DOE RESPONSES TO U.S. EPA TECHNICAL REVIEW COMMENTS ON THE DRAFT AREA 1, PHASE II SUPPLEMENTAL CHARACTERIZATION PACKAGE

GENERAL COMMENTS

1997

1) Commenting Organization: U.S. EPA Commentor: Saric
Section #: Not Applicable (NA) Pg. #: NA Line #: NA
Original General Comment #: 1

Comment: Original General Comment 2 on Revision D of the "Draft Integrated Remedial Design Package for Area 1, Phase II," notes that line numbers are wholly or partially missing on many pages. The U.S. Department of Energy's (DOE) response states that the problem will be corrected in future draft documents. However, only some line numbers are legible on Page 1-1 of the supplemental characterization package and no line numbers are legible on Page 1-3. Similar irregularities exist on subsequent pages. Future draft submittals should include a complete, legible set of line numbers on each page of text in order to facilitate the review process.

Response: Noted.

Action: Future draft documents will be more carefully photocopied so that line numbers are clear and readable.

2) Commenting Organization: U.S. EPA Commentor: Saric
Section #: Not Applicable (NA) Pg. #: NA Line #: NA
Original General Comment #: 2

Comment: Page ES-1 states that the document's figures will be posted on the Fernald Soils Characterization and Excavation Project (SCEP) web site and presents a "fernald.gov" uniform resource locator (URL). After the SCEP web site was searched, the relevant web site was found to be "http://www.ead.anl.gov/~femp/srp/prodocs/html/a1p2irdp.html," an Argonne National Laboratory web page. However, the figures were not available on the web page during the first week of the regulatory review period. In future submittals, the complete URL should be presented to facilitate location of cited figures, and the figures should be available on the web site when a document is submitted.

Response: Noted.

Action: Future postings will be made in a more timely fashion, and the complete URL is presented in the Executive Summary of the A1PII Supplemental Characterization Package.

SPECIFIC COMMENTS

3) Commenting Organization: U.S. EPA Commentor: Saric
Figure #: 1-1 Pg. #: NA Line #: NA
Original Specific Comment #: 1

Comment: Figure 1-1 shows two areas that are between the 82 milligram per kilogram (mg/kg) final remediation level (FRL) for uranium and the 50 mg/kg as low as reasonably achievable (ALARA) level but are just outside the shallow (6 inches) excavation area. These two areas, which are indicated by green triangles, lie west of the shallow excavation area around the 1351400 East coordinate. DOE should follow the ALARA principle by extending the shallow excavation as far across these two areas as possible without interfering with the North Access Road drainage. The figures and associated text should be revised accordingly.

Response: The FRL in the A1PII area is 82 mg/kg, and all areas where the estimated uranium concentrations exceed the FRL are included in the areas to be excavated. The requirement for excavation in accordance with the ALARA principle is that, when excavating an area to FRLs, additional excavation will be performed "to the extent practical" to reach the 50 mg/kg level; the 50 mg/kg level is not the FRL.

The proposed design exceeds this ALARA requirement by including significant areas for excavation outside the 82 mg/kg area. The estimated modeled area outside the STP deep excavation that exceeds the 82 mg/kg FRL is approximately 71,000 ft^2. The area outside the STP deep excavation where surface soil will be removed encompassed approximately 500,000 ft^2. This additional excavation area exceeds the ALARA requirement.

The two identified areas are beyond the FRL excavation limit and neither practical nor necessary to excavate and are beyond the scope of the ALARA excavation requirements. The west area is on the other side of the Conveyance Channel and North Entrance Road; the north area is 100 to 400 feet away from the nearest point that exceeds the 82 mg/kg FRL. The north area is also well vegetated and includes an area that conveys flow along the new North Entrance Road.

Action: No Action.

4) Commenting Organization: U.S. EPA Commentor: Saric
Section #: 1.3 Pg. #: 1-3 Line #: NA
Original Specific Comment #: 2

Comment: The last paragraph of text states that material from two additional areas of technetium-99 contamination in the Sewage Treatment Plant (STP) incinerator area will be handled in different ways. Specifically, material from one area will be sent to Stockpile 7 and material from the other area will be placed in white metal boxes. The text should be revised to clearly state why this variation in treatment of technetium-99 contaminated material is necessary.

Response: Above-WAC material from a surface stripping area to the west of the STP incinerator location will be sent to SP-7. However, material from a deeper excavation on the east

side of the STP incinerator location will be placed in white metal boxes because the material is oil-saturated soil.

Action: The referenced text has been revised to explain this difference in above-WAC technetium-99 soil management.

5) Commenting Organization: U.S. EPA Commentor: Saric
Section #: 1.4 Pg. #: 1-4 Line #: 5
Original Specific Comment #: 3
Comment: The text states that locations with results greater than the waste acceptance criteria (WAC) limit of 82 mg/kg are shown as red dots on Figure 1-4. The text should be revised to cite the correct WAC limit of 1,020 mg/kg (1,030) for uranium.

Response: Noted.

Action: The referenced text will be revised to state that the WAC limit for total uranium is 1,030 mg/kg.

6) Commenting Organization: U.S. EPA Commentor: Saric
Section #: 1.5 Pg. #: 1-5 Line #: 10 and 17
Original Specific Comment #: 4
Comment: The text states that Figure 1-6 shows the original modeled excavation surface (on Line 10) and that Figure 1-7 shows the final design excavation plan (on Line 17). However, Figure 1-5 is captioned "Modeling Results," Figure 1-6 "Deep Excavation Plan," and Figure 1-7 "Cross Sections." It therefore appears that the Line 10 should cite Figure 1-5 and that Line 17 should cite Figure 1-6. The text should be revised accordingly in the construction drawings and specifications.

Response: Noted.

Action: Text will be revised to accordingly to correct figure references.

7) Commenting Organization: U.S. EPA Commentor: Saric
Section #: 1.5 Pg. #: 1-5 Line #: 18
Original Specific Comment #: 5
Comment: The text refers the reader to Figures 1-7 through 1-9 for cross sections of the STP deep excavations. In Figure 1-7, cross section A to A' indicates that the deep excavation in the area of sampling location 1441 extends to an elevation of about 587 feet above mean sea level (msl). It is not clear why the excavation does not extend to 580 feet above msl, as sample analytical data for this elevation indicates a uranium concentration of 20.7 mg/kg, which exceeds the uranium FRL of 20 mg/kg. The text or Figure 1-7 should be revised to address this issue.

Response: Figures 1-6 and 1-7 have been revised. See response to OEPA Comment No. 17.

Action: Figures 1-6 and 1-7 have been revised. See action for OEPA Comment No. 17.

8) Commenting Organization: U.S. EPA 1997 Commentor: Saric
Section #: 1.6 Pg. #: 1-6 Line #: 28 and 29
Original Specific Comment #: 6

Comment: The text states that the last phase of excavation includes excavation of two haul roads. However, Figure 1-10, which is cited in the text, does not show these roads. It merely contains labels and arrows indicating one point on each road. Figure 1-10 and associated figures should be revised to show the location of the two haul roads.

Response: Noted.

Action: Figure 1-10 will be revised.

9) Commenting Organization: U.S. EPA Commentor: Saric
Section #: 2.0 Pg. #: 2-1 Line #: NA
Original Specific Comment #: 7

Comment: The text states that two parts of soil will be added to one part of sludge in order to stabilize the sludge. However, Section 3.0 of Attachment 1, which is cited in the text, states that one part of soil to ten parts of sludge is probably sufficient for sludge stabilization. Based on this result, Section 5.0 of Attachment 1 states that one part of soil will be added to two parts of sludge in order to stabilize the sludge. The document should be revised to resolve this discrepancy.

Response: Section 3 of Attachment 1 to the A1PII Supplemental Characterization Package states that, "The sludge in the digester is likely to pass the PFLT [paint filter leachate test] if it is stabilized by adding 10% more soil." In order to ensure that this material passes the PFLT, and that it is stabilized as much as possible (to minimize handling problems), the digester sludge will be mixed with soil at a two parts sludge to one part soil ratio. This ratio of 2:1, rather than the estimated requirement of 10:1, is proposed because the technetium-99 contaminated soil is available, and this more conservative mix will minimize potential handling problems.

Action: No Action.

10) Commenting Organization: U.S. EPA Commentor: Saric
Section #: 4.1 Pg. #: NA Line #: NA
Original Specific Comment #: 8

Comment: The table lists underground utilities to be excavated and indicates that 12 utility lines are present in 10 trenches. However, Figure 1-10 shows only four utility corridors and has no labels to associate specific lines with specific corridors. Figure 1-10 should be revised to show the specific lines present in each utility corridor.

Response: Figure 1-10 presents general excavation sequencing and is not intended to illustrate all individual underground utility excavations. An STP Excavation Package construction drawing (Sheet No. G0003) shows the location of the underground utilities listed in Table 4-1.

Action: No Action.

1997

11) Commenting Organization: U.S. EPA Commentor: Saric
Section #: 6.2 Pg. #: 6-1 Line #: 28
Original Specific Comment #: 9

Comment: The text states that perched water from Borings 12399, 12401, and 12403 was composited for analysis. However, Figure 6-1 shows analytical results for Borings 12401, 12403, and 12404. The text and figure should be reconciled in this regard and, if necessary, the planned excavation area should be adjusted to accommodate the measured perched water contamination.

Response: The data as presented in the Figure is correct. Perched water was collected and composited from boring 12401, 12403, and 12404. The composited sample was labeled 12399.

Action: The text will be revised accordingly.

12) Commenting Organization: U.S. EPA Commentor: Saric
Section #: 6.2 Pg. #: 6-2 Line #: 9 through 12
Original Specific Comment #: 9

Comment: The text lists concentrations and associated depths of tetrachloroethene and trichloroethene contamination that are different from those listed in Figure 6-1. These discrepancies should be reconciled.

Response: The data as presented in the Figure is correct.

Action: The text will be revised accordingly.

13) Commenting Organization: U.S. EPA Commentor: Saric
Section #: 6.3 Pg. #: 6-2 Line #: 29
Original Specific Comment #: 11

Comment: The text states that the excavation strategy for the area underneath the incinerator pad is to excavate soil in a 10- by 20-foot area around Boring 12388 to a depth of 4 feet. The analytical results for Borings 12388 and 12404, which are only 6 inches apart, are quite different at all depths, implying considerable heterogeneity of the contamination in this area. Close monitoring should be performed in this area to ensure removal of both all visible contamination and all technetium-99 contaminated material that exceeds the FRL. The text should be revised to address this issue.

Response: The construction subcontractor, FDF construction, and FDF WAO will visually monitor all excavations. During excavation of the Incinerator Area, they will monitor the excavation to ensure all oil and sludge contamination is removed from the area.

Action: Section 6 will be revised to incorporate this requirement.