



Jereimiah W. (Jay) Nixon, Governor • Mark N. Templeton, Director

DEPARTMENT OF NATURAL RESOURCES

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August 20, 2009

Ms. Elizabeth Southerland, Director
Division of Assessment and Remediation
Office of Superfund Remediation
And Technology Innovation
U. S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

RE: Memorandum of Understanding Consultation on the Decommissioning of the
Mallinckrodt Inc. site, St. Louis, Missouri

Dear Ms. Southerland:

Referencing the Nuclear Regulatory Commission's (NRC), June 22, 2009, letter to you regarding the above referenced site, we are providing information from the state of Missouri's perspective on this decommissioning process. As you may know, or have gathered from the information provided by the NRC, portions of the Mallinckrodt (Covidien) site are also being remediated under the Environmental Protection Agency's authority to address contamination from the Formerly Utilized Sites Remedial Action Program (FUSRAP). The U. S. Army Corps of Engineers is carrying out the actual remediation of the FUSRAP areas, with any long term stewardship issues to be returned back to the U. S. Department of Energy, once remediation requirements called for in the Record of Decision (ROD) are met.

Our office is pleased that decommissioning of the NRC's license at the Mallinckrodt facility is moving forward and that the NRC is actively engaging with our Department during this process; although, we have some concerns on a few of the proposed actions being considered by the NRC. Since the NRC has issued its Level 1 consultation notice, as called for in the EPA/NRC Memorandum of Understanding, we are taking this opportunity to provide a few concerns the state has on the site's Decommissioning Plan (DP), with regards to impacts to and future use of groundwater, as well as cleanup levels for soils.

Soil Cleanup/Institutional Controls

With regard to the soils cleanup levels, the scenario is based on historical industrial use and current local zoning designation, with which we agree. Although, each of our respective agencies have learned at other CERCLA sites, that reliance on zoning or historical use does not necessarily ensure that institutional controls are always permanent

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or effective. Institutional controls often include "layers" in order to be robust, enforceable and effective for protection of human health and the environment. A further complication to the soil cleanup numbers in the DP is the considerable variance of these numbers between those for the FUSRAP areas (i.e. FUSRAP U-238 is 50 pCi/g, Th-232 is 5 pCi/g and Ra-226 is 5 pCi/g; DP U-238+ D is 721 pCi/g, Th-232 +D is 23.9 pCi/g, Ra-226 is 29.4pCi/g).

For the soils cleanup, we recognize that the DP states that the cleanup will meet the NRC's dose from all residual media of 25 millirem (or less) requirement for the industrial scenario. This may be an issue that cannot be resolved for this site, but we have made note of it in our comment letter to NRC. Furthermore, we understand that either Mallinckrodt currently has or will create and maintain a soils management plan for the site, which is an additional layer. How current or future maintenance and compliance of the soil management plan would occur, should there be an ownership change, is not known. It is our understanding that the FUSRAP areas will have institutional controls in locations that do not meet "Unlimited Use/ Unrestricted Exposure" (UU/UE). Given this, we do not understand why areas remediated under this DP would not have similar stipulations.

Groundwater

The DP appears to ignore the determination contained in EPA's ROD (Page 8, last sentence of the first complete paragraph, "Record of Decision for the St. Louis Downtown Site, October, 1998"), that the Unit B (lower zone) groundwater is a potential source of drinking water. Despite this, the DP has several citations regarding use of groundwater, site-wide characterization data, and other information which conclude that addressing groundwater issues do not need to be included in the plan. None of the monitoring wells noted in the DP are specific to the columbium-tantalum (C-T) (Plant 5) area. The existing wells were installed and are used for the FUSRAP remediation.

There are no wells that specifically evaluate impact to groundwater within or at the DP site boundary. There is a well (DW-19, screened in the Unit B zone) down gradient from the DP site that actually does show radioactive contamination (ranging from 73-200 ug/l). It has yet to be determined the source of this impact. The DP cites monitoring wells DW 14, B16W02S and B16W13SR as showing no impact from the C-T area; however, data for DW14 is not contained in any of the DP package that we have access to. The other two wells are screened in the upper zone. Also, well B16W13SR does show total U in the filtered sample to be 137 ug/l. Again, this office does not dispute most of the rationale in the DP for removal of the groundwater pathway, except for a couple of statements (page 4-7, first sentence of the last paragraph under section 4.7; page 8-8, third sentence, first paragraph under section 8.6 ; and Appendix A, page A-6, first sentence of section 1.4 of the DP) that clearly conflicts with the FUSRAP ROD language referenced above.

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In closing, the Department again reiterates our appreciation of NRC's efforts to address our concerns; which, beyond the two issues noted previously, have generally been resolved. Attached is the Department's most current comment letter to the NRC on the DP plan. There may be additional information on the NRC's ADAMS site that your office may want to review. The ADAMS Accession number for the phase II DP is ML083150652. If you or your staff have any questions or need clarification from this office, please contact Branden Doster or Larry Erickson at (573) 751-3907.

Sincerely,

HAZARDOUS WASTE PROGRAM



**Aaron Schmidt, Chief
Federal Facilities Section**

Enclosure

- c: **Mr. John Buckley, Nuclear Regular Commission**
Ms. Karen Burke, Covidien
Ms. Sharon Cotner, U.S. Army Corps of Engineers
Mr. Dan Wall, U.S. Environmental Protection Agency-Region VII