



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION III
2443 WARRENVILLE RD. SUITE 210
LISLE, IL 60532-4352

March 22, 2016

EA-16-004

Ms. Gay Fussell, Deputy Director
Hematite Decommissioning Project
Westinghouse Electric Company
3300 State Road P
Festus, MO 63208

SUBJECT: RESPONSE TO DISPUTED NOTICE OF VIOLATION
WESTINGHOUSE ELECTRIC COMPANY (HEMATITE)
NRC INSPECTION REPORT 07000036/2015003(DNMS)

Dear Ms. Fussell:

On December 23, 2015, you provided the Westinghouse Electric Company (Hematite) response (ADAMS Accession Number ML15357A074) to U.S. Nuclear Regulatory Commission (NRC) Inspection Report 07000036/2015003 and Notice of Violation, dated November 27, 2015 (ADAMS Accession Number ML15334A404). In that response, Hematite contested Violations Nos. 1, 2, and 3, and accepted Violation No. 4. The three contested violations are Violation No. 1 for the failure to control storm water in LSA (Land Survey Area) 02-01, Violation No. 2 for inadequate survey procedures, and Violation No. 3 for failure to perform a 100 percent survey of LSA 10-01 and 10-02. By letter dated January 19, 2016, the NRC acknowledged your letter and advised you that NRC staff was evaluating your reply and would inform you of the results of NRC's evaluation.

The NRC has completed its evaluation of the response to the Notice of Violation. The evaluation was conducted by individuals independent from the NRC staff in the Division of Nuclear Materials Safety (DNMS) who originally identified the violations and issued the inspection report. Based on this independent evaluation, the NRC has determined that Violations No. 1, 2, and 3 occurred as stated in the Notice of Violation. Details of the evaluation are provided in the enclosure to this letter. As stated in our letter dated January 19, 2016 (ADAMS Accession Number ML16020A093) to you acknowledging receipt of your December 23, 2015, response, the corrective actions for Violation No. 4 appear adequate and may be reviewed by NRC inspectors during a future inspection.

In summary of the contested violations, the NRC has made the following determinations. For Violation No. 1, the failure to control storm water in LSA 02-01, you contended that: (1) the heavy rainfall on August 30, 2015, that resulted in the movement of 15 radiologically contaminated items (likely roofing material) into the remediated, uncontaminated LSA was beyond the maximum rainfall event analyzed in your Environmental Report; and (2) that controls of surface water and contamination at the site are not required to be absolute. In our review, we determined that the 9-inch rainfall event discussed in the Environmental Report is a maximum rainfall over a 10-day extended period and that it is not appropriate to simply divide the 9 inches

by the number of hours in 10 days to establish that 0.0375 inch per hour is the maximum short-term rainfall rate you need to consider. Thunderstorms also occur and are mentioned in the Environmental Report (occurring on average between 40 and 50 days per year). Rainfall rates during thunderstorms are expected to be much higher and the rate seen on August 30, 2015, which was approximately 1.9 inches per hour, was heavy but not unexpected for a thunderstorm. Regarding the controls at the site for rainfall runoff, while the Environmental Report is not absolute about storm water flowing out of contaminated LSAs, a number of site procedures are currently worded as absolute—as we stated in the Notice of Violation, you are required to follow these procedures as written. The movement of the 15 radiologically contaminated items as a result of the heavy rain that occurred on August 30, 2015, and subsequent damage to a storm water contamination control structure near the same LSA from a heavy rainfall on September 10, 2015, demonstrate that controls specified in site procedures were not adequate to prevent storm water moving through contaminated areas. In your letter dated December 23, 2015, contesting this violation, you described some actions you had taken related to this violation. These actions, however, do not fully address the inadequate procedures.

For Violation No. 2, inadequate survey procedures, you contended: (1) site procedures are not required for rainfall beyond what is analyzed in the Environmental Report; and (2) that an inspection was made of LSA 02-01 following the heavy rainfall on August 30, 2015, as required by an existing procedure but that the inspection was poorly performed. In our review, we determined, as with Violation No. 1, that the rainfall event was within your design basis and that the procedurally required (visual) inspection you reference is not adequate to identify that contaminated material might have been moved into previously remediated and uncontaminated LSAs. Several days after the August 30, 2015, rainfall and the site's inspection of the LSA, our inspectors were onsite and readily observed that these radiologically contaminated items—some of which were over six inches in diameter—were in the LSA. Our inspectors then confirmed with their survey instruments that the objects were contaminated. In your letter dated December 23, 2015, contesting this violation, you indicated that an existing procedure (work package) HDP-WP-ENG-802, "Backfill & Site Restoration," has been changed to require a gamma survey be performed of a remediated and uncontaminated area prior to backfill. This change, however, does not provide for timely survey, and control, of an area that potentially has been re-contaminated through heavy surface water flow as a result of a rain storm.

For Violation No. 3, failure to survey 100 percent (gamma walkover) of LSA 10-01 and 10-02, you contended that you met the intent of the Decommissioning Plan and industry guidance. In our review, we determined as with Violation No. 1 that you did not follow the required site procedures. We mentioned to you in one of the routine publicly-noticed telephone conferences (on October 29, 2015—ADAMS Accession Number ML15307A152) that you need to provide justification when 100 percent survey coverage is not achieved. In your letter dated December 23, 2015, contesting this violation, you indicated that you would provide a detailed discussion in survey area release records of why a 100 percent survey may not have been achieved. You also indicated that procedures had been revised to provide for modifications to survey methods and equipment that could potentially reduce the amount of areas not subject to 100 percent survey. To complete corrective actions for this violation, you need to provide an explanation of why a 100 percent survey was not completed, and you need to complete an evaluation that demonstrates the entire area is acceptable for unrestricted use, in accordance with the radiological criteria of 10 CFR 20.1402, given that less than 100 percent of an area was surveyed.

Because the NRC has concluded that Violations Nos. 1, 2, and 3 are valid violations and you did not provide specific corrective actions for these violations in your December 23, 2015, response, except as discussed above for Violation No. 3, you are required to provide corrective actions as directed in the Notice of Violation issued on November 27, 2015. Follow the instructions specified in the original Notice of Violation when preparing your response. This response is required within 30 days of the date of this letter from me. The guidance in NRC Information Notice 96-28, "Suggested Guidance Relating to Development and Implementation of Corrective Action," may be useful in preparing your response. You can find the Information Notice on the NRC's website at <http://www.nrc.gov/reading-rm/doc-collections/gen-comm/info-notices/1996/in96028.html>. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your reply will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records System (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Darrell J. Roberts
Deputy Regional Administrator

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

Enclosure:
Independent Assessment of Hematite
Contested Violations

Independent Assessment of Hematite Contested Violations

The independent assessment of the Hematite contested violations concluded that the three violations in the original inspection report were valid violations. A discussion of each violation is provided below.

The independent assessment included a review of the following documents:

- NRC Inspection Report (IR) 07000036/2015003, November 27, 2015 (ML15334A404);
- Westinghouse Hematite Decommissioning Project (HDP) Reply to a Notice of Violation Issued November 27, 2015, December 23, 2015 (ML15357A074);
- Westinghouse Hematite Decommissioning Project - Submittal of Technical Report HDP-RPT-FSS-202, Survey Area Release Record for Land Survey Area 10, Survey Units 01 and 02 (LSA 10-01 and LSA 10-02) in Support of Hematite Decommissioning Project License Termination (License No. SNM-00033, Docket No. 070-00036), May 29, 2015 (ML15176A780);
- NRC Comments on HDP-RPT-FSS-202, August 2015 (ML15218A409);
- Westinghouse Hematite Decommissioning Project – Withdrawal of Hematite Decommissioning Technical Report HPD-RPT-FSS-202, Survey Area Release Record for Land Survey Area 10, Survey Units 01 and 02 (LSA 10-01 and LSA 10-02), September 14, 2015 (ML15258A709);
- Publicly Noticed Conference Call Summary for the October 29, 2015, conference call between NRC Region III, NRC HQ Materials Decommissioning Branch of the Office of Nuclear Materials Safety and Safeguards, and representatives of Westinghouse Hematite Facility; summary dated November 13, 2015 (ML15307A152);
- NRC Safety Evaluation Report on Westinghouse Amendment Request For Approval of Hematite Decommissioning Plan and Associated Supporting Documents, October 2011 (ML112101630); and,
- Hematite Decommissioning Project Environmental Report, DO-08-009, Revision 0, July 2009 (ML092870403 and ML092870405).

The independent assessment included the review of following licensee procedures:

- HDP-PO-EHS-003, Emergency Action Plan, Revision 0, July 14, 2015;
- HDP-WP-OPS-503, Construction Stormwater Management, Revision 0;
- HDP-WP-ENG-803, Isolation and Control Measures, Revision 0;
- HDP-PR-HP-602, Data Package Development and Isolation and Control Measures to Support Final Status Survey, April 15, 2015;
- HDP-PO-FSS-700, Final Status Survey Program, Revision 5, October 28, 2015; and,
- HDP-PO-QA-001, Project Quality Plan (PQP), Revision 1, November 29, 2012.

In addition, the independent assessment included discussions with the senior health physics inspector on the original inspection and the licensee's regulatory affairs manager. All underlined information in the discussion sections, including quotes, was underlined by the independent reviewer for emphasis.

Enclosure

Violation No. 1: Failure to Control Storm Water in LSA (Land Survey Area) 02-01

NRC Basis of Violation

Condition 9 of License SNM-33 states, in part, that the authorized use of licensed material is described in the August 12, 2009, Decommissioning Plan (DP) and associated supporting documents noted in the Hematite DP Safety Evaluation Report (SER). Section 13.0, "Quality Assurance Program," of the DP and documents noted in the SER state, in part, that the Hematite Quality Assurance (QA) plan for decommissioning is detailed in Westinghouse Electric Company (WEC) document HDP-PO-QA-001, "Project Quality Plan (PQP)." All work related to Hematite decommissioning is required to comply with the PQP. The PQP and its implementing procedures establish what personnel are required to do for quality-related activities. Procedure HDP-PO-QA-001, Section 12, "Instructions, Procedures and Drawings," states, in part, that activities affecting quality are prescribed by, and performed in accordance with, documented policies, procedures, plans, and/or drawings of a type appropriate to the circumstance. Section 8.2.3 of HDP-PR-HP-602, Revision 3, references Work Package HDP-WP-ENG-803, "Isolation and Control Measures." Section 4.1 of HDP-WP-ENG-803 states, in part, that BMPs (Best Management Practices) concerning storm water and surface water management are detailed in HDP-WP-OPS-503, "Construction Storm Water Management." Section 3.0, "Structural BMPs," of Appendix B, "Best Management Practices," of HDP-WP-OPS-503 states, in part, that storm water and surface water will be prevented from entering excavated areas: by maintaining or improving the following: existing grade surrounding the excavation; installing diversionary berms and dikes around the areas of the excavation; installing silt fencing or equivalent filtering control; and constructing temporary barriers to slow flow velocity. Contrary to the above on or about August 30, 2015, the licensee failed to prevent storm water from entering excavated area LSA 02-01. Specifically, storm water transported 15 radiologically contaminated items from LSA 05-04 to LSA 02-01. This is a Severity Level IV violation.

Westinghouse Basis for Contesting this Violation

Westinghouse agrees that storm water caused by severe rain transported 15 radiologically contaminated items from LSA 05-04 into LSA 02-01 but disputes the basis for the violation that it "failed to prevent storm water from entering excavated area LSA 02-01" for reasons including the following:

- 1) The Decommissioning Plan (DP) and associated supporting documents noted in Hematite DP Safety Evaluation Report (SER) do not require the absolute prevention of any amount of storm water from entering an excavation. The licensee contends that NRC Region III established a criteria of "zero" storm water being allowed to enter an excavated area as the determining factor for the violation. Section 3.6.1 of the Environmental Report, which is a part of the SER, states "The maximum 10-day precipitation event would yield 9 in. [inches] of precipitation in a given 25-year span." This rainfall averages 0.0375 inches per hour, which is an "appropriate boundary for rainfall analysis." On August 30, 2015, the site experienced a severe rain event of 1.89 inches per hour (for 80 minutes) which is beyond the design basis of the measures to prevent storm water from entering an excavation.
- 2) Westinghouse considers site procedures that state "surface water will be prevented from..." to be written in the context of the information provided in the Environmental Report as descriptive intent rather than prescriptive requirement.

- 3) In summary, Westinghouse contends that NRC Region III has incorrectly established an isolation control criteria of “absolutely no storm water” entering an excavation. Westinghouse also contends NRC Region III use of Section 3.0, “Structural BMP’s,” of Appendix B, “Best Management Practices,” of HDP-WP-OPS-503 as a basis to issue the notice of violation is a use of the description of BMPs that is outside the context of the Environmental Report.

Independent Assessment Considerations and Conclusion for Violation No. 1

- 1) **Documents do not require the absolute prevention of any amount of storm water from entering an excavation.** The HDP-WP-OPS-503 excerpt, quoted in the violation, that storm water and surface water will be prevented from entering excavated areas does not contain qualifiers found in the Environmental Report (ER). Section 5, “Mitigation Measures,” of the ER includes the following:

Structural measures that may be used to control erosion and sedimentation include: Prevent or reduce run-on storm water from entering excavated areas by maintaining or improving existing grade surrounding excavations...

- 2) **Westinghouse considers site procedures that state “surface water will be prevented from entering excavated areas” are written in the context of the information provided in the Environmental Report as descriptive intent rather than prescriptive requirement.** The ER may help inform the design basis rainfall, but the licensee’s contention that assumes rain would fall at a uniform rate over 240 hours (and) creates a suitable bounding condition for rainfall is non-conservative and ignores a statement regarding thunderstorms in the same paragraph of the ER which reads “Thunderstorms occur on average between 40 and 50 days per year...” In the context of a design basis, had the rainfall exceeded 9 inches in a 10-day period, that event could be considered beyond the design basis for this licensee.

Licensee procedure HDP-WP-OPS-503, “Construction Stormwater Management,” Revision 0, contains the “Significant Storm Event Contingency Plan,” which includes the following:

- a. The purpose of this Storm Event Contingency Plan is to facilitate and organize actions during significant precipitation periods that could occur during the remediation of the Hematite site. These actions include personnel responsibilities, design of detention basins, controls, BMPs, and notification in accordance with HDP-WP-OPS-503.
- b. Storm events that yield significant precipitation are when rainfall exceeds 3 inches in a 24-hour period. Such storm events are within the most limiting design basis described in the ‘Background’ Section.
- c. Summary of capacities for managing potentially contaminated stormwater based on the DP or its Responses to Additional Information (RAIs):
 - i. The design basis for the loading pad drain is a 5-inch rainfall in a 24-hour period.
 - ii. The following bullets are key segments of DP or RAI text that address capacities for managing potentially contaminated stormwater ... Page 5 of Attachment 5 To HEM-11-96: “The loading pad drain was designed for a 10-year rainfall for Jefferson County, MO, which is 5 inches in 24 hours

per the U.S. Department of Agriculture's 'Urban Hydrology for Small Watersheds,' TR-55, June 1986...."

The violation description does not mention analysis or calculation. It rests on the license and associated procedures and on the uncontested failure to prevent storm water from entering excavated area LSA 02-01, as demonstrated by the movement of 15 pieces of radioactive material into area LSA 02-01.

- 3) **NRC Region III use of Section 3.0 "Structural BMP's" of Appendix B "Best Management Practices" of HDP-WP-OPS-503 as a basis to issue the notice of violation is a use of the description of BMPs that is outside the context of the Environmental Report.** The Best Management Practices Procedure does not have language indicating it is bounded by a rainfall rate of 0.0375 inch per hour.

The independent review of Violation No. 1, Failure to Control Storm Water in LSA (Land Survey Area) 02-01, concluded that it is a valid violation.

Violation No. 2: Inadequate Survey Procedures

NRC Basis of Violation

Condition 9 of License SNM-33 states, in part, that the authorized use of licensed material is described in the August 12, 2009, DP and associated supporting documents noted in the SER. Section 13.0, "Quality Assurance Program," in the DP and documents noted in the SER state, in part, that the Hematite QA plan for decommissioning is detailed in WEC document HDP-PO-QA-001, "Project Quality Plan (PQP)." All work related to Hematite decommissioning is required to comply with the PQP. The PQP and its implementing procedures establish what personnel are required to do for quality-related activities. Procedure HDP-PO-QA-001, Section 12, "Instructions, Procedures and Drawings," states, in part, that each organization performing activities covered by the Quality Assurance Program shall establish adequate procedures implementing the requirements of the PQP that apply to its work. Contrary to the above, the licensee failed to establish adequate procedures implementing the requirements of this PQP that apply to its work. Specifically, HDP-PO-FSS-700 did not address licensee actions if a rain event occurred and water and/or sediment could have entered previously Final Status Surveyed area. On or about August 30, 2015, a rain event occurred and moved 15 radiologically contaminated items into LSA 02-01, a previously Final Status Surveyed area.

This is a Severity Level IV violation.

Westinghouse Basis for Contesting this Violation

- 1) The DP and associated documents noted in the SER do not require site procedures to address rain events beyond those described in the ER, Section 3.6.1, "Meteorology and Climatology," which was used as the basis for isolation controls implemented through site procedures, including HDP-PO-FSS-700. Actions for heavy rain are contained in HDP-PO-EHS-003, "Emergency Action Plan." Section 8.6 of the Emergency Action Plan discusses actions for severe weather, and Section 8.7 discusses site actions for flooding both forecasted and unanticipated. Westinghouse believes the site procedures adequately provide actions necessary to be taken after a rain event.

- 2) The Hematite Stormwater Pollution Prevention Plan (SWPPP) requires the inspection of all BMPs monthly and that inspections will be performed within 24 hours during the work week of a rainfall event of 0.25 inches or more.
- 3) In the instance of the 15 radiologically contaminated items that were transferred into LSA 02-01, it was the visual inspection that proved to be inadequate as the material was not visually discernible from the surrounding soil, rather than the procedures not adequately providing instructions to perform an inspection.

The deficiency associated with inspection after the August 30, 2015, rainfall involved the execution of the procedure, not the procedure itself. Westinghouse memorandum HEM-15-MEMO-064 states in part "At the time, no potential for cross contamination was suspected based on a visual inspection performed on August 31, 2015 of existing BMPs, the visual inspection did not identify that the integrity of the BMPs had been overwhelmed, and a determination was made that storm water did not exceed the height of the silt fence, and straw bales."

Independent Assessment Considerations and Conclusion for Violation No. 2

- 1) **The DP and associated documents noted in the SER do not require site procedures to address rain events beyond those described in the Environmental Report.** As described in items 2) and 3) above in the Independent Assessment section for Violation No. 1, the licensee's assumption of a uniform rate of rainfall throughout a design basis event leads to a 0.0375 inches per hour figure which is non-conservative compared to experience and to the 5 inches in 24 hours figure attributed by licensee documents to the U.S. Department of Agriculture's "Urban Hydrology for Small Watersheds."

Actions for heavy rain are contained in HDP-PO-EHS-003, Emergency Action Plan. This is true but the actions address "severe weather" (specifically tornadoes and lightning) and actual or anticipated flooding. No actions under the severe weather section mention rainfall rates or rainfall amounts or BMPs or the potential spread of contamination by rainwater. The flooding procedure has general actions such as "review BMPs to determine if additional protection or capacity is required," but the procedure applies only when flooding occurs or is expected.

- 2) **The HDP Stormwater Pollution Prevention Plan requires the inspection of all BMP's within 24 hours ... of a rainfall event of 0.25 inches or more.** The failure of the visual inspections to recognize a potential for contaminated material to have spread into LSA 02-01 under conditions of heavy rainfall, later shown to have been significant enough to have caused 15 contaminated items to be transferred into LSA 02-01, suggests that visual inspections (that did not include radiological surveys) were inadequate not merely inadequately executed.
- 3) **The visual inspection proved to be inadequate as the material was not visually discernible from the surrounding soil, rather than the procedures not adequately providing instructions to perform an inspection.** The procedures intended to identify whether recent rainfall might have moved contaminated items into LSA 02-01 were inadequate as demonstrated by both their failure to identify the potential movement and by licensee reliance on visual inspections even under conditions when "the material was not visually discernible from the surrounding soil."

The independent review of Violation No. 2, Inadequate Survey Procedures, concluded that it is a valid violation.

Violation No. 3: Failure to Perform a 100 Percent Survey of LSA 10-01 and 10-02

NRC Basis of Violation

Condition 9 of License SNM-33 states, in part, that the authorized use of licensed material is described in the August 12, 2009, DP and associated supporting documents noted in the SER. Section 14.4.4.1.6.2, "Sub-surface Soil," of the DP states, in part, that the Final Status Survey (FSS) will consist of Gamma Walkover Surveys (GWSs) of 100 percent of the excavated surfaces to be included in the survey unit, or portion of a survey unit. Contrary to the above on May 29, 2015, the licensee did not perform a 100 percent GWS of LSA 10-01 and 10-02 of the excavated surfaces that were included in the survey unit, as documented in licensee letter HEM-15-52, dated May 29, 2015. This is a Severity Level IV violation.

Westinghouse Basis for Contesting this Violation

- 1) **NRC Region III has interpreted the meaning of 100% GWS outside the context of 100% GWS as described and applied by MARSSIM, acceptable industry standard practice, and is contrary to the resolution of this issue that was achieved with NRC Headquarters and Westinghouse, and**
- 2) **HEM-15-52 has been previously withdrawn by Westinghouse.**

Independent Assessment Considerations and Conclusion for Violation No. 3

- 1) **NRC Region III has interpreted the meaning of 100% GWS outside the context of 100% GWS as described and applied by MARSSIM, acceptable industry standard practice, and is contrary to the resolution of this issue that was achieved with NRC Headquarters and Westinghouse.** The licensee seems to imply that it disagrees significantly with Region III - but not with NRC HQ - regarding GWS requirements. This overlooks items like the NRC review of the Westinghouse position paper "Clarification of Intent Regarding the '100% Gamma Walkover Survey' Performed in Class 1 Survey Units at HDP" discussed October 29, 2015, which showed that Westinghouse's understanding of GWS requirements differed on important points from the NRC HQ position many weeks after the May 29, 2015, survey submittal. It states that Westinghouse's FSS and their associated procedures do not meet the commitments presented in the Hematite DP and the RAI responses.

Specific deficiencies relating to GWS included the following:

- a. No discussion of Westinghouse's manner for justifying that GWS coverage achieved is deemed sufficient if 100% GWS coverage is not attained,
- b. No description of the part in the process where Westinghouse reviews the data and determines the percentage of coverage obtained during the performance of the 100% GWS, and
- c. Identification of alternatives if situations are encountered or known to exist which stretch the ability to perform the 100% GWS in the usual manner or prevent 100% GWS.

These deficiencies noted by NRC HQ align with the language describing the finding in NRC IR 07000036/2015003, Section 2.2, Observation and Findings:

In HDP-RPT-FSS-202, the licensee stated for Final Status Surveys of LSA 10-02 that “Although 100 percent of accessible areas underwent GWS, certain small areas of the LSA 10-02 interior could not be accessed for GWS due to overly steep side slopes or especially tall interior pit sidewalls.” The licensee informed the NRC that certain small areas of the LSA 10-01 also could not be accessed for GWS due to overly steep side slopes or especially tall interior pit sidewalls. During discussions with licensee personnel, the licensee did not identify conditions within the licensee’s Decommissioning Plan which allow for these areas to be not surveyed because they were inaccessible. In addition, the licensee did not provide any justification on why overly steep side slopes or especially tall interior sidewalls could not be surveyed. Specifically, the licensee did not mention or document why engineering equipment, (e.g.; using pole extensions for survey instruments or mechanical lifting devices) was not used to survey those areas.

- 2) **Region III concluded that Westinghouse was not compliant with the requirements of the HDP FSS Program based on the pixelated colored maps of the GWS included in the report.** This was only one issue. The May 29, 2015, report states in its conclusion “the complete data set for LSA 10-02 includes a total of 12 soil samples and a 100% GWS coverage with post-processed statistical evaluation.” This aligns with section 5.1.3.2 GWS Technical Requirements “... LSA 10-01 and LSA 10-02 were required to undergo a 100% GWS.” A small fraction of the excavation surface area was comprised of sidewalls, benching, steep slopes, and small pits. These surfaces were also required to undergo 100% GWS and are subject to biased sampling if scanning measurements exceeded the investigation action level (IAL).

Only one note, below the map of LSA 10-02 on page 51 of the May 29, 2015, report, makes clear that 100% GWS was not accomplished for LSA 10-02:

Although 100% of accessible areas underwent GWS, certain small areas of the LSA 10-02 interior could not be accessed for GWS due to overly steep side slopes or especially tall interior pit sidewalls. These areas appear as pink blanks in the Figure 6-3 above. Given the overall uniformity of the GWS measurements and scarcity of measurements exceeding the IAL, it can be reasonably assumed that radioactivity in the blank areas can be interpolated from neighboring measurements.

Comments on HDP-RPT-FSS-202, placed in ADAMS in August 2015, include the following issues related to the GWS apparent violation:

- a. Figures 6-2 and 6-3 had pink legends which indicated there existed certain areas which were inaccessible for GWS. Yet various statements in the document indicate that a 100% GWS was performed.
- b. The report did not contain specific sections documenting changes from the FSS survey design including field changes and anomalies occurring during the survey or in the sample results as was described in the DP.

- 3) This note does not satisfy the requirements when 100% GWS survey requirements are not met, described in more detail in Section 1) above, which are drawn from NRC HQ documents and based on the Hematite DP and the RAI responses.
- 4) **HEM-15-52 has been previously withdrawn by Westinghouse.** Ongoing discussion of requirements and acceptable ways for the licensee to meet them do not preclude issuing of violations. The May 29, 2015, letter stated its purpose was “to provide the Technical Report, HDP-RPT-FSS-202, Survey Area Release Record for Land Survey Area 10, Survey Units 01 and 02 (LSA 10-01 and LSA 10-02), to the U.S. Nuclear Regulatory Commission (NRC) for review. Its conclusions included: “Based on the above findings, Westinghouse has demonstrated that the unrestricted release of LSA 10-02 is consistent with Title 10 CFR Part 20.1403 "Criteria for License Termination." Thus, LSA 10-02 is suitable for backfill and unrestricted release. This document may have also been intended to facilitate discussion of requirements and to serve as a template, but its stated purpose cannot be ignored. The violation resulted not from deficiencies solely in the report but from failing to meet requirements for “unrestricted release.”

The independent review of Violation No. 3, Failure to Perform a 100 Percent Survey of LSA 10-01 and 10-02, concluded that it is a valid violation.

Because the NRC has concluded that Violations Nos. 1, 2, and 3 are valid violations and you did not provide specific corrective actions for these violations in your December 23, 2015, response, except as discussed above for Violation No. 3, you are required to provide corrective actions as directed in the Notice of Violation issued on November 27, 2015. Follow the instructions specified in the original Notice of Violation when preparing your response. This response is required within 30 days of the date of this letter from me. The guidance in NRC Information Notice 96-28, "Suggested Guidance Relating to Development and Implementation of Corrective Action," may be useful in preparing your response. You can find the Information Notice on the NRC's website at <http://www.nrc.gov/reading-rm/doc-collections/gen-comm/info-notices/1996/in96028.html>. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your reply will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records System (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Darrell J. Roberts
Deputy Regional Administrator

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