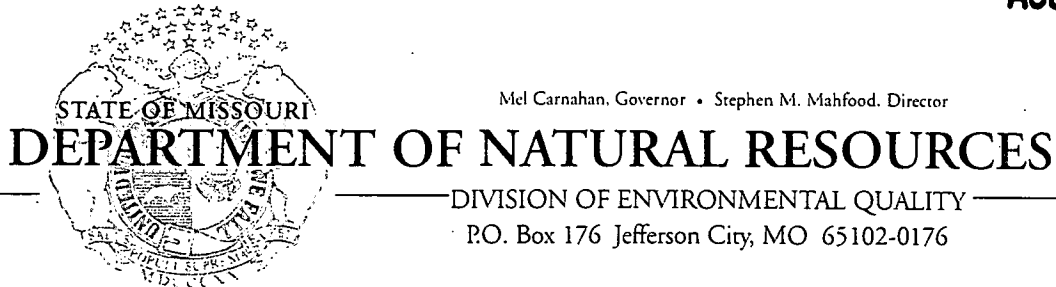


AUG 20 REC'D



August 20, 1999

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

RE: Draft Final Ecological Risk Assessment for the North County Site, July 1999

Dear Ms. Cotner:

The Missouri Department of Natural Resources (MDNR) reviewed the Draft Final Ecological Risk Assessment for the North County Site (July 1999). The decision on how to handle Coldwater Creek is an important one that requires the utmost attention by all parties involved in the final decision. Coldwater Creek is an important issue to the State of Missouri and the previous St. Louis Remediation Task Force as indicated in the Task Force Report (September 1997). The ecological risk assessment currently paints a picture of Coldwater Creek as a "damaged" resource with little resource potential. The assessment has statements like "The middle reach of Coldwater Creek does not offer unique, rare, or critical habitat to the ecological communities in the North County Area. This reach passes through primarily commercial and residential land uses. There are numerous sources of debris and chemical contaminants. This reach is not designated for any beneficial use by the State of Missouri." Coldwater Creek runs through numerous parks, e.g., St. Cin Park, St. Ferdinand Park, Black Jack Park, and Duchesne Park, which demonstrates an aesthetic and recreational value in Coldwater Creek. As stated on page A-9 of the Draft Final Ecological Risk Assessment, "However, because of its location and scarcity even such marginal forested habitats become valuable."

Additional concerns exist with how the USACE has defined "significant adverse ecological effect" as either death or certain and complete reproductive failure for non-threatened or non-endangered species. The assessment should justify why this is appropriate for Coldwater Creek and the ball fields while other non-lethal community and population impacts are not included in the assessment. There is concern with the selection of appropriate receptor for the assessment and specifically why fish were not used.

Ms. Cotner
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Page two

The assessment also seems to contradict itself by stating in the recommendation section that remediation planned for these units on the basis of human health risk or other reasons should consider remedial goal options based on ecological risk. While the summary section indicates that the Ecological Chemicals of Potential Concern (COPC) previously identified, were judged not to cause ecological "significant" adverse effects to the receptors used in the assessment, so why would the remedial goal options be based on ecological risk. Additionally, the assessment lacks documentation on the background values used in the assessment for sediment and surface water.

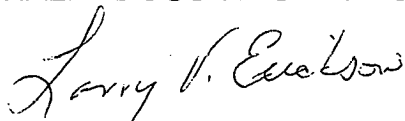
The U.S. Army Corps of Engineer (USACE) met with the Environmental Protection Agency (EPA) and MDNR to discuss the draft Screening Ecological Risk Assessment in June 1999. EPA indicated that the assessment should focus on the risk associated with Manhattan Engineer District and Atomic Energy Commission contaminants released from FUSRAP sites within the assessment. There is a concern on how the quality of the Creek is used within the document as a factor to justify removal of contaminants from the list of ecological contaminants of concern.

These concerns and comments should be addressed by the USACE before a final remedy is selected for Coldwater Creek and Ballfields. MDNR representatives are available to meet with the USACE to discuss these concerns and comments.

If you have any questions, or need further information, you may contact Mr. Scott Honig of my staff at (573) 751-3087.

Sincerely,

HAZARDOUS WASTE PROGRAM



Larry V. Erickson, DOE Unit Chief
Federal Facilities Section

LE:shg

Enclosure

c: Dan Wall, EPA
Alan Buchanan, Missouri Department of Conservation
Joe Gillman, DGLS
Eric Gilstrap, FUSRAP Field Office

The Missouri Department of Natural Resources reviewed the Draft Final Ecological Risk Assessment for the North County Site (July 1999). The comments listed here were generated from that review.

1. Section 1.1, Page 1-3: Why are SLAPS soils not being evaluated in the SERA? Although remediation activities are ongoing at SLAPS, surface soils may still provide exposure to ecological receptors.
2. Section 1.1, Page 1-3: Historical soil sampling data for the ballfields area is not being considered in the SERA. Is the current soil sampling data post-remediation sampling data? Why is historical sampling data not being used in lieu of more recent sampling?
3. Section 2.3.3, Page 2-5: Historical radiological data from Coldwater Creek is not being considered in the SERA. Why is historical sampling data from Coldwater Creek not being used?
4. Section 3.3.1, 3.3.2, and 3.3.3: These sections reference "North County sediment background" values. The locations of the North County sediment background samples should be provided. In addition, information regarding the "background" sampling effort should be provided.
5. Section 3.3.1, 3.3.2, and 3.3.3: These sections reference "North County surface water background" values. The locations of the North County surface water samples should be provided. In addition, information regarding the "background" sampling effort should be provided.
6. Page 1-9, paragraph 2, line 3 under section 1.2: History of Ecological Risk Assessment at St. Louis Site: On what basis is this statement made? Isn't the purpose of this process to assess and mitigate impacts to "any" organisms in the impacted areas?
7. Why was a fish not evaluated as a receptor? Since fathead minnows are present in Coldwater Creek and there is probably more toxicity data on fathead minnows than almost any other aquatic organism, it would be a good receptor for evaluating risk. The list of 6 fish species based on Nash, 1982, is out-of-date and probably less than half of the species that would be expected in this stream.
8. How and where are the receptors chosen? Did the U.S. Army Corps of Engineers carry out a new biological inventory before deciding on receptors? The possibility exists for new species to move into areas of Coldwater Creek affected by the 1993 and 1995 floods.
9. Under #3: Re-evaluation of Ecological COPCs (Step 3) page 3-1, paragraph 3: This appears to state that the only ecological significant effect on non-threatened or endangered species is death. The assessment should provide justification of why Non-lethal (i.e. chronic) community and population impacts were not included in the assessment.
10. Under 3.1-3.3: Are North County background concentrations "natural" or do those means include "impacted" sites? Are the median concentrations also higher than the Geochemical Survey of Missouri data?
11. In the same section (3.1-3.3) the author(s) use inadequate justification in discounting the potential of risk posed by metals present at levels well above a hazard quotient (HQ) of 1.0 (identified as the HQ level of concern).

12. Section 3.3.2, Page 3-6, 5th paragraph: Statement that the Middle Reach of Coldwater Creek is not designated for any beneficial use by the State of Missouri is not relevant, since this stream reach empties into lower Coldwater Creek which is protected for livestock and wildlife watering and aquatic life.
13. The authors need to do a better job of explaining how they arrived at the HQ in Tables 18 and 19 (for example) which are drastically different than the HQs in Table 3. For instance, the short-tailed shrew HQ for aluminum in Table 3 is 343 and in Table 18 is 61.8. The level of aluminum used in the Table is 31% lower than that used in Table 3, yet the HQ is over 80% lower. What other assumptions were made which resulted in the additional lowering of the HQ?
14. How did the authors arrive at the conclusion (see Recommendations on page 4-1) that HQs several times the "level of concern" HQ of 1 did not represent significant ecological risk?
15. Page 1-9, "...not unique or unusual; not necessary for continued propagation of key species, and not highly valued economically, recreationally or aesthetically." This statement is incorrect based on the fact of that Coldwater Creek runs through numerous city parks and residential areas.
16. Please clarify why the RME was selected over going strictly with maximum concentration from the sampling.
17. Page 1-9, What was the date for the most recently collected chemical data for surface soils at IA-9 and IA-10? Justification for leaving out data of the evaluation needs to be included in the document.
18. Page 4-1, "Remediation planned for these units on the basis of human health risk or other reasons should consider remedial goal options (RGOs) based on ecological risk." Does this mean that RGOs should be based on ecological risk if human health risk exists but not solely ecological risk? This contradicts the summary in section 3 "re-evaluation."
19. Page 2-4, "The effect of using a body-weight-scaling exponent of zero for birds is discussed in the re-evaluation of ecological COPCs (Section 3)." Please clarify this statement. We could not find justification for a zero scaling factor within section 3. Only discussion was on page 3-7 "no additional substances detected in surface water have HQs greater than 1 for birds when calculated using NOAELs and LOAELs uncorrected for receptor body weight."
20. Page E-3, Did any of the locations that were sampled during the most recent sampling event correspond to the locations sampled during the remedial investigation?
21. Quality of the creek is first discussed in Section 1.1, Site Description. Section 3.0 also looks at the quality of habitats in the evaluation while Section 2.0 only looks at the risk associated with the possible ecological COPCs. The following statements can be found in various sections:

Section 3.3.1, "The SLAPS/HISS reach of Coldwater Creek does not offer unique, rare, or critical habitat to the ecological communities in the North County area. This reach passes through primarily industrial land uses. There are numerous sources of debris and chemical contaminants. This reach is not designated for any beneficial use by the State of Missouri."

Section 3.3.2, "The middle reach of Coldwater Creek does not offer unique, rare, or critical habitat to the ecological communities in the North County area. This reach

passes through primarily commercial and residential land uses. There are numerous sources of debris and chemical contaminants. This reach is not designated for any beneficial use by the State of Missouri."

Section 3.3.3, "The lower reach of Coldwater Creek includes a relatively unique habitat for ecological communities in the North County area, the backwater area at the confluence with the Missouri River. Although the habitats in this reach are neither rare nor critical to the survival of any populations, the lower reach of Coldwater Creek is designated as a Class C stream by the State of Missouri."

Section 3.4, "Coldwater Creek SLAPS/HISS Reach and Middle Reach are also judged not to require further evaluation in an ERA because risks are low or of uncertain origin, the level of adverse effect for most contaminants and receptors are not considered ecologically significant, and these sections of the creek do not represent unique, rare, or critical habitat to local ecological communities. Coldwater Creek Lower Reach is also judged not to require further evaluation in an ERA because the risks from the few ecological COPCs identified in sediment and surface water from this reach are low and are not likely a result of release from the North County Site."

Section 4.0, "No further ecological risk evaluation is recommended for Coldwater Creek. The SLAPS/HISS and Middle reaches of Coldwater Creek do not represent unique, rare, and critical habitat for ecological receptors."

Each one of those sections listed above looks at the risk for the ecological Chemicals of Potential Concern (COPC) under a more realistic scenario. After the re-evaluation, all the ecological COPCs listed in the Screening Ecological Risk Assessment (SERA) are determined not to be ecological contaminants of concern. How does the fact that Coldwater Creek is not a unique, rare, or critical habitat for ecological receptors effect the fact a HQ is greater than one for a contaminant?

Cataloging Form
{Technical/Project Managers fill in C through G, K through Q. RM completes other fields}

A. Document ID Number: Assigned by database 658

B. Further Information Required?: ☐

C. Operable Unit (Choose One):

USACE	<input type="checkbox"/>
St. Louis Sites	<input type="checkbox"/>
Downtown	<input type="checkbox"/>
North County	<input checked="" type="checkbox"/>
Madison Sites	<input type="checkbox"/>
Inaccessible Areas	<input type="checkbox"/>
PRP	<input type="checkbox"/>
Oversight Committee	<input type="checkbox"/>

D. Site (Optional):

SLDS VPs	<input type="checkbox"/>
Mallinckrodt	<input type="checkbox"/>
SLAPS	<input type="checkbox"/>
SLAPS VPs	<input type="checkbox"/>
CWC	<input type="checkbox"/>
HISS	<input type="checkbox"/>
Madison	<input type="checkbox"/>

E. Area (Optional): _____

F. Primary Document Type (Choose One):

Site Management Records	<input type="checkbox"/>	Remedial Action	<input type="checkbox"/>
Removal Response	<input type="checkbox"/>	Public Affairs/Community Relations	<input type="checkbox"/>
Remedial Investigation	<input checked="" type="checkbox"/>	Congressional Relations	<input type="checkbox"/>
Feasibility Study	<input type="checkbox"/>	Freedom of Information Act	<input type="checkbox"/>
Record of Decision	<input type="checkbox"/>	Real Estate	<input type="checkbox"/>
Remedial Design	<input type="checkbox"/>	Project Management	<input type="checkbox"/>

G. Secondary Document Type (see back of form): Correspondence

H. Bechtel Number: _____

I. SAIC Number: _____

J. MARKS Number(Choose One): FN: 1110-1-8100e ☐ FN: 1110-1-8100f ☐ FN: 1110-1-8100g ☐

K. Subject/Title: MDNR's Comments on the Draft Ecological Risk Assessment for the North County Sites

L. Author: Larry Erickson

M. Author's Company: MDNR

N. Recipient(s): Sharon Cotner

O. Recipient(s) Company: PM-R

P. Version (Choose One): Draft ☐

Final ☒

Q. Date: 8/20/99

R. Include in the ARF? ☐

S. Include in the AR? ☐

T. Filed as Confidential/Privileged? ☐

U. Document Format (Choose one):

Paper	<input checked="" type="checkbox"/>	Photographic	<input type="checkbox"/>	Cartographic/Oversize	<input type="checkbox"/>
Electronic	<input type="checkbox"/>	Audio-visual	<input type="checkbox"/>	Microform	<input type="checkbox"/>

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X. Associated with Document(s): _____