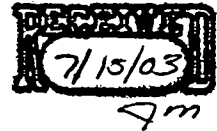




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101



July 14, 2003

Ms. Sharon Cotner
FUSRAP Program Manager
St. Louis District, Corps of Engineers
8945 Latty Avenue
Berkeley, Missouri 63134

Dear Ms. Cotner:

Re: North County Site Feasibility Study and Proposed Plan

The U.S. Environmental Protection Agency (EPA) has reviewed the North County Site Feasibility Study and Proposed Plan (FS/PP). Our comments on these documents are enclosed. The USACE made these documents available for public review without giving the EPA the opportunity to review a draft final version of these documents. By not following the consultation requirements of the Federal Facility Agreement (FFA), the USACE has violated the terms of the FFA. The EPA considers this to be a significant violation and must consider whether some action should be taken in response to this violation.

The EPA has some significant comments on the FS/PP; however, at this point we don't believe the deficiencies are so great that we need to require the documents be revised and resubmitted. We will look to the Responsiveness Summary and Record of Decision (ROD) to address EPA's concerns. Although our comments are on the FS/PP, they should be interpreted as items that need further analysis or clarification as the Responsiveness Summary and ROD documents are developed. We expect that the USACE will follow the consultation procedures as outlined in the FFA as future site documents are developed. We request that the USACE submit a schedule for the remainder of the remedy selection process, including a deadline for submission of the draft ROD pursuant to Section XI of the FFA.

Specific comments are generally made once, although they apply to similar discussions that recur throughout the FS/PP. We did not attempt to identify each instance in the FS/PP that a similar comment could be made.

Please call if you have any questions or would like to discuss next steps.

Sincerely,

Daniel R. Wall

Enclosure

cc: Larry Erickson, MDNR
Eric Gilstrap, MDNR Field Office

EPA Comments on the North County Site Feasibility Study and Proposed Plan

July 14, 2003

General Comments:

1. By initiating public comment on the Proposed Plan without providing EPA the opportunity to review a draft Final FS and draft final Proposed Plan the ACE violated the consultation requirements terms of the FFA. EPA considers this to be significant violation and is considering taking some other action in response to these violations.
2. We are concerned that the information presented in the FS/PP is rather vague on some aspects of the preferred remedial strategy especially as it relates to the long-term implementation. We are not certain sufficient information is presented to support development of a ROD with clear performance objectives and commitments. For example:
 - a) The PP is inconsistent on whether a decision regarding inaccessible soils is proposed as part of this decision process or is being deferred to future decision documents. The preferred alternative says that inaccessible soils are not addressed by this remedial action, but in some instances the PP says inaccessible soils will be remediated to the proposed cleanup criteria when they become accessible. The scope of the decision must be made clear. If a decision or decisions regarding inaccessible soils are deferred, then this is not the final response action for the North County site and the corresponding response strategy needs to be spelled out. If this is intended to be the final decision process, then more definition of the long-term response strategy is needed.
 - b) Depending on what the ACE intends, there may or may not be clear distinction between Alternatives 5 and 6. If the intent under Alternative 5 is to remediate inaccessible soils to the proposed cleanup criteria at some point in the future when circumstances make them accessible, then the only distinction between Alternative 5 and Alternative 6 is in the implementation strategy. The technologies, the methods, and the end results are essentially the same. If this is the case, the cost of Alternative 5 should be adjusted to include the cost of future remediation. It is not clear that these two alternatives actually qualify as separate alternatives under the CERCLA remedy selection process. On the other hand, if the intent under Alternative 5 is to make no decision with respect to the inaccessible soils beyond management in place, then these two alternatives do have some important distinctions. However, the FS/PP seems to try to do both.
 - c) The preferred alternative needs to be clear on the criteria for what constitutes an inaccessible versus an accessible condition. This is especially true if a decision regarding inaccessible soils is deferred. It needs to be clear what soils may be remediated under this decision and what soils must be subject to future decision-making. Optimally, the criteria would be flexible enough so that soils which become unexpectedly available over the near-term are not precluded from being remediated under this decision process.

d) The division of responsibilities between the ACE and DOE is not described. The MOU between the ACE and the DOE should be described and interpreted to fit site-specific circumstances. Presumably, the general plan is that the ACE is responsible for implementing this response action and the DOE is responsible for the long-term stewardship activities such as monitoring and enforcement of institutional controls. However, expectations regarding specific activities are not described. For example, is the ACE proposing to implement future decision processes and response actions associated with inaccessible soils, or is DOE expected to accept that task? Which agency is expected to implement institutional controls? Could this responsibility fall to either agency depending on the timing? Is it intended that the long-term stewardship plan will be used as a mechanism to negotiate and define these responsibilities?

e) The inaccessible soils are generally not well described. Discussion in the FS on the nature and extent of contamination does not address inaccessible soils. What are the volumes, locations, and concentration levels of these soils? Subtracting volume estimates for Alternatives 5 and 6 would suggest an impacted volume of 70,000 cubic yards. Is that a reasonable estimate? What kind of data is available and how adequate is it? What assumptions are used? Figure 6 in the PP suggests that all soils under every road and rail line in the area are contaminated. Is that a reasonable characterization?

f) The documents provide no specific information, beyond Figure 6 of the PP, on the particular structures impacted by the inaccessible soils. Such information would be useful in developing a strategic distinction between inaccessible soils based on the kind of structure they are located under. The indicated approach to soils located under relatively permanent structure like building or interstate highway may be different than the approach to soils located under an inactive rail spur in an area that might be redeveloped. Especially if the ACE's intent is to make a decision regarding inaccessible soils as a part of this process, some effort should be made to categorize situations based on the character of the structure, including ownership, anticipated life span, opportunity to remediate, disruptive impact, potential for exposure, etc.

3. The ACE selects remedial goals for Th-230 based on an estimate of the ingrowth of Ra-226 to not exceed soil standards in 40 CFR 192 which are being used as an ARAR. This interpretation of 40 CFR 192 is inconsistent with EPA's.

OSWER 9200.4-25 *Use of Soil Cleanup Criteria in 40 CFR Part 192 as Remediation Goals for CERCLA sites* (February 12, 1998) states "It should be noted that to meet a permanent clean-up objective for radium-226 and radium-228 of 5 pCi/g, there needs to be a reasonable assurance that the preceding radionuclides in the series will not be left behind at levels that will permit the combined radium activity to build-up to levels exceeding 5 pCi/g after completion of the response action. At a minimum, this would generally mean that thorium-230 (the parent of radium-226) and thorium-232 (the parent of radium-228) should be cleaned up to the same concentrations as their radium progeny. Therefore, whenever the 5 pCi/g and/or 15 pCi/g standards are used as

relevant and appropriate requirements (or TBC's) at CERCLA sites with some combination of thorium-230 and thorium-232, these soil standards should apply to the combined level of contamination of thorium-230 and thorium-232." [emphasis added]

OSWER 9200.4-35P *Remediation Goals for Radioactively Contaminated CERCLA Sites Using the Benchmark Dose Cleanup Criteria in 10 CFR Part 40 Appendix A, I, Criterion 6(6)* (April 11, 2000) states "The Criterion 6(6) rule should not affect the ARAR status of requirements under the EPA's UMTRCA rule (40 CFR Part 192). In particular, the guidance in OSWER Directive 9200.4-25 "Use of Soil Cleanup Criteria in 40 CFR Part 192 as Remediation Goals for CERCLA sites", still applies. **This means that when the 5 pCi/g and/or 15 pCi/g standards are used as RARs or TBCs, these soil standards should continue to apply to the combined levels for radium-226 and radium-228, as well as the combined levels of thorium-230 and thorium-232.**" [emphasis added]

If 40 CFR Part 192 soil standards are not ARARs for thorium at this site (e.g., because the profile of contamination means use of the subsurface finding tool would result in thorium levels exceed 5 pCi/g), then a risk based remedial goal for thorium may be suitable. The decision document should specify the risk estimate for such a remedial goal.

4. The FS/PP contains no supporting information on the remediation of buildings, or other structures that will be left in place. EPA is aware that the ACE has submitted documents containing survey procedures for some of these activities; however, the standards or criteria that will be used need to be supported as part of the CERCLA decision process. It should be noted that dose assessments are not part of the CERCLA decision-making process unless required for ARAR compliance.
5. In a variety of instances the FS/PP frequently concludes that certain contaminants are not FUSRAP related and therefore don't have to be considered further. In making these cases, the ACE doesn't seem to account for the expectation that co-located contaminants not originating from the ore processing activities be remediated. Further, the FS/PP generally leaves the impression that the ACE has identified many potential contamination problems or health concerns that are not being addressed under this process due to the limitations of FUSRAP authority. We don't believe this is a wholly accurate impression; however, the ACE should clearly describe any potential contamination problems or health concerns that it has identified, but does not intend to address.
6. The decision process should provide some greater description of the scope, function, and expectations of the stewardship plan.
7. The U.S. Department of Energy (DOE) is a key player in the long-term management of this site. This decision process defines site conditions that DOE will inherit and defines

activities that DOE will be expected to perform. Therefore, DOE must provide its concurrence with the remedy before EPA will be in a position to concur.

Specific comments:

Proposed Plan:

1. Pg. 3, col. 1– The 2 bullets appear to reflect accurately the scope of the cleanup agreed to in the FFA, but the sentence after them seems to inappropriately limit the scope of the cleanup activities.
2. Pg. 3, col. 2, 1st full ¶– By mentioning the informal comments provided by EPA, the ACE seems to imply that informal comment was all the process provided and that, having made these informal comments, EPA concurred with the ACE's proposal. Neither is true. The FFA provides for a formal review, comment and approval/disapproval procedure by EPA which the Corps chose not follow. EPA wasn't given the opportunity to participate in this formal review process or provide concurrence on the Corps proposal.
3. Pg. 4, col. 1, end of 1st full ¶, last sentence– This sentence also seems to imply that the appropriate regulatory agency review was completed before the FS was released to the public, which is not true. Like with the PP, EPA was not given the formal review and approval/disapproval of the FS that was to be provided under the FFA.
4. Pg. 5, bottom of col. 1– We don't think this accurately represents the status of ongoing removal actions once a ROD is final. Rather than considering the removal actions to be "complete," which implies no further cleanup is necessary, which generally isn't the case, it would seem to be more accurate to say the removal actions within the scope of the ROD are terminated when the ROD is signed. These actions would be incorporated into the remedial action and completed as part of the remedial action. Any ongoing removal actions that are beyond the scope of the cleanup decision made in the ROD should continue uninterrupted.
5. Nature and Extent of Contamination, pg. 9 –We found no information in the FS on contaminant levels in surface water (Coldwater Creek) and we found no information to support the conclusion regarding risk levels.
6. Pg. 9, col. 2, 1st partial ¶– The FS doesn't provide much substantiation in the way of data summaries to support the conclusion that non-rad FUSRAP contaminants are largely co-located with rad contaminants. Also, it isn't clear whether the non-FUSRAP chemical contaminants discussed in the last 3 sentences of this ¶ are either co-located with FUSRAP wastes or pose an identified problem that the ACE isn't planning on addressing. Co-located non-FUSRAP wastes are supposed to be addressed under the terms of the FFA.

7. Pg. 9, col. 2, bottom partial ¶– It's also not clear here whether the VOCs claimed not to be FUSRAP wastes are co-located with FUSRAP wastes or present an identified problem the ACE doesn't plan to address. In the last sentence of this ¶, on the top of pg. 10, it's not clear what the ACE means when it says the remedial design investigations must consider the presence of these contaminants.
8. Groundwater, pg. 10 –Here and elsewhere in the FS/PP, we find statements to the effect that the presence of contaminants in the shallow groundwater does not require action because a complete pathway to receptors does not exist. Such statements are not consistent with the NCP which sets out the expectation that all potentially usable groundwater be restored to its beneficial use. This expectation is not conditioned on there being a complete pathway to receptors. A judgement that action is not required is dependant on making the case that the groundwater is not potentially usable.
9. Scope and Role, pg. 10 –This section should have explained how this operable unit fits into the overall remedial strategy for the St. Louis FUSRAP site.
10. Pg. 10, col. 2, 1st full ¶– The description of what wastes are not addressed by the FS and PP doesn't distinguish between co-located non-FUSRAP wastes, which should be addressed under the FFA, and non-co-located non-FUSRAP, which might not have to be addressed under the FFA.
11. Scope and Role, pg. 10 - 11, last sentence –This says that in cases where removal actions were previously conducted, the data will be evaluated to ensure that ROD criteria are met and that they require no further action. What will be done if the evaluation shows that the ROD criteria were not met?
12. Pg. 13, col. 1, 1st full ¶– It's not clear what the ACE means when it says it will continue to monitor the groundwater for TCE where appropriate if TCE is co-located with FUSRAP COCs requiring remediation, especially in light of the statements in the preceding ¶ that there are no COCs identified in HZ-A.
13. Pg. 13, col. 1, bottom ¶– the ACE's explanation for not addressing arsenic doesn't take into consideration whether the arsenic is co-located with FUSRAP wastes in the sediment.
14. Pg. 14, col. 1, bottom partial ¶– The second sentence appears to define "relevant and appropriate," not "applicable or relevant and appropriate."
15. Pages 17-18. The proposed plan does not specify what is the benchmark and compliance dose of the selected remedial goals. OSWER 9200.4-35P *Remediation Goals for Radioactively Contaminated CERCLA Sites Using the Benchmark Dose Cleanup Criteria in 10 CFR Part 40 Appendix A, I, Criterion 6(6)* (April 11, 2000) pages 5-8 describes how both a "benchmark" and "compliance" dose should be established site-specifically when complying with Criterion 6(6) rule as an ARAR. It is important that the

"compliance" dose should be less than 15 mrem/yr and the risk assessment for concentrations corresponding to the compliance dose should fall within the 10⁻⁶ to 10⁻⁴ risk range. Otherwise, the Criterion 6(6) rule should not be used to establish cleanup levels.

16. Page 18, first column, first paragraph. The ACE states that doses to the general public would not exceed 100 mrem/yr if institutional controls fail. While EPA is not opposed to the concept of establishing a fail safe level in the event institutional controls are lost, it should be noted that dose assessments are not part of CERCLA decision-making unless required for ARAR compliance.

December 17, 1999 memo to EPA Regions from Stephen D. Luftig, Director Office of Emergency and Remedial Response and Stephen D. Page Director Office of Radiation and Indoor Air entitled *Distribution of OSWER Radiation Risk Assessment Q & A's Final Guidance* see page , which states "This Risk Q&A clarifies that, in general, dose assessments should only be conducted under CERCLA where necessary to demonstrate ARAR compliance. Further, dose recommendations (e.g., guidance such as DOE Orders and NRC Regulatory Guides) should generally not be used as to-be-considered material (TBCs)." [emphasis added]

If the ACE is analyzing the site for compliance with some 100 mrem/yr recommendation/requirement outside of its CERCLA decision-making authority, the Corps should state its rationale (e.g., compliance with an internal DOD guidance under the Atomic Energy Act) or remove this language from CERCLA decision documents.

17. Pg. 19, col. 2— The rationales presented for elimination of the on-site disposal cell and vitrification/biological techniques/incineration don't appear to follow CERCLA remedy selection criteria.
18. Summary of Feasibility Study Alternatives, beginning on pg. 19 —The costs for each alternative should be presented in a form that includes capital costs, annual costs, and total present worth costs. The duration of the evaluation period and the discount rate should also be indicated.
19. Summary of Feasibility Study Alternatives, pg. 20 —The discussion on land use, supported by the information in Table 9 is not clear. By "future land use" does the ACE mean reasonably anticipated future land use, which is the standard for identifying reasonable maximum exposure. The analysis tends to equate land use assumption with risk assessment exposure analysis. The FS/PP does not make clear how an industrial standard for reasonable maximum exposure can be consistent with the remedial objective of unrestricted use. On Table 9, how does the term "removal action" indicate the removal status?
20. Pg. 20, col. 2, 3rd full ¶ (re: ongoing removals)— As commented previously, when the ACE says the ongoing removal actions will be complete, it seems they really mean they

will be terminated when the ROD is signed. This seems to say that on-going removal actions otherwise consistent with the selected remedy would be stopped when the ROD is signed and put on hold until the remedial action work plan and remedial design, etc., have been completed.

21. Pg. 20, col 2, bottom partial ¶ (re: excavation)– this discussion doesn't appear to describe precisely the requirement of the FFA to cleanup all FUSRAP wastes (radiological and non-radiological) as well as any non-FUSRAP wastes commingled with FUSRAP wastes in accordance with CERCLA remedy selection criteria.
22. Pg. 21, col. 1 (re: institutional controls)– Depending upon the alternative selected, institutional controls could be a significant feature of a protective remedy. The PP is somewhat vague as to whether the ACE will be responsible for the long-term stewardship plan or whether this will be part of DOE's followup work. Which agency will be responsible for this should be clarified.
23. Pg. 21, col. 2, 2nd full ¶– Since the purpose of the RI is to determine the extent of contamination, it should be clarified what is meant by undertaking pre-remedial design investigation to define the extent of contamination.
24. Pg. 21, col. 2, 2nd full ¶– Have any properties with co-located RCRA wastes been identified or is this intended to be hypothetical?
25. Pg. 21, col. 2, 3rd full ¶ (re: monitoring)– Explain what is meant by the protective nature of existing geologic deposits and why they would not be changed by any of the alternatives.
26. Pg. 21, col. 2, 4th partial ¶ – Reference the relevant and appropriate federal and state regulations.
27. Pg. 22, col. 1 (re: Alt. 2, capping)– the multi-layer cap would provide a barrier in addition to what?
28. Pg. 22, col. 2 (re: excavation)– it's not clear what the ACE means when it says "when and as the inaccessible soils become available" and what the implications are for this in terms of if and when the so-called inaccessible soils will be cleaned up. This is the first we've heard of new decision documents being planned. The remedial decision will need to be thorough on defining this approach. Also, the discussion seems to apply cost as a factor in selecting cleanup criteria in a manner not consistent with CERCLA criteria.
29. Pg. 22, col. 2 (re: excavation)– The ACE should explain its choice of preferred remedies in light of the statement that supplemental standards are appropriate at SLAPS and HISS because excavation to unrestricted criteria would result in excessive remedial action costs relative to the long-term benefits.

30. Pg. 23, col. 1 (re: institutional controls)– The discussion doesn't give a very accurate picture of the potential difficulties in trying to effectuate enforceable controls over the number and types properties falling into the category of inaccessible soils.
31. Pg. 23, col. 2 (re: Alt. 3, excavation)– It's not clear what the ACE means when it says "additional soils may be identified as inaccessible during implementation"
32. Pg. 23, col. 2 (re: Alt. 3, treatment)– Reference the supporting information establishing that these treatment processes are effective at achieving the indicated goals. Based on the treatability work, how effective is soil sorting and washing expected to be at achieving the supplemental standards? What is the basis for including phytoremediation of Coldwater flood plain? Is this really considered implementable and effective? If so, we found no rationale eliminating this as an option going forward.
33. Pg. 25, col. 2, Alternative 5, excavation –What kind of new decision documents (removal or remedial) will be developed when and as inaccessible soils become available? Is there a point in time beyond which the DOE becomes responsible for these decision documents? This seems to set up the expectation that a decision document will be developed each time that some subset of inaccessible soils is made available. Is this a reasonable plan given the number and types of activities anticipated?
34. Pg. 26, col. 1, 1st partial ¶ –A primary objective of the institutional controls is described as use restriction designed to limit activities that could disturb soil. This objective may not be entirely consistent with an inaccessible soils plan where the objective is to identify and remove these soils.
35. Pg. 28, col. 1 –The purpose of the no action alternative is to provide a baseline for comparison. Screening it out prior to the evaluation and comparison of alternatives is not consistent with this purpose.
36. Pg. 32, Preferred Alternative, 1st ¶ –Residential use does not necessarily equate to unrestricted use.
37. Pg. 32, Preferred Alternative, col. 2, 2nd ¶ –We had trouble finding the exposure evaluation or risk basis for Coldwater Creek sediment criteria.
38. Pg. 32, Preferred Alternative, col. 2, 3rd ¶ –Further explain the plan to release roads based on final status surveys. Will a focused data collection effort be undertaken or will this be addressed on an ad hoc basis? Another objective will be to better define the locations and concentration, and to identify known versus presumed conditions.
39. Pg. 32, Preferred Alternative, col. 2, 4th ¶ –This says that limited dredging may be used for Coldwater Creek. What other method is being considered for sediment removal?
40. Pg. 33, Preferred Alternative, col. 1, 3rd ¶ –The applicable standards for surface water

treatment need to be identified.

41. Pg. 33, Preferred Alternative, col. 1, 2nd ¶ –Under CERCLA, cost is not an overriding consideration in determining whether or not to apply treatment.
42. Pg. 33, Preferred Alternative –No mention is made of the standards or criteria being applied to buildings or structures left in place.
43. Pg. 34, Preferred Alternative –The full scope and purpose of the stewardship plan, and expectations for how it will be developed in conjunction with the DOE should be explained.
44. Pg. 34, Preferred Alternative –Where is there an explanation of what is meant by “short-term monitoring”? What is the anticipated end point? What criteria would be applied to determining whether long-term monitoring is required to assess potential contaminant migration from contaminated soils beneath roads, railroads, and other permanent structures? What is the basis for the judgement that this might be necessary? The text says this type of monitoring could be performed. Is this the subject of one of the future decision documents?