

March 2, 2006

Mr. Henry A. Sepp
Site Manager
Westinghouse Electric Company LLC
3300 State Road P
Festus, MO 63028

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR REVIEW OF THE
HEMATITE FORMER FUEL CYCLE FACILITY - BUILDING DEMOLITION
AMENDMENT REQUEST (TAC NO. L52641)

Dear Mr. Sepp:

By letter dated October 5, 2004 (ML042860234), supplemented by letter dated December 22, 2004 (ML0502503470), Westinghouse Electric Company LLC (WEC) submitted an amendment request to the U.S. Nuclear Regulatory Commission (NRC) to amend Chapter 1 of Materials License No. SNM-00033 to authorize the dismantlement and demolition of the building complexes at the Hematite Facility, in Festus, Missouri. By letter dated June 28, 2005 (ML051720051), NRC asked for additional information to complete its technical review of this amendment request. By letter dated July 22, 2005 (ML052140426), WEC responded to the Requests for Additional Information (RAIs).

In September 2005, WEC submitted a copy of the Hematite Former Fuel Cycle Facility Decommissioning - Environmental Monitoring Plan, Revision 0, (EMP) for NRC review. Staff reviewed the EMP and determined additional information was needed to ensure that the EMP is consistent with the RAI responses (ML052140426) and to ensure that the technical basis for the program is consistent with the proposed activities. By letter dated December 23, 2005 (ML053330179), the RAIs for the EMP were sent to WEC. The subsequent WEC RAI responses for the EMP were sent to the NRC by letter dated January 31, 2006 (ML060330438), and are currently under review.

On January 18, 2006, at a meeting to discuss proposed changes to criticality requirements of Materials License No. SNM-00033 (ML06260607) for decommissioning activities, WEC stated that it had recently estimated the U^{235} source term for building demolition and verbally provided the estimate. This new information is inconsistent with the December 22, 2004, supplemental submittal (ML0502503470). Also, this new information appears to be inconsistent with WEC's January 31, 2006, response to RAI number three (ML060330438).

WEC has not demonstrated why nuclear criticality safety is not a concern during building demolition activities and how the criticality accident alarm system requirements in 10 CFR 70.24 will be met during building demolition activities. Furthermore, WEC has not clearly defined the amount and location of special nuclear material within the buildings.

H. Sepp

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Therefore, in order to complete the staff's safety evaluation, please respond to the enclosed RAs within 30 calendar days from the date of this letter and reference Docket No. 70-00036 and TAC No. L52641 in future correspondence related to this licensing action. If you have any questions, please contact me at (301) 415-8580.

Sincerely,

/RA/

Amy M. Snyder, Acting Section Chief
Division of Waste Management
and Environmental Protection
Office of Nuclear Material Safety
and Safeguards

Docket No.: 70-00036

TAC No.: L52641

Enclosure:
Request for Additional Information

cc:

G. M. Vytlačil, Manager, Licensing and Quality Assurance

A. J. Nardi, Chairman, Project Oversight

H. Floyd Gilzow, Deputy Department Director for Policy

Missouri Department of Natural Resources

B. Moore, Project Manager, Missouri Department of Natural Resources

H. Sepp

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Sincerely,
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Amy M. Snyder, Acting Section Chief
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and Environmental Protection
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Attachment:
Request for Additional Information

cc:
G. M. Vytlačil, Manager, Licensing and Quality Assurance
A. J. Nardi, Chairman, Project Oversight
H. Floyd Gilzow, Deputy Department Director for Policy
Missouri Department of Natural Resources
B. Moore, Project Manager, Missouri Department of Natural Resources

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ML060540109

OFFICE	DWMEP:PM	DWMEP:LA	DWMEP:SC	FCSS:PE	DWMEP:DD
NAME	MThorpeKavanaugh	SM for CBurkhalter	ASnyder	HFelsher	DGillen
DATE	2/22/06	2/22/06	2/27/06	2/27/06	3/1/06

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Request for Additional Information
Nuclear Criticality Safety Questions on the Westinghouse-Hematite Building Demolition
Amendment Request dated
October 5, 2004, and December 22, 2004, Supplement

1. The licensee has stated that all ventilation systems and process equipment have been removed from the buildings. However, given the lack of consistent information provided previously to the U.S. Nuclear Regulatory Commission (NRC) (e.g., 750-kg uranium, 5-kg UO_2 , 10-kg U^{235}), NRC needs to know the type of special nuclear material (SNM) in the buildings, the amount of SNM in the buildings, and the location of the SNM in the buildings. The information should be provided in a table consisting of rows of locations of SNM and columns of mass of SNM (e.g., U^{235}) and enrichment (e.g., 5.0 weight percent). Detailed calculations are not needed, so bounding estimates will be sufficient.

This information is needed for NRC to determine whether or not there is an Nuclear Criticality Safety (NCS) concern and whether or not the requirements of 10 CFR 70.24 (criticality accident alarm system (CAAS)) need to be met during building demolition activities.

2. Assuming that amount of SNM in the answer to question #1 is above the limit in 10 CFR 70.24 (e.g., greater than 700 grams of U^{235} in an area), the licensee will need a CAAS during building demolition activities to comply with 10 CFR 70.24. If the licensee wants to pursue an exemption to 10 CFR 70.24, that exemption request needs to provide the basis for why building demolition activities will be performed safely without the CAAS.

If a CAAS is required, but an exemption is desired, then this information is needed for NRC to determine whether or not the licensee can be granted an exemption from 10 CFR 70.24 during building demolition activities.

3. Based on the answers to questions #1 and #2, the evaluation of NCS during building demolition activities depends upon how the licensee intends to perform building demolition activities (e.g., one building at a time or all buildings at once). Please provide a description of how building demolition activities will be accomplished with emphasis on how NCS will be maintained.

This information is needed for NRC to determine whether the building demolition activities can be performed safely by the licensee to meet 10 CFR 70.22(a)(2) [the license application must contain the activity for which the SNM is requested and the general plan for carrying out the activity], 70.22(a)(7) [the license application must contain a description of equipment and facilities which will be used to protect health and minimize danger to life or property], and 70.22(a)(8) [the license application must contain proposed procedures to protect health and minimize danger to life or property].

Enclosure