

November 9, 2015

MEMORANDUM TO: Michael A. Norato, Chief
Materials Decommissioning Branch
Division of Decommissioning, Uranium Recovery
and Waste Programs
Office of Nuclear Material Safety and Safeguards

FROM: John J. Hayes, Senior Project Manager */RA/*
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and Waste Programs
Office of Nuclear Material Safety and Safeguards

SUBJECT: PUBLICLY NOTICED CONFERENCE CALL SUMMARY

On September 24, 2015, a publicly noticed conference call was held between U.S. Nuclear Regulatory Commission (NRC) personnel from the Material Control, ISFSI, and Decommissioning Branch of NRC Region III, the Materials Decommissioning Branch of the Office of Nuclear Materials Safety and Safeguards and representatives of the Westinghouse Electric Company (WEC) Hematite Facility located in Hematite, MO. Mr. Ben Moore of the Missouri Department of Natural Resources participated as a member of the public.

Enclosure 1 is the agenda for the call. Enclosure 2 is a listing of the call participants.

In the introductory remarks, the NRC explained that the conference call was a Category 1 Publicly Noticed Call in which members of the public were invited to listen to the call consistent with past practice. The public would be allotted the opportunity to communicate with the NRC after the business portion of the call but before the call was adjourned. The NRC stated that there was nothing which required the licensee to respond to any comments or questions from members of the public. However, while there was no requirement to respond, there was also nothing which precluded the licensee from responding to questions or comments if the licensee chose to do so.

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Following the introduction of each participant, each of the agenda items was discussed.

The first agenda item involved a discussion of Westinghouse's new source of offsite borrow material and analysis of the material. In preparation for the discussion during the call the NRC provided Westinghouse and Mr. Moore copies of Enclosure 3. Enclosure 3 contains NRC comments regarding previous discussion on Horine Road offsite borrow material. During the call Westinghouse indicated that they were considering two additional sources for offsite borrow. One source was on Huskey Road. This material had already been utilized for the surface cover in the barns area of the Hematite site in 2013. This material was considered best for the surface as it contained a high quantity of organic material which provides better growing capabilities for vegetation cover. The second source for borrow material comes from the Pruett property. This material has been sampled and has qualified under EPA guidelines for use as backfill material. Samples have been taken of this material. The results of the analyses will be provided to the NRC following their receipt by Westinghouse.

The second agenda item dealt with Westinghouse's interactions with Laclede Pipeline and the discussion involved remediation in the area of the gas pipeline which traverses the Hematite site. In previous discussions regarding this issue, Westinghouse had requested that Laclede provide copies of their procedures associated with the servicing and maintaining the pipeline. Previously, Westinghouse had also invited representatives from Laclede to observe the Westinghouse's remediation activities in the area of the pipeline. Westinghouse had not received copies of the procedures nor had the representatives from Laclede visited the site to observe remediation. Two weeks ago Westinghouse and Laclede attorneys were engaged in discussions with respect to the sharing of the procedures. Westinghouse indicated that they have now received copies of the Laclede procedures. However, the procedures were heavily redacted. Although they were redacted, Westinghouse concluded that they had sufficient information to move forward. On October 8, 2015, an engineer from Laclede and Laclede's contractor will be at Hematite for a site visit.

The third agenda item involved the NRC's review of Data Summary Report for Combined Reuse Stockpile 4-7, HDP-RPT-FSS-109 (ADAMS Accession No. ML15243A098). The NRC's comments were assembled in the form of a Resolution Table. Attachment 4 contains the items which were discussed with Westinghouse. The NRC indicated that they would be finalizing the Table and providing it to Westinghouse.

The fourth agenda item involved the NRC's review of Volume 1, Chapter 1 of the Hematite Final Status Survey Report (ADAMS Accession Item No. ML15257A307). Because of the necessity to terminate the call with sufficient time to permit questions from members of the public within the allotted hour time scheduled for the call, only a few items associated with the NRC's review could be discussed. The NRC indicated that this item would be an agenda item for the call on October 1, 2015.

Members of the public were asked whether they had any questions or comments regarding the discussion. They had none.

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The NRC indicated that they would be providing Westinghouse with the Resolution Tables associated with agenda items 3 and 4.

Enclosures:

1. Agenda
2. Attendee List
3. Paper Provided on Off-site Borrow Material
4. Draft Resolution Table on Report for Combined Reuse Stockpile 4-7

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PUBLICLY NOTICED CALL ON WESTINGHOUSE HEMATITE DECOMMISSIONING

Agenda
Thursday, September 24, 2015
10:30 AM – 11:30 AM

- *Introductory Remarks – NRC*
- *Topics for Discussion –*
 - *Hematite' s New Source for Offsite Borrow*
 - *Status of Laclede Pipeline & Westinghouse's interactions*
 - *NRC Review of Reuse Soil Report HDP-RPT-FSS-109*
 - *NRC Review of Vol 1, Ch. 1 of Hematite FSS Report*
- *Public's Opportunity for Comments and/or Questions - Public*
- *Concluding Remarks – NRC*

Attendance List
September 24, 2015 Conference Call

Name	Organization	Title
Mike LaFranzo	NRC, Region III	Senior Health Physicist, Material Control, ISFSI and Decommissioning Branch
Karen Pinkston	NRC/NMSS	Systems Performance Analyst
Greg Chapman	NRC/NMSS	Nuclear Process Engineer
Clark Evers	Westinghouse	Radiation Safety Officer, Hematite Decommissioning Project
Joe Smetanka	Westinghouse	Director, Hematite Decommissioning Project
Katie Tapp	NRC/NMSS	Health Physicist
Leah Parks	NRC/NMSS	Systems Performance Analyst
Tim Vitkus	ORAU/IEAV	Associate Director
Scott Zoller	Northwind	Radiological Engineer
Ben Moore	Missouri Department of Natural Resources	Member of the Public
Camille Zozula	Westinghouse	Sr. Engineer, Regulatory Affairs
John Hayes	NRC, NMSS	Senior Project Manager, Materials Decommissioning Branch,
Ken Pallagi	Westinghouse	Licensing Manager
Mike Norato	NRC, FSME	Chief, Materials Decommissioning Branch,
Robert Orlikowski	NRC, Region III	Chief, Material Control, ISFSI and Decommissioning Branch

NRC staff have reviewed the submittal(s) related to backfill soil from an off-site borrow location, and the Scenario B WRS and Quantile tests appear to have been performed in accordance with NUREG-1505. However, the associated hypothesis statements are not appropriate for a comparison between a background reference area and an area that should be equivalent to background (borrow soil) and must be updated before approval to use the referenced off-site borrow soil as backfill.

WEC indicated in their April 2, 2015 submittal that:

WRS tests were performed for each radionuclide in accordance with Section 6.3 of NUREG- 1505. Scenario B of the test was used, with a null hypothesis that the median concentration of radioactivity in the borrow material and in the reference area is less than the lower boundary of the gray region (LBGR). The value of 3ω was used for each radionuclide as the LBGR and the width of the gray region is the derived concentration guideline level (DCGL) per Section 13.4 of NUREG-1505.

Section 13.4 of NUREG-1505 states the hypotheses tested by WRS under Scenario B as follows:

H_0 : The difference in the median concentration of radioactivity in the survey unit and in the reference area is less than the LBGR

H_A : The difference in the median concentration of radioactivity in the survey unit and in the reference area is greater than the $DCGL_w$

These hypothesis statements from NUREG-1505 are only appropriate if Scenario B is being utilized for a survey unit where a DCGL is used as the release criterion. Since the current WEC application of Scenario B is used as a comparison of survey areas to background, and not to a DCGL, it would be appropriate for WEC to adjust their hypothesis statements as follows:

H_0 : The difference in the median concentration of radioactivity in the survey unit and in the reference area is less than the LBGR

H_A : The difference in the median concentration of radioactivity in the survey unit and in the reference area is greater than the mean/median of the reference area + 3ω .

In this case, it is acceptable to set the lower bound of the gray region (LBGR) equal to 3ω and to set the upper bound of the gray region (UBGR) equal to the mean of the reference area + 3ω . Therefore, the width of the gray region is the mean of the reference area. As such, the relative shift calculation which should be utilized to determine the required number of survey unit (borrow) samples becomes:

$\Delta/\sigma = (UBGR - LBGR) / \sigma$, which simplifies to

$\Delta/\sigma = (\text{mean of the reference area} / \sigma)$,

where σ is the standard deviation of the reference area.

NRC approves the usage of the off-site borrow soil referenced in the April 27, 2015 submittal on the condition that WEC utilizes the appropriate hypothesis statements and relative shift calculations as indicated above. As such, WEC should demonstrate that their data would fail to reject the null hypothesis for the WRS test and that an appropriate number of samples were taken in the borrow survey unit based upon a relative shift calculation where the width of the gray region is represented by the mean of the reference area. NRC staff also notes that the April 27, 2015 (HEM-15-39) only included retrospective power curves and did not include the WRS/Quantile test results and the associated hypothesis test results (i.e., did the test reject or fail to reject the null hypothesis). As such, it would be appropriate for WEC to finalize all conclusions in a single document.