UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 21 2007

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

Mr. Charles L. Miller, Director
Office of Federal and State Materials
and Environmental Management Programs
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Dear Mr. Miller:

I am writing in response to your letter of December 21, 2006, regarding the Kaiser Aluminum Speciality Products site in Tulsa, Oklahoma. The December 21 letter notified EPA that the Kaiser site triggers an NRC consultation with EPA in accordance with the 2002 Memorandum of Understanding (MOU) entitled: "Consultation and Finality on Decommissioning and Decontamination of Contaminated Sites" (OSWER No. 9295.8-06, signed by EPA on September 6, 2002, and NRC on October 9, 2002). This letter responds to the notification in accordance with Section V.D.1 of the MOU, when NRC requests EPA's consultation on a decommissioning plan or a license termination plan, EPA is obligated to provide written notification of its views within 90 days of NRC's notice.

Your letter constitutes a Level 2 consultation as specified in the MOU as the consultation is concerning residual radioactive contamination remaining after completion of the Final Status Survey (FSS).

The views expressed by EPA in this letter regarding NRC's decommissioning are limited to discussions related to the MOU. The comments provided here do not constitute guidance related to the cleanup of sites under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).[1] EPA's views on the matters addressed by this letter were developed from information furnished by NRC in the December 21 letter, other materials provided by NRC, and staff discussions.

[1]Please see the memorandum entitled: "Distribution of Memorandum of Understanding between EPA and the Nuclear Regulatory Commission" (OSWER No. 9295.8-06a, October 9, 2002) which includes guidance to the EPA Regions to facilitate Regional compliance with the MOU and to clarify that the MOU does not affect CERCLA actions that do not involve NRC (e.g., the MOU does not establish cleanup levels for CERCLA sites). This memorandum may be found on the Internet at: http://www.epa.gov/superfund/resources/radiation/pdf/transmou2fin.pdf.

EPA Consultation Views

This response response is limited to those matters that initiated NRC's request for consultation in its letter of December 21. NRC initiated this consultation because the measured soil concentrations for thorium-232 exceed the MOU trigger values.

Soil: Supplemental Standards

NRC triggered the consultation for soil on the basis of measured soil concentrations for thorium-232 in the DP exceeding the Table 1 values in the MOU. In Table 1, the 5 pCi/g soil concentrations for thorium-232 are based on soil standards developed under the Uranium Mill Tailings Radiation Control Act (UMTRCA) and implementing regulations (40 C.F.R. 192). The UMTRCA standard is often identified as an Applicable or Relevant and Appropriate Requirement (ARAR) at CERCLA sites and establishes cleanup levels for thorium-232. 40 C.F.R. 192 also contains provisions for the establishment of "supplemental standards" under some special circumstances that allow the selection and performance of remedial actions that come as close as reasonably achievable to meeting the UMTRCA standards. Supplemental standards were designed:

- for situations in which worker safety would be adversely impacted or clearly greater environmental harm would result from the remedial action necessary to attain the standards,
- for situations in which the materials do not pose a clear present or future hazard and improvements could be achieved only at unreasonably high cost, or
- where concentrations of other radionuclides are sufficiently high to constitute a significant radiation hazard.

If supplemental standards are used for the remediation of soil, EPA will generally include institutional controls as a component of the cleanup alternative to ensure the response will be protective over time. For further information regarding how EPA selects institutional controls, see "Institutional Controls: A Site Manager's Guide to Identifying, Evaluating and Selecting Institutional Controls at Superfund and RCRA Corrective Action Cleanups" (OSWER Directive 9355.0-74FS-P, September 2000). This guidance document may be found on the Internet at: http://www.epa.gov/superfund/action/ic/guide/guide.pdf. For further information regarding how EPA interprets the soil standards of 40 C.F.R. 192 as a potential ARAR, see the "Use of Soil Cleanup Criteria in 40 CFR Part 192 as Remediation Goals for CERCLA sites" (OSWER Directive 9200.4-25, February 12, 1998). This guidance document may be found on the Internet at: http://www.epa.gov/superfund/resources/radiation/pdf/umtrcagu.pdf.

It is EPA's understanding that at this site future direct contact with soil having contamination over the Table 1 values is highly unlikely due both to any likely foreseeable land use of the site and the contamination having at a minimum 10 feet of clean soil cover. NRC's compliance exposure scenarios for its dose assessment assumes that the 10 feet of clean soil

cover over the soil with thorium-232 concentrations up to 31 pCi/g is not completely removed. Therefore, direct contact to human receptors of the soil with thorium-232 concentrations up to 31 pCi/g does not occur.[2]

In EPA's view, NRC should select and implement institutional controls to ensure no human access to the subsurface portion of the site with thorium contamination in excess of the Table 1 value. If Kaiser were a CERCLA site, and EPA had made the same determination that NRC did that human exposure to the thorium-232 contaminated soil was expected to be very limited, EPA might consider the selection of supplemental standards. However, when selecting supplemental standards, EPA would likely have selected institutional controls consistent with the exposure assumptions underlying the establishment of the supplemental standards as part of its remedy decision. EPA prefers that more than one institutional control be implemented to ensure that a restrictive land use continues and the remedy remains protective. This helps avoid returning to the same site later to conduct further remedial actions because of an unexpected change in the land usage of the site.

Conclusion

EPA staff will remain available to NRC for consultation if needed at the site. If you have any questions regarding this letter, please contact Stuart Walker of my staff at (703) 603-8748.

Sincerely,

James E. Woolford, Director
Office of Superfund Remediation and
Technology Innovation

[2]See Appendix E "Final Status Survey Report Volume III: Pond Parcel Evacuation Backfill Units, Kaiser Aluminum and Chemical Corporation" March 31, 2006.