GWOU ADMINISTRATIVE RECORD
SECTION TITLE:
GW-500-501-1.18

MISSOURI DEPARTMENT OF
HEALTH

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February 3, 1999

Larry Erickson
Federal Facilities Section
Hazardous Waste Program
Division of Environmental Quality
Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102-0176

Re: Comments to Draft Proposed Plan for Remedial Action for the Groundwater Operable Unit at the Chemical Plant Area of the Weldon Spring Site.

Dear Mr. Erickson:

As requested by the Department of Natural Resources (DNR), the Department of Health (DOH) has reviewed the *Final Draft of the Remedial Action Plan for the Groundwater Operable Unit at the Chemical Plant Area of the Weldon Spring Site*. DOH has the following comments and observations:

According to the proposed plan, the primary method of remediation will be natural attenuation of contaminants. This process would rely heavily on trapping contaminants within the bedrock/overburden, biodegradation, absorption, and dilution. Given the fact that chemicals already test above Preliminary Removal Goal (PRG) levels and that an unknown amount of time is needed for natural abatement to reduce these levels, DOH would like to see more active remediation for chemicals above the PRG levels.

The preferred alternative outlined in the plan calls for the active remediation of trichloroethylene (TCE) through the use of injecting an aqueous solution of chemicals into the groundwater in the upper aquifer region. According to the plan, the slow rate of recharge for the shallow aquifer has considerably reduced the viability of removing groundwater from this region. Hence, the Alternative 9 decision for injection treatment. However, DOH feels that a pre-established pump out rate should not be the mitigating factor for the use of groundwater removal and treatment. We also feel that some system of remediation other than natural attenuation should be used for non-TCE chemicals above PRG levels.

DOH would like to point out that TCE is not the only chemical that has tested above the PRG levels. Just from Table 2 of the plan (page 22), the following chemicals have all tested above their PRG levels: Nitrate; 2,4-DNT; and 2,6-DNT.

Chemicals without MCLs listed in Table 1 should use PRG levels based on the risk-based values in the residential scenario. The residential scenario should be used because the long-term future use of groundwater in this area is unclear. This would affect the following chemicals' PRG levels from Table 2: 1,3,5-TNB from 160 ug/L to 1.8 ug/L; 2,4,6-TNT from 250 ug/L to 2.8 ug/L; and 2,6-DNT from 11 ug/L to 0.13 ug/L. This would add 1,3,5-TNB and 2,4,6-TNT to chemicals that test above PRG levels.

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The Missouri Department of Health is responsible for protecting and promoting the health of Missouri by assessing health status and needs, developing policies and priorities, and assuring that the state is responding appropriately.
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In regards to Table 2 (page 22) DOH would like the Department of Energy (DOE) to clarify the use of 80 pCi/L as a PRG for uranium when page 18 of the plan indicates the use of 20 ug/L for uranium as a to-be-considered MCL. DOH would also like to see the conversion equation for uranium from ug/L to pCi/L. Is this a chemical or radiological toxicity?

The groundwater in the area of the chemical plant is a various and complex karst system. The statement that "none of the domestic wells located in the area of influence from the chemical plant area are active" (page 3, paragraph 1) is an assumption that would prove difficult to confirm. As would other statements regarding shallow and middle aquifers (page 8, paragraph 1) used as drinking water that are outside the influence of the groundwater contamination.

Section 2.3.2 regarding springwater (page 12-13) mentions that "concentrations for nitrate at this location have been correlated with changes in flow rate." Do concentrations increase with increased flow rate? And if so, has there been a concerted effort to take samples during high flow rate conditions?

Section 2.3.1 (page 12, paragraph 2) mentions well MW-4020 with a reading of 20 pCi/L of uranium but it is not included on Table 2. Is this a weathered or unweathered well?

In section 2.3.1 (page 11, paragraph 2) the plan comments that the 1996 TCE concentration is a "one-time but analytically suspect detection." Why does DOE feel this to be suspect?

If you have any questions, please contact Chuck Hooper at (573) 751-6404.

Sincerely,

Daryl W. Roberts, Director
Section for Environmental Public Health

DWR:SAC:RDM:PH:CAH/mdh

cc: Angela Baker, MDOH Eastern District Health Office
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