

INTEROFFICE CORRESPONDENCE

DATE: April 28, 1994

TO: S. G. Berman, Remediation Project Management, Bldg. 080, X8670

FROM: C. H. Hayes, Environmental Quality Support, Bldg. 080, X6905 *CH*

SUBJECT: TECHNICAL REVIEW AND COMPARISON OF THE OU 12 WORK PLAN WITH THE INTEGRATED OU FIELD SAMPLING PLAN - CHH-005-94

DOE Order: 5700.6C

The Environmental Quality Support (EQS) group has evaluated and compared the Integrated Operable Unit (OU) Field Sampling Plan (FSP, [Jacobs, 1993]), with the Operable Unit 12 Phase I [Resource Conservation & Recovery Act] Facility Investigation/Remedial Investigation (RFI/RI) Work Plan, (EG&G, 1993) for the purpose of identifying and correcting any discrepancies that might compromise data quality, i.e., its scientific and/or legal defensibility. This evaluation is based on the assumption that the Work Plan is the approved and controlling document against which work will be performed and reviewed.

Also included in this letter report are the following attachments:

1. Environmental Management Inspection Report (EMIR) Check List for the OU 12 Work Plan
2. List of the required Data Forms

The attachments are designed to improve compliance of your project with the technical requirements. EQS can provide assistance for implementing corrective actions on items identified in this letter report. The identified problems and suggested corrections are categorized and summarized below.

ADMINISTRATIVE

1. The term, "Americium", is misspelled in the "NOTES" section of Table 3-1, page 6 of 11 of the FSP.
2. Correct the title of Table 3-1 to read "Sampling Program for the Integrated Operable Units 8,9,10,12,13, and 14."
3. There are no headers for the columns in Table 10.2, "Analytical Methods, Detection Limits, and Data Quality Objectives" in Appendix A of the Integrated FSP. Identify the column headings.
4. The acronym "FIDDLER" (sic), as reported in Table 3-1 of the FSP is incorrectly spelled. The correct spelling is "FIDLER". Check for this error throughout the text and add the acronym to the List of Acronyms at the beginning of the document.
5. Groundwater sampling and monitoring well installation practices are not described in the FSP as are other operations. An explanation of these operations should be included in the FSP, as appropriate.



6. Figures 6-4, 6-5, and 6-10 of the Work Plan identify hydraulic probe sampling points. This field measurement and description is not defined in the FSP. If this operation will be used for groundwater sample screening activities during the non-intrusive phase of the investigation, a description and explanation of the operation should be incorporated into the FSP.

SAMPLING

1. Soil sampling locations for radionuclide analysis for IHSS 116.1 are outlined in Section 6.3.1.1, paragraph 2, of the Work Plan but no locations are indicated on Figure 6-2. The figure may require editing if the radiological locations are different from the other eight (8) surficial soil sampling locations.
2. Section 6.3.1.2, pg. 22, of the Work Plan states that two groundwater screening locations will be drilled at IHSS 116.1 with a hollow stem auger. The text continues to state that only one boring will be turned into a monitoring well and the remaining boring will be abandoned. Table 3-1 of the FSP indicates that two groundwater sampling events will be conducted. The two documents seem to contradict one another regarding the number of sampling events to be performed. Clarify the discrepancy and make any necessary corrections.
3. Section 6.3.1.1, paragraph 1, of the Work Plan indicates the HPGe instrument will be used to conduct radiological surveys at IHSS 116.1. Table 3-1 of the FSP states that the surveys will be conducted using a FIDLER instrument. Clarify the text and survey grids as necessary.
4. Table 3-1 of the FSP indicates radiological soil samples will be collected at IHSS 116.2 and the Work Plan indicates duplicate surficial samples will be collected. The two texts are confusing and need clarification; are the two surficial radiological soil samples discrete tasks or are they duplicates from the surficial soil samples. Figure 6-3 of the Work Plan does not identify the radiological sample locations. Clarify the text and the figure's legend.
5. Section 6.3.2.1, paragraph 3, of the Work Plan indicates that two additional groundwater screening samples will be collected along with the soil gas survey points at IHSS 116.2. Figure 6-3 of the Work Plan does not identify these locations. Also, how will these samples be collected from soil gas sampling points. Clarify the text.
6. Section 6.3.2.1, paragraph 1, of the Work Plan indicates that a HPGe will be used to conduct radiological surveys at IHSS 116.2. Table 3-1 of the FSP indicates the radiological surveys will be conducted with a FIDLER. Clarify the text and the survey grids.
7. Section 6.3.2.2, paragraph 1, of the Work Plan indicates that soil borings will be auger-drilled to the water table or 6 ft into bedrock. Paragraph 2 indicates that the borehole will be advanced to 3 ft below the bedrock contact. These two sentences are conflicting and further clarification/consistency is needed. These conflicting statements also occur throughout the various IHSS's.
8. Section 6.3.3.1, paragraph 1, of the Work Plan indicates that a HPGe will be used to conduct radiological surveys at IHSS 136.1. Table 3-1, pg. 6 of the FSP indicates radiological surveys will be conducted with a FIDLER instrument. Clarify the text and the survey grids.

9. Table 3-1, pg. 6, of the FSP indicates soil samples for radionuclide analysis will be collected at IHSS 136.1 and the Work Plan, Section 6.3.3.1, paragraph 2, indicates that duplicate surficial samples will be collected. The two texts are confusing and need to be clarified; are the two surficial radionuclide soil samples discrete tasks or are they duplicates from the surficial soil samples. Figure 6-3 of the Work Plan does not identify the radionuclide sample locations. Clarify the text and the legend of the figure.
10. Section 6.3.3.1 of the Work Plan indicates a NaI survey will be conducted at IHSS 136.1 at the locations in Figure 6-1. However, Figure 6-1 of the Work Plan does not identify the survey locations. Correct the figure as appropriate.
11. Section 6.3.3.1 of the Work Plan does not indicate a soil gas survey for IHSS 136.1. Reference to a soil gas survey is made in Table 3-1 of the FSP. Correct the discrepancy.
12. Section 6.3.3.1 of the Work Plan does not indicate the analytical methods to be performed on the soil and groundwater screens. Also, how will the locations be identified?
13. Section 6.3.4.1 of the Work Plan does not indicate a soil gas survey for IHSS 136.2. Reference to a soil gas survey is made in Table 3-1 of the FSP. Correct the discrepancy.
14. Section 6.3.4.1, paragraph 1, of the Work Plan indicates a minimum of three (3) vertical depth profile samples will be collected at IHSS 136.2. Table 3-1, pg. 6, of the FSP outlines zero (0) vertical depth profile samples. Correct the table to reflect the collection of three samples.
15. Section 6.3.4.1, paragraph 1, of the Work Plan indicates that a HPGe radiological survey will be conducted at IHSS 136.2. Table 3-1 of the FSP outlines the use of a FIDLER. Clarify the text and the survey grids.
16. Hydraulic probe sampling for IHSS 136.2, Section 6.3.4.1, paragraph 4, of the Work Plan is not identified in Table 3-1 of the FSP. Correct Table 3-1 of the FSP to reflect the activity if it is a component of the non-intrusive phase of the integrated remedial investigation (see Administrative Item #6).
17. Section 6.3.4.1, paragraph 4 of the Work Plan outlines collection of groundwater screening samples for IHSS 136.2. How will this sampling be performed and is this activity the "groundwater sampling" referred to in Table 3-1 of the FSP. Clarify this item.
18. Section 6.3.5.1, paragraph 4, and Figure 6-6 of the Work Plan outline the collection of groundwater screening samples (20) and installation of well points (10) for IHSS 157.2. However, Table 3-1 of the FSP does not identify these activities. Clarify the text in the FSP as appropriate.

19. Section 6.3.5.1, paragraph 3, and Figure 6-6 of the Work Plan outline the collection of four (4) and five (5) sediment samples for IHSS 157.2, respectively. Table 3-1 of the FSP indicates zero (0) sediment samples. Clarify this discrepancy.
20. Section 6.3.5.1, paragraph 1, and Figure 6-6 of the Work Plan outline the collection of twelve (12) vertical depth soil profile samples. Table 3-1 of the FSP indicates zero (0) profile samples. Clarify this discrepancy.
21. Section 6.3.5.1, paragraph 1, and Figure 6-6 of the Work Plan outline the collection of twelve (12) asphalt samples for IHSS 157.2 to be analyzed with the HPGe. Table 3-1 of the FSP indicates zero (0) asphalt samples. Clarify this discrepancy.
22. Section 6.3.5.1, paragraph 1 indicates that an HPGe instrument will be used for radiological surface surveys at twenty two (22) locations for IHSS 157.2. Table 3-1 of the FSP indicates the same activity to be performed utilizing a FIDLER at only twenty one (21) locations. Clarify the text and survey grids.
23. Section 6.3.5.1 of the Work Plan and Table 3-1 of the FSP indicate collection of forty six (46) surficial soil samples at IHSS 157.2. Figure 6-6 of the Work Plan only shows forty five (45) sampling points. Correct Figure 6-6.
24. Section 6.3.5.2 paragraph 1 of the Work Plan indicates that only four samples will be analyzed. Does this refer to each borehole or only four samples for all 8 boreholes? This sentence needs to be further clarified.
25. Table 3-1 of the FSP contains an error in the total number of soil gas surveys conducted for IHSS 157.2. The total number of surveys should equal eighty one (81), not eighty two (82). Correct the Table entry.
26. Section 6.3.5.1, paragraph 4, indicates collection of 40 soil and 20 groundwater screening samples for analysis at the mobile GC laboratory. Table 3-1 of the FSP does not reflect these activities and the hydraulic probe sampling is not described in the FSP text. Correct these discrepancies.
27. Section 6.3.7.1, paragraph 1, of the Work Plan indicates the use of the HPGe instrument for radiological surface surveys at IHSS 120.1. Table 3-1 of the FSP references the use of a FIDLER for this activity. Clarify the text and survey grids.
28. Figure 6-8 (IHSS 120.1) in the Work Plan does not identify locations for the FIDLER survey or the vertical depth profile samples.
29. Section 6.3.7.1, paragraph 3 of the Work Plan indicates collection of 5 soil and 3 groundwater screening samples for IHSS 120.1. Table 3-1 of the FSP does not list these activities and they are not included in Figure 6-8.

30. Section 6.3.8 of the Work Plan indicates the use of the HPGe instrument for radiological surface surveys at IHSS 120.2. Table 3-1 of the FSP references the use of a FIDLER for this activity. Clarify the text and survey grids.
31. Figure 6-9 of the Work Plan does not identify the four soil sampling locations discussed in Section 6.3.8.1, paragraph 2. The text was interpreted as meaning the four (4) samples, discussed in the second sentence, were a subset of the original eleven (11). However, Table 3-1 of the FSP indicates these four samples are in addition to the original eleven samples, for a total of fifteen samples. Clarify the Work Plan text, Figure, and Table as appropriate.
32. Section 6.3.8.2 of the Work Plan indicates the collection of six (6) soil and three (3) groundwater screening samples. Figure 6-9 and Table 3-1 do not identify these activities. Clarify these discrepancies.
33. Section 6.3.10, paragraph 2 of the Work Plan indicates the use of the HPGe instrument for radiological surface surveys at IHSS 147.2. Table 3-1 of the FSP references the use of a FIDLER for this activity. Clarify the text and survey grids.

QUALITY ASSURANCE

1. The OU 12 Work Plan (Section 4.2.6, pg.17) refers to the Work Plan Quality Assurance Addendum (QAA; Section 10.0) for PARCC parameters. The QAA (Section 10.3.2) refers to the ERM Quality Assurance Project Plan (QAPjP) for the applicable PARCC parameters. The QAPjP does not identify project-specific goals and references the Work Plan QAA as containing the specific goals. No specific parameters and goals are defined for OU 12. PARCC parameters should be established for this project.

REFERENCES

Jacobs Engineering Group Inc., 1993. "Integrated Field Sampling Plan (For Operable Units 8,9,10,12,13 and 14), Rocky Flats Plant, Nonintrusive Investigation of the Phase I RFI/RI Work Plans."

EG&G Rocky Flats Plant, 1992. "Final Phase I RFI/RI Work Plan for Operable Unit 12, 400/800 Area, Rocky Flats Plant", Document Control No. 21100-WP-OU12.1 Rev.0.

This letter report is to inform you of recommended options for addressing the problems identified; it does not require a formal response or rebuttal. However, compliance of actual field activities with the Work Plan will be evaluated at some point during the project, using the information presented here.

S. G. Berman
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If I can further help you define or comply with your project requirements, please call me at x6905 or R.S. Luker at X8625.

CHH:maa

Attachments:
As Stated

cc:
K. Bentzen - w/o attachments
W. S. Busby - w/o attachments
M. J. Kowalewski - w/o attachments
R. S. Luker - w/o attachments
B. D. Peterman - w/o attachments
ERM Project File (2)

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