Westinghouse letter dated December 4, 2009 are the worst case, bounding condition for on-site structures. Thus, all site buildings are included.
1.6.3, 5th bullet	Was: N/A. Now: "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*."	This exemption is needed based on ANSI/ANS-8.3 Section 4.1.1, which is endorsed by the NRC in Regulatory Guide 3.71. ANSI/ANS-8.3 Section 4.1.1 states that a CAAS should only be installed when it will result in a reduction in total risk. Stated conversely, a CAAS should not be installed when it will result in an increase in personnel risk. ANSI/ANS-8.3 also makes it clear that the hazards associated with false alarms are an important consideration. Given that there is no credible risk of a criticality accident associated with secure storage under the specified conditions, the hazards associated with personnel evacuating from false alarms increases personnel risk. Thus an active CAAS would be inconsistent with the guidance in this standard, and this fact supports the issuance of the requested exemption. Assuming that the unlikely event of discovering a *Contingency Hot Spot* occurs during remediation, this exemption is solely for the secure storage of a *Contingency Hot Spot*. Other operations involving the *Contingency Hot Spot* would not be exempt. The secure storage of a *Contingency Hot Spot* is only exempt where the specified conditions are met. The specified conditions apply the double contingency principle to prevent self-criticality and apply neutronic isolation to prevent interaction with other SNM. Achievement of these conditions would be subject to Westinghouse's nuclear criticality safety program, which is described in Chapter 10, Section 10.9 of the Decommissioning Plan and would be approved by the NRC by virtue of its approval of the Decommissioning Plan, as submitted by Westinghouse letter dated August 12, 2009, (Westinghouse [E. K. Hackmann] letter to NRC [Document Control Desk], HEM-09-94, "Decommissioning Plan and Revision to License Application"). This

Section	Revision	Basis
		change is part of incorporating the discussions supporting the Westinghouse-U.S. Government Settlement Agreement-in-Principle The term *Contingency Hot Spot* is defined in the Nuclear Criticality Safety Contingency Plan for Remediating Contingency Hot Spots, as submitted by Westinghouse letter dated November 12, 2010, (Westinghouse [E. K. Hackmann] letter to NRC [Document Control Desk], HEM-10-116, "Nuclear Criticality Safety Contingency Plan"). • A Hot Spot is defined as a distinct, in-situ location where field instruments indicate an elevated quantity of ^{235}U (whether one object, a group of objects, or a cluster of material) when compared to the quantity of ^{235}U in the surrounding area. • A *Contingency Hot Spot* is defined as a discrete item with a ^{235}U mass estimate exceeding 700 g ^{235}U (i.e., a distinct in-situ location where field instruments indicate the presence of more than 700 g of ^{235}U).
1.6.5	Was: N/A. Now: "1.6.5 Notwithstanding the requirements of Title 10, Code of Federal Regulations, Part 73, §§73.20, 73.25. 73.45 and 73.46, the licensed activity shall be exempted from the security requirements of those cited sections with respect to the SNM covered by the Westinghouse - U. S. Government Settlement Agreement-In-Principle. 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."	This exemption is needed based on the remote possibility that Westinghouse may discover a Category I quantity of SNM during remediation since prior site Licensees handled such SNM during the historical operation of the on-site burial pits. Such a possible discovery resulted in discussions addressed by the Westinghouse - U.S. Government Settlement Agreement-In-Principle. The Westinghouse - U.S. Government Settlement Agreement-In-Principle defined U.S. Department of Energy and Westinghouse responsibilities for a timely approach to reduce the amount of SNM below a Category I quantity in the unlikely event such a quantity is discovered during remediation. Westinghouse has submitted a Physical Security Plan that meets the intent of the regulations at 10 CFR §§73.20, 73.25, 73.45 and 73.46 for the short and unlikely contingency of possessing a Category I quantity following discovery. Westinghouse has justified this exemption and the manner in which the Physical Security Plan

Section	Revision	Basis
		meets regulatory intent in Westinghouse letter dated November 9, 2010, (Westinghouse [E. K. Hackmann] letter to NRC [Document Control Desk], HEM-10-121, "Revision to Hematite Physical Security Plan for Decommissioning"). Additional details are not provided here due to information security controls.
1.6.6	Was: N/A. Now: "1.6.6 Notwithstanding the requirements of Title 10, Code of Federal Regulations, Part 70, §70.22(a)(4), the licensed activity shall be exempted from the possession limit requirements of Section 1.4 Item C above with respect to the SNM covered by the Westinghouse - U. S. Government Settlement Agreement-In-Principle. 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."	This exemption is needed based on the remote possibility that Westinghouse may discover a Category I quantity of SNM during remediation since prior site Licensees handled such SNM during the historic operation of the on-site burial pits. Such a possible discovery resulted in discussions addressed by the Westinghouse - U.S. Government Settlement Agreement-In-Principle. The Westinghouse - U.S. Government Settlement Agreement-In-Principle defined U.S. Department of Energy and Westinghouse responsibilities for a timely approach to reduce the amount of SNM below a Category I quantity in the unlikely event such a quantity is discovered during remediation. This exemption is for a contingency event to handle unexpected SNM that is already present on-site in the form of contamination and buried waste. As committed in the Westinghouse - U.S. Government Settlement Agreement-In-Principle, Westinghouse agrees to use its best efforts as part of its cleanup of the Site, including mechanical size reduction, to avoid the accumulation of Special Nuclear Material in Category I quantities.
1.6.7	Was: N/A Now: "1.6.7 Dismantlement and demolition of site buildings down to building slabs and foundations at grade."	This revision is needed to continue in the DP License Amendment a provision from Amendment 55 of SNM-33.