

Colorado Department of Health
Hazardous Materials & Waste Management Division

Comments

on

FINAL

PHASE I RFI/RI WORK PLAN

FOR

OU-11

(West Spray Field)

ROCKY FLATS PLANT

MARCH 16, 1992

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FURTHER COMMENTS TO THE WORKPLAN, DATED DECEMBER 18, 1992:

Figure 2-10: DOE has not responded fully to comments on the Site Conceptual Model flow chart. The Secondary Release Mechanism, Re-suspension/Dissolution, is made possible by precipitation events. Arrows should be drawn from Deposition/Precipitation to Re-suspension/Dissolution then to Surface Water to complete the circle for potential re-mobilization.

Caliche is known to exist at the West Spray Field. Water could infiltrate/percolate to a caliche bed, perch, migrate laterally and seep through surface soils to the surface. Truncation of caliche beds at the surface could provide the route. Seepage which has been removed from the revised Figure 2-10 should be restored. Arrows should be drawn from Vadose Zone to Seepage and onward to Contaminated Soils and further onward to Surface Water.

Section 5.5.2: The Division acknowledges DOE's intent to use the statistical procedures presented in the Background Geochemical Characterization Report (See EPA Comment 3), but we reiterate our earlier position that a drawn-out decision process, on what is or is not contaminated, will not be acceptable.

Section 7.2: DOE has not responded to the earlier comment on this section (previous page 7, new page 10). It may be appropriate to adjust test pit locations based on radiological survey results, but

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not to supplement non-radiological sampling locations. Unless, of course, radionuclides are proposed as an indicator of metals and nitrate contamination. If this is DOE's intent, please proceed.

Section 7.3.1: The second paragraph, page 14, (previously page 11) remains unclear concerning vertical profile sampling and whether it **includes** a method equivalent to the CDH method. At issue is the following quote, "The vertical profile sample method will be more extensive than but augment the CDH soil sampling protocol as outlined in EMD-OP GT.8". The latest GT.8, Section 5.0, March 1, 1992, still does not include a description of the vertical profile sample method for radionuclides. Consequently, it is not possible to determine whether there is intent to provide data equivalent to the CDH method, data from **multiple** horizons, or the total depth of the vertical profile. Clearly, the sampling cannot proceed until these issues are resolved and approval of a proper sampling protocol is granted by the Division and EPA. DOE must update GT.8, or provide a SOP addendum, to include the vertical profile method.

Section 7.3.3: (Previously third paragraph, page 11, (now third paragraph, page 9.) The Division reaffirms its concern about confirmation sampling for gamma and non-gamma emitting radionuclides. Although sampling along transects is acceptable, the surficial soil scrapes should not be placed only at HPGe identified hot spots or at the specific HPGe sampling stations. Soils scrapes should also be randomly distributed to verify negatives readings and check for non-gamma emitters.

Section 7.3.3: The Division appreciates DOE's willingness to move surficial soil sampling location #17 to a point upstream of the first berm. Please collect the sample as close to the berm as possible so as to include any deposited or precipitated contaminants.

COMMENTS TO THE WORKPLAN DATED MARCH 16, 1992:

Section 2.3.4.4: The Division accepts DOE's opinion that stream deposited sediments are unlikely to be found in the spray induced drainages and that soil sampling protocols, rather than sediment sampling protocols, are appropriate. However, the Division concurs with EPA's concern (EPA Comment 1) about the interpretation of possible bimodal distributions. The Division assumes that DOE will determine whether contaminants are concentrated in the drainages even if the data are not bimodal, i.e. general site soils are uncontaminated.

Section 3.2.3: Please note, EPA has published a final Guide to Management of Investigation Derived Wastes, January 1992.

Section 4.0: Although surface water flow through the West Spray Field may be restricted to precipitation events, investigation of its impacts on surface water must also be addressed in the Phase II RFI/RI investigation. An appropriate reference to surface water impacts is provided in Section 5.7.1, page 11.

Section 7.0: Reference is made on page 1 to modifications of the workplan being submitted as amendments. Modifications to the workplan must be submitted as Technical Memoranda. This approach is correctly stated in Section 7.3.1, page 14.

Section 7.3.2: Regarding the last paragraph, page 16, SOP GT.8 does not provide procedures for a 7/8 inch Tube Sampler. DOE must include a procedure in GT.8, or a SOPA, before sampling is initiated.

Regarding the rationale for collection of a six inch soil sample presented on page 17, the Division agrees that comparison of data gained from test pits to data gained from the proposed soil sampling depth of six inches is possible for metals and nitrates. However, no comparison of radionuclides is possible since they are excluded from the soil samples. Consequently, DOE must reanalyze the adequacy of the test pits to alone meet the statistical performance measures of power and confidence listed in EPA's Guidance for Data Useability in Risk Assessment, October, 1990. If the test pits are not adequate in number, the Division suggests that DOE consider adding radionuclides to the analysis suites of the soil samples since the surficial soil scrapes based on HPGe results are not comparable.

Figure 7.2: The figure is misleading by stating, in the legend, that surficial soil sampling stations are located in areas of historic surface water runoff. Three stations are located in spray application areas as properly noted in Section 7.3.2, page 18. Please note that locations #3 and #16 are redundant to the grid locations shown on Figure 7-1. The need for location #14 is also questioned. If one is needed in that location, perhaps the grid spacing covering Spray Area 2 is too large. The Division will allow the elimination of these three duplicate stations which must be acknowledged in the Phase I RFI/RI Report.

Section 11.0: The OU specific Health & Safety Plan must be provided before investigation activities begin.