

May 10, 2013

Ms. Rebecca Clark  
Director, Division of Assessment  
and Remediation  
Office of Superfund Remediation  
& Technology Innovation  
U.S. Environmental Protection Agency  
Mail Code: 5204P  
1200 Pennsylvania Avenue NW,  
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SUBJECT: COMPLETION OF SCHEDULED DECOMMISSIONING ACTIVITIES AT THE  
ABB, INC. SITE, WINDSOR, CONNECTICUT (NRC LICENSE NO. 06-00217-06)

Dear Ms. Clark:

I am writing to inform you of the completion of the active onsite decommissioning activities at the ABB, Inc. (ABB) site in Windsor, Connecticut, (NRC License No. 06-00217-06). The U.S. Nuclear Regulatory Commission (NRC) staff has completed the review of ABB's final status survey (FSS) reports for the remediated portions of the site. The data in the FSS reports demonstrate that the site meets the radiological criteria for unrestricted use in 10 CFR Part 20, Subpart E. Currently, we are coordinating the actions to terminate the NRC license and release the site for unrestricted use with the State of Connecticut and the U.S. Army Corps of Engineers. We expect to complete these actions within several months.

In a letter dated June 16, 2008, the NRC notified the U.S. Environmental Protection Agency (EPA) that the decommissioning plan (DP) for the ABB site contained approved Derived Concentration Guideline Levels (cleanup levels) that exceeded the consultation trigger values for four radionuclides (Cobalt-60, Uranium-234, Uranium-235, and Uranium-238) from Table 1 of the Memorandum of Understanding (MOU) entitled "*Consultation and Finality on Decommissioning and Decontamination of Contaminated Sites*" dated October 9, 2002. The consultation letter (termed a Level 1 consultation by NRC) also stated that we would review ABB's FSS reports following completion of site remediation, and initiate a second consultation, as discussed in Section V.C.2 of the MOU (termed a Level 2 consultation), if the actual residual soil contamination levels exceeded the consultation trigger values in Table 1 of the MOU. As discussed below, we have concluded that a Level 2 consultation is not required.

### **Discussion**

After completion of decommissioning activities, including soil removal, ABB conducted their FSS in accordance with the guidance in the Multi-Agency Radiological Survey and Site Investigation Manual (MARSSIM) and their FSS plan. ABB partitioned the approximately one million square

meter site into 68 individual survey units, ranging in size from 149 to 146,000 square meters. Using the MARSSIM guidance, ABB collected and analyzed a total of 1,562 soil samples in the 68 survey units. In accordance with the FSS plan, ABB also performed radiological scanning measurements of the soil surfaces within each of the survey units using handheld equipment. Based on the results of these scanning measurements, ABB identified 19 relatively small areas (ranging in size from 0.5 to 11 square meters) within eight of the survey units where additional soil sampling was needed to evaluate elevated scanning measurements. ABB performed elevated measurement comparisons by taking an additional 103 samples over approximately 21 square meters within these eight survey units.

The NRC staff reviewed the data in the FSS reports and compared the residual radioactivity levels to the trigger values for soil in Table 1 of the MOU. Table 1 states that, except for radium-226, thorium-232 or total uranium, concentrations should be aggregated using a sum of the fractions approach to determine site specific consultation trigger concentrations. Consistent with the MOU, the residual radioactive material concentrations for cobalt-60, uranium 234, uranium-235, and uranium-238 (as determined from the sample analyses) were aggregated using the sum of fractions approach to determine the site specific consultation trigger values for each of the 68 survey units.

Using the MARSSIM guidance, the results for the 1,562 systematic samples and the 103 elevated measurement comparison samples were used to calculate the average sum of the fractions values for the 68 survey units. The NRC determined that none of the 1,562 systematic soil samples exceeded the sum of the fractions trigger values. Sample results from 24 of the 103 elevated measurement comparison samples exceeded a sum of the fractions value of 1.0 compared to Table 1 of the MOU. However, none of the average sum of the fractions values for any of the 68 survey units exceeded the trigger levels for soil in Table 1 of the MOU. The average sum of the fractions values for the 68 survey units ranged from 0.01 to 0.21, with an average sum of the fractions value for all survey units of less than 0.03. Because each of the survey unit sum of the fractions values were much less than a sum of fractions value of 1.0, the staff concluded that the trigger levels for soil were not exceeded. The NRC staff also evaluated the FSS results for radium-226 and thorium-232 individually and determined that the FSS results did not exceed the Table 1 residential soil concentration trigger value of 5 pCi/g for either of these two radionuclides. Based on the above discussion, we have concluded that a Level 2 consultation is not required.

During the site decommissioning process, the NRC conducted a number of onsite inspections of ABB's actions to verify that the cleanup was being conducted as described in the DP. The NRC also performed independent measurements and sample analysis to verify ABB's FSS results and concluded they were in consistent with ABB FSS data. Based on these actions, the NRC has concluded that: (1) decommissioning activities were performed in accordance with the approved DP; (2) the FSS data was collected and evaluated consistent with the MARSSIM guidance; and, (3) the FSS data and NRC independent measurements demonstrate that the site meets the NRC radiological criteria for release for unrestricted use.

R. Clark

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If you, or your staff, have any questions regarding this letter, or the license termination activities at the ABB site, please contact Andrew Persinko at 301-415-7479 or via email at [Andrew.Persinko@nrc.gov](mailto:Andrew.Persinko@nrc.gov) or Marc Ferdas at 610-337-5022 or via email at [Marc.Ferdas@nrc.gov](mailto:Marc.Ferdas@nrc.gov).

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of 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>.

Sincerely,

**/RA/**

Larry W. Camper, Director  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Management Programs

Docket No.: 0300375

License No.: 06-00217-06

cc: See attached List

R. Clark

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Sincerely,

/RA/  
Larry W. Camper, Director  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Management Programs

Docket No.: 0300375

License No.: 06-00217-06

cc: See attached List

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