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USEPA REVIEW COMMENTS

XX-XX-XX

US EPA REVIEW COMMENTS**Specific Comment 1:****Comment:** Section 2.3, p.2-2

Please specify how the rate of water flow from the 1.5-inch hose into the waste pit will be controlled. In addition, it should be stated here that the water level will be inspected daily (as specified in Section 6.4 and in Section 7).

Response: Water added on an as-needed basis to Waste Pit 5 utilizing the 1.5-inch hose supplying potable water to maintain the appropriate water level. A surveyors rod will be attached to the effluent tower to permit monitoring of the water level by visual inspection. As stated in the Work Plan, the water level will be inspected on a daily basis to assure that the appropriate water level is maintained. Water will be added on an as-needed basis from the 1.5-inch potable water hose. Since the water will be added on a periodic basis rather than continuous, no control of the water flow will be required. However, as a form of control, the effluent tower can safely discharge 386 gallons per minute which far exceeds the flow rate possible through the 1.5-inch hose. No revision to the Work Plan is required with the above clarification.

Resolution: No resolution is necessary.

Specific Comment 2:**Comment:** Section 7.2.5., p.7-7, paragraph 1

More detail should be provided on how the composition of the slurry will be maintained at a ratio of 60% water to 40% fines and sand. If this is the composition of the existing material without any modifications, then the field studies showing this should be cited. Otherwise, it should be specified what methods will be needed to maintain the correct ratio of water to sand in order to provide even distribution of the waste.

Response: The specific gravity of the discharge slurry is controlled by positioning the auger head and by the dredge's instrumentation. The ratio of 60% of water to 40% sand and fines is the standard ratio that a typical dredge system will normally maintain for pumping slurries. Also, the dredge system for this project will be able to handle variations in slurry composition.

Resolution: No resolution is necessary.

Specific Comment 3:**Comment:** Section 11.1, p. 11-1

Because of the Amended Consent Agreement cited in Section 10, the Department of Energy (DOE) is not required to submit Health and Safety Plans to the U.S. EPA for review. However, there are a

number of issues that should be addressed in this work plan which are also relevant to the Health and Safety Plans to be developed. A major concern is that the sample collection and analysis plan for the air monitoring stations (AMS) is not comprehensive enough to provide adequate protection of worker or public health at the site nor to provide sufficient documentation that the removal action accomplishes its objectives.

While it is stated that a constant spray of water will be maintained over the exposed surface of the waste pit during the removal action to control airborne emissions, the effectiveness of this strategy should be confirmed by taking frequent air samples and analyzing them promptly. If samples are collected weekly from the AMS array, it is possible that actionable deviations in air concentrations of radionuclides could be missed. Samples should be collected daily and screening measurements should be performed daily to demonstrate that airborne hazards are not endangering workers at the site. In this way, actions can be taken expeditiously when criteria are exceeded. A subset of samples should receive more thorough analysis. If this is not practical with the existing AMS system, the DOE should consider installing temporary monitoring stations for the duration of activities at Waste Pit 5.

Because a number of alpha emitters have been identified in the waste pit in high concentrations, gross alpha should be added to the list of laboratory analyses performed on AMS samples. In addition to screening measurements on these air samples, more detailed isotopic analysis should be performed routinely on a select number of samples taken during the removal action. In the case of unusually high concentrations, such detailed analysis will provide a means of estimating doses to workers and the public; otherwise, it is used to provide more assurance that this removal action is remediating the specific hazards posed by the waste pit. Because the Characterization Investigation Study identified the main constituents in the waste pit (see Table 1-1), it should be a relatively straightforward matter to determine which specific radionuclides should be included in a more detailed analysis of air samples.

Response: The Project Specific Health and Safety Plan (HSP) is currently under the standard review process, and has not yet been finalized. The draft HSP requires air samples be taken in the immediate breathing zone or general work area. A sample will be collected daily using portable, battery-powered air pumps with 37 mm diameter membrane filters. The air sample filter will be checked for gross radioactivity daily to verify the adequacy of respiratory protection. The exposure limits for radiological constituents are listed in the HSP. In addition, the filter membranes exhibiting high counts will be analyzed for total and isotopic uranium and thorium. These air samples will adequately demonstrate that appropriate precautions are being implemented so that airborne contaminants are not endangering workers at the site. The DOE is confident that the current air monitoring

stations are adequate to monitor actual or potential off-site releases of airborne radiological contamination from this project.

Resolution: A copy of the HSP will be made available upon request to the U.S. EPA for informational purposes once it has been issued final.

Specific Comment 4:

Comment: Section 11.2., p. 11-4

In the 1991 Federal Facilities Agreement between the U.S. EPA and the DOE, the DOE agreed that, in addition to providing estimates of radon flux from potential radon sources at the FEMP, it would directly measure radon flux from several of the waste pits, including Waste Pit 5. This paragraph should be corrected to include all the commitments made in the FFA.

Response: In the FFA, the DOE agreed to provide estimates of radon flux from potential sources and agreed to directly measure radon flux from Waste Pit 5. According to 40 CFR61, Appendix B, Method 115, Monitoring for Radon-222 Emissions, no radon flux measurements are required for water covered areas. Therefore, once this removal action is complete, there will be no rationale or mechanism for performing direct radon measurements from Waste Pit 5. In addition, on May 27, 1992, a conference call was held with the U.S. EPA to determine if radon flux measurements should be taken for Waste Pits 4, 5, and the Clearwell. It was decided that radon sampling for Waste Pit 5 will not have to be conducted if this removal action is completed on schedule. Currently it is estimated that approximately 80% to 85% of the waste material is covered. In order to perform an accurate radon measurement, the water level would have to be lowered thereby delaying the start and completion of the removal.

Resolution: Specific justification for the deletion of the radon monitoring requirements will be provided under separate cover. No resolution is required in conjunction with this Work Plan.

Specific Comment 5:

Comment: Appendix B, p. B-6

In the 1991 Federal Facilities Agreement between the U.S. EPA and the DOE, the DOE agreed that, in addition to providing estimates of radon flux from potential radon sources at the FEMP, it would directly measure radon flux from several of the waste pits, including Waste Pit 5. This implementation strategy for limiting air discharges from radon should be corrected to include all the commitments made in the FFA.

Response: See response to Specific Comment 5.

Resolution: Specific justification for the deletion of the radon monitoring requirements will be provided under separate cover. No resolution is required in conjunction with this Work Plan.