

**EPA/PRC REVIEW COMMENTS
OU 11 FINAL RFI/RI WORK PLAN**

General Comments

1. The field sampling plan (FSP) for OU11 does not appear to be statistically designed to meet the specific performance measures listed in EPA's guidance for data useability in risk assessments. The statistical basis for each sampling program and the way in which the chosen number of samples relates to the requirements of power and confidence should be included in this Work Plan as appropriate. Explanations must be provided if the minimum standards of power and confidence cannot be reached.
2. CDH specifically requested that DOE consider the cone penetrometer test proposed for OU7 for sampling the vadose zone in the unconsolidated alluvium of OU11. No information is presented in this work plan to indicate whether DOE considered using these methods at OU11.
3. Despite requests by both EPA and CDH, the baseline risk assessment (BRA) provided in this final work plan still lacks site-specific information and definition of proposed methods.
4. The area beyond individual hazardous substance site (IHSS) 168 included in the OU11 EE study area should be identified on a map. The text frequently refers to one or the other but there is nothing to identify the limits of the study area.

SPECIFIC COMMENTS

1. Executive Summary, Page 3. The discussion of the vadose zone sampling and analysis does not include semivolatile organic compound (SVOC) analysis. The field sampling plan (FSP) lists SVOC analyses for soil samples from the vadose zone.
2. Section 4.1.4, Page 7 and Section 7.1, Page 3. One of the objectives of this investigation is to "determine the representative site-specific background concentrations of analytes in surface and subsurface soils". However, the FSP does not address this issue as no soil samples, except for a few surface soils samples, are being collected outside the WSF area. DOE should explain how it will determine the representative background concentration of analytes of interest at OU11, and explain why it is necessary to determine site-specific background concentrations when Section 5.5.2 states that data will be compared to site-wide background values in the Background Geochemical Characterization Report.

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3. Section 4.1.4, Page 8. The discussion of nature and extent of contamination should be modified to state that the nature and extent of contamination in ground water within the WSF and in all media outside "...will be addressed in Phase II...". This statement is consistent with the discussion in Section 7.

4. Section 5.5.2, Page 5 and Page 6. This section states that only those concentrations that exceed site-specific background concentrations will be considered evidence of contamination; by comparison to the Background Geochemical Characterization Report. However, the method for comparing collected data to background levels is not specific. DOE must specify its criteria for determining when soil/sediment data exceeds background levels.

5. Section 7.1, Page 3. The third objective under "define contaminant sources" includes "characterize location and type of contaminants in soil pore water". However, no method to extract and analyze soil pore water is included in the FSP. An appropriate method for sampling vadose zone water should be incorporated into the FSP, as should the specifics of when and where this method will be applied.

6. Section 7.3.1, Page 11. This section states that, during the radiological survey, soil samples may be collected along ground-based transect lines. The decision process explaining why a soil sample will be collected should be provided. Additionally, two types of soil samples are proposed, vertical profile and grab. Details on how these two types of samples will be collected should also be provided.

7. Section 7.3.2, Page 15. The Work Plan must describe what procedures have been established to minimize soil disturbance during collection of samples for volatile organic compound (VOC) analysis during excavation of the test pits. Because the concentrations of VOCs and SVOCs are expected to be low, care must be taken to minimize sample disturbance. The current procedure requires the collection of a composite sample in each of the three soil horizons. Compositing a sample will allow volatiles and semivolatiles to dissipate to the atmosphere.

8. Section 8.2.3, Page 9. This section fails to clarify how the listed criteria will be used to determine COCs. For instance, if the concentration of a contaminant does not exceed ARARs, will it automatically be eliminated as a COC? Chemicals with ARARs are not usually excluded from risk assessments, although the comparison of ARAR values with containment concentrations can provide useful information. The specific use of the presented criteria should be outlined.

9. Section 8.3.4, Page 13. Any current on-site potential receptors, such as workers, should be identified. Closest off-site potential receptors that are currently known should also be identified (for example, closest down-wind populations). The way

in which other potential receptors will be identified should be more clearly defined.

10. Section 8.3.6, Page 15. The inclusion of the method for calculating nonradioactive chemical intakes is good. However, the method for determining radioactive exposures must also be included. The reference provided for radioactive exposure estimation appears to be a training manual, not an exposure assessment guidance document for baseline risk assessment. EPA provides guidance and references for calculating radiation exposure for Superfund risk assessments.

11. Section 8.4, Page 19. The Health Effects Assessment Summary Tables (HEAST) should be consulted for toxicity values not available in the Integrated Risk Information System (IRIS). The EPA Environmental Criteria and Assessment Office should be consulted for toxicity values not available in IRIS or HEAST.

12. Section 9.2.1.2, Page 5, Paragraph 2. The text states that the error terms associated with americium-241 and plutonium-239 measurements exceeded the measured values and therefore were not considered above background levels. This conclusion is unacceptable and must be revised. DOE has acknowledged problems with data validity in sample analyses before 1989. Therefore, it is not reasonable to rely on those data when developing baseline concentrations and, from them, identifying COCs. Americium and plutonium cannot be eliminated on the basis of inconclusive results from highly variable studies.