



STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Bob Holden, Governor • Stephen M. Mahfood, Director

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August 23, 2002

Ms. Sharon Cotner
FUSRAP Program Manager
United States Army Corp of Engineers
8945 Latty Avenue
Berkeley, MO 63134

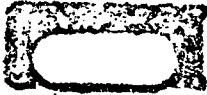
Re: Comments on the Annual Environmental Monitoring Data and Analysis Report
for CY01

Dear Ms. Cotner:

The department completed reviewing the above-referenced document. The following is a list of comments that the department compiled in order to clarify a few points:

1. Page ES-5, 1st paragraph
 - ☐ Please clarify the statement "...and background concentration expected to be established in future North County Feasibility Study".
 - 1) Shouldn't the background concentration already have been established?
 - 2) If you have not established any background concentrations for the North County Sites, then what has been used to compare contaminant levels found at the North County Sites?
2. Page ES-5, 2nd paragraph
 - ☐ It states that there are increased levels of Ra-226 and Th-230 in the wells at the southern and western edges of the site. What actions have been taken to ensure that these levels will not continue to increase in the future?
3. Page ES-6, 1st paragraph
 - ☐ Please explain how the conclusion was made that TCE and 1, 2-DCE are not MED/AEC contaminants.

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4. Page ES-6, 2nd paragraph
 - ☐ How was the conclusion drawn that the elevated levels of arsenic, iron, manganese, total dissolved solids were due to natural occurrences?
 - ☐ What is causing the elevated thorium levels in the wells screened in the lower levels?
5. Table 3-4: Results from Third Quarter CY01
 - ☐ There is an elevated Th-230 and gross alpha result from outfall HN01 of 78.39 and 104.2 pCi/L respectively. These readings were not discussed in the discussion section for the third quarter. Please provide an explanation as to what action was taken to reduce the thorium level in the future.

In addition to the above comments, please see the attached comment list from the Geological Survey and Resource Assessment Division (GSRAD).

Thank you for giving us the opportunity to review and comment on this document. The department awaits your response. If you have any questions please call me at (314) 877-3046.

Sincerely,

HAZARDOUS WASTE PROGRAM

Jill Groboski
Environmental Engineer
Federal Facilities Section

c: Mr. Daniel Wall, EPA Region VII
Ms. Jacque Mattingly, USACE

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

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MEMORANDUM

DATE: August 7, 2002

TO: Larry Erickson, Chief
DOE Unit, Federal Facilities Section, HWP, ALPD

FROM: *Myrna Rueff*
Myrna Rueff, Geologist
Environmental Geology Section, GSP, GSRAD

SUBJECT: Annual Environmental Monitoring Data and Analysis Report for CY 01,
FUSRAP, St. Louis, Missouri



August 7, 2002
page 1 of 2

As per your request, the GSP has reviewed the groundwater data and analysis sections of the subject document and have the following comments for your consideration.

Comment 1. Groundwater Monitoring HISS, paragraph three, page ES-5. According to the text, elevated concentrations of arsenic, iron and manganese in the HZ-C groundwater zone are likely the result of natural conditions. No supporting evidence is provided to support this claim. Evidence supporting the theory that the elevated metals are likely the result of natural conditions should be provided in subsequent documents which address the origin of elevated concentrations of arsenic, iron and manganese in the HZ-C groundwater zone.

Comment 2. Groundwater Monitoring SLAPS, paragraph one, page ES-5. The description of hydrostratigraphic zone D (HZ-D) is Interbedded Pennsylvanian rock and shale. The Pennsylvanian unit that underlies portions of SLAPS is the Cherokee Group which is composed of shale, sandstone and minor amounts of coal and limestone. The Pennsylvanian-age rock unit in this paragraph should be described in greater detail.

Comment 3. Table 4-2, Analytes Exceeding MCLs or SMCLs in HZ-A Groundwater at HISS in CY 01 (Unfiltered Data), page 4-6. There is a probable typographical error in the units column for manganese for stations HISS-20S, HW 21, and HW 22. The unit listed for these stations is pCi/L, which is usually the unit for radionuclides.

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MEMO TO LARRY ERICKSON
August 7, 2002
Page 2 (CY 01, FUSRAP)

Comment 4. HZ-C Groundwater, paragraph one, page 4-8 and Figures 4-6 and 4-8. It is stated in this paragraph that HW23 is an upgradient well. However this well appears to be downgradient (based on groundwater flow from southwest to northeast) illustrated by the potentiometric surface in Figures 4-7 and 4-9. If this well is not upgradient of the HISS site, as suggested in this paragraph, an explanation needs to be provided indicating how HW23 can be used to evaluate background conditions.

Comment 5. HU-B Groundwater SLDS, paragraph one, page 4-56. It is stated in the text that arsenic concentrations may be naturally occurring and according to Miller, 1974, (Water Resources St. Louis Area, Water Resources Report Number 30) elevated arsenic concentrations are typical for groundwater in the Mississippi River alluvial deposits. The GSP reviewed the sections concerning the Mississippi River alluvial deposits in the referenced document and did not find any discussion of elevated levels of arsenic. In addition, no sampling for arsenic (surface water or groundwater) was performed in conjunction with this report. The GSP recommends that this reference be verified.

If you have any questions regarding these comments, please do not hesitate to call Myrna Rueff at (573) 368-2132.

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