

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Mel Carnahan, Governor • Stephen M. Mahfood, Director

DIVISION OF ENVIRONMENTAL QUALITY

P.O. Box 176 Jefferson City, MO 65102-0176

August 17, 1998

Ms. Sharon Cotner, Project Manager
Formerly Utilized Sites Remedial Action Project
Department of the Army
St. Louis District, Corps of Engineers
9170 Latty Avenue
Hazelwood, MO 63134

RE: Groundwater Characterization Report of Baseline 1997 Data, Hazelwood Interim
Storage Site (HISS), JUNE 1998

Dear Ms. Cotner:

Departmental staff have reviewed the above referenced document and wish to provide you with the enclosed comments. Ms. Mimi Garstang of the Division of Geology and Land Survey (DGLS) or Jim Harris of my staff will be happy to discuss these comments with either you or your staff.

If you have any questions, or need further information, you may contact Jim Harris at (573) 526-2736.

Sincerely,

HAZARDOUS WASTE PROGRAM


Larry V. Erickson, DOE Unit Chief
Federal Facilities Section

LE:jhg

Enclosure

c: Mimi Garstang, DGLS

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**Ground Water Characterization Report of Baseline 1997 Data,
Hazelwood Interim Storage Site (HISS), June 1998**

General comments:

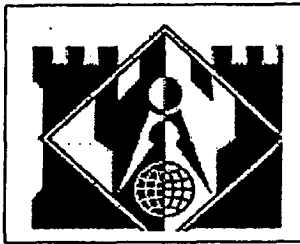
1. Certain conclusions have been drawn in this report with very limited supporting data. As the work identified in the SLAPS Sampling and Analysis Plan (SAP) is completed, more data to answer questions and draw conclusions should be available.
2. Very little specific stratigraphic and groundwater data has been accumulated, specifically for HISS. As groundwater issues or subsurface remediation issues become more pertinent it is likely that additional site specific information may need to be collected at HISS.
3. The waste pile at HISS has no doubt impacted groundwater flow. As the waste pile is removed the shallow groundwater movement must be evaluated. Additional data from the lower groundwater zone may be needed in the future. Only one well is completed below the 3M unit.
4. Background concentrations for radionuclides need to be established.
5. The detection limits for protactinium and actinium are 200 pCi/L instead of the 50 pCi/L promised in the sampling plan. From the numbers reported they seem to be present. Their presence must be considered in evaluating risk.
6. All reports that involve or reference geologic conditions and interpret geologic data that impacts human health, safety and welfare must include a title page properly endorsed by a geologist registered in Missouri.

Specific Comments:

1. Page 6
Arsenic concentrations in HISS-9S should not be considered anomalous until the well is resampled and further evaluated.
2. Page 7
As stated in the text, tritium analysis distinguishes pre-1950 groundwater from post-1950 groundwater. It is not necessarily an indicator that there is "no or limited hydraulic communication" in geologic time. Additional information as proposed to collect in the SLAPS SAP will help to better answer this question. Some of the summary statements presented are over stated at this time.

3. Page 14, Conclusion #1, #3, and #5
Only one well at HISS was deep enough to encounter the 3M unit. Statements about the thickness of the 3M unit at the site or absence of shale bedrock beneath HISS are definitely "stretching" the available information. Any statements about groundwater at depth need to be qualified. This includes conclusions about vertical gradients.
4. Figure 2-2
A notation of Unit 5 being absent at HISS is premature.
6. Figure 3-2
A comparison should be made of the geochemistry of the wells versus the concentrations of PCOC's obtained during the 1997 sampling event to see if the information would help to understand contaminant movement.
7. Table 4-3, 4-4, and 4-5
It is noted that all historical data reported is yearly averaged data. The 1997 data is from a single sampling event. Therefore, comparisons are somewhat distorted. Future data reporting should not be averaged.

8/17/98



U. S. Army Corps of Engineers
St. Louis District -
FUSRAP Project Office
Berkeley, Missouri

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GW Char Report of Baseline 1997 Data
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To: Sharon Cotner, USACE

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Further Info?



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HISS

Area

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Author/Originator

Larry Erickson

Company

MDNR

Date

8/17/1998

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