



March 23, 1998

R. L. Mullins
FUSRAP Program Manager
St. Louis District Corps of Engineers
9170 Latty Avenue
Berkeley, MO 63134

RE: Review of EE/CAs for SLAPS and HISS Sites

Dear Mr. Mullins:

As requested by the St. Louis District Corps of Engineers and the Department of Natural Resources, the Department of Health (MDOH) has reviewed the March 1998 *Engineering Evaluation/Cost Analysis for the St. Louis Airport Site (SLAPS)* and the March 1998 *Engineering Evaluation/Cost Analysis for the Hazelwood Interim Storage Site (HISS)*. MDOH has reviewed these documents and found that our previous comments have not been addressed.

MDOH resubmits the following comments from the review of the previous draft of the SLAPS EE/CA:

- Streamlined Risk Evaluation. Risks should have been evaluated for exposure to chemicals at the ballfields. It is true that the radiological risks are sufficient alone to show risk on-site, and, therefore, it is not necessary to also evaluate chemical risks to determine if a clean-up is needed. However, the ballfields were evaluated to have a 6×10^{-5} risk for a future occupational scenario based on only radiological risks. Exposure to the ballfields would include combined radiological and chemical exposure. As the evaluated risk at the ballfields is relatively close to an action level, the exclusion of chemical exposure in the risk evaluation may have falsely determined that no action was needed. Inclusion of chemical risks would have more fully assessed the risks to those exposed in an occupational setting at the ballfields in the future. *A revision of this section is not needed for the purpose of determining the appropriate clean-up alternative, as alternatives 2, 3, 4 and 5 include the clean-up of soils at the ballfields.*
- It is stated in the Risk Evaluation section that radiological risks would drive any assessment as compared to chemicals risks, and, therefore, chemical risks do not need to be evaluated. However, risks from exposure to uranium have been found in other assessments to be driven by the chemical toxicity of uranium, rather than the radiological properties of uranium. There are also many chemicals that were detected at levels that can generate a risk in an assessment, for example, arsenic and trichloroethene. These chemicals are excluded in this evaluation and that exclusion may lead to underestimation of the risks from this site. Likewise, exclusion of chemicals in the determination of clean-up goals may leave chemicals on-site that would still pose a risk after clean-up of radionuclides.

MDOH offers the following comments specific to this revision of the SLAPS EE/CA:

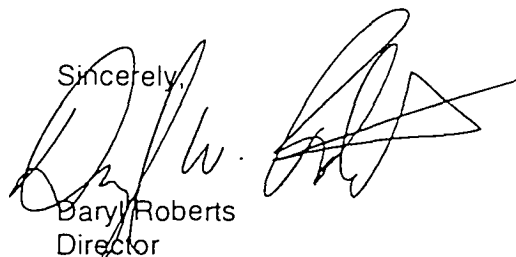
- Section 7. Identification of the Preferred Alternative. Alternative 2 will result in the greatest reduction of potential migration to water sources and other areas and would restore the site to beneficial use as compared to the other alternatives. Alternative 1 is not protective of the public health. Alternative 3 would utilize 'below criteria' soils from the site. The residual contaminants may not allow attainment of the desired ARAR. Alternative 2 would better address overall site contamination, therefore, MDOH would request that Alternative 2 be chosen as the preferred alternative.

MDOH resubmits the following comments from the review of the previous draft of the HISS EECA:

- Section 6, Identification of the Preferred Alternative. The document sent to our office did not include the preferred alternative. Alternative 1 does not meet health-protective goals and is unacceptable as the preferred alternative. Alternatives 2 and 3 differ in that alternative 2 would leave soils on site below 15 pCi/g stockpiled for a possible use unknown at this time. Alternative 3 would remove all contaminated soils from the site and properly dispose of them. The cost of alternative 3 is approximately 5% higher than alternative 2. With chemicals not being addressed in this removal, and only the radiological component of the constituents that were assessed being taken into account, there is still the possibility of unknown risk from soils at this site. There is also the possibility of runoff from remaining stockpiled soils as pointed out in the comparative analysis of the removal alternatives. For these reasons, MDOH would request alternative 3 be the preferred alternative at this site.
- Appendix C, Dose Assessment. This assessment uses Resrad to evaluate the dose to workers from exposure to radionuclides at this site, which is acceptable to MDOH to use for assessment of radioactive risk for this site. The dose assessment, however, does not take into account the chemical toxicity of the constituents examined. Uranium's chemical toxicity has generated more of a risk than its radiological aspects in other assessments. There is also no evaluation of other chemicals, such as metals and SVOCs, that workers may be exposed to. The exclusion of the chemical toxicity of the constituents examined, in addition to the complete exclusion of other chemicals, may underestimate the risk to workers at this site.

We appreciate the opportunity to participate in this matter. If you have any questions, please contact Pam Holley at (573) 751-6111.

Sincerely,



Gary Roberts
Director

Section of Environmental Public Health

dr/sc/ph

cc: Scott Honig, MDNR