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Army Environmental Division - BRAC Operations Branch

Mr. Ricardo Maestas
Acting Chief, Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

RE: Final RCRA Facility Investigation Phase 2 Work Plan, Parcel 11, Revision 1, Response to Disapproval, dated October 17, 2018, Fort Wingate Depot Activity, McKinley County, New Mexico. EPA# NM6213820974

Dear Mr. Maestas:

This letter provides responses to the comments issued in the Disapproval, Final RCRA Facility Investigation (RFI) Phase 2 Work Plan, Parcel 11, Revision 1, dated October 17, 2018. This letter also describes revisions to the RFI Phase 2 Work Plan, Revision 1, that are being submitted under separate cover as the Phase 2 RFI Work Plan, Revision 2.

GENERAL COMMENTS

1. Cover Title Page

NMED Comment: NMED has previously requested that the Permittee provide the revision number on the binder cover page of the document. While there is an indication on the binder spine and on the internal title page, there is no indication on the binder cover page. Provide the revision number on the cover title page, in addition to the spine and internal title page, in the revised Plan, as well as all future document revisions.

Permittee Response: Concur. The revision number will be included on the binder cover page, binder spine, and internal title page for future document revisions.

2. Deferred Correction Action

NMED Comment: In the revised Plan, as well as all future documents for parcels where corrective action requirements are being deferred, the Permittee must provide a table identifying all deferred actions. Based on a preliminary review of previous documents, the table below lists several deferred corrective actions required at Parcel 11.

Site/Location	Action Required
SWMU 3 - Building 80	Two samples must be collected 5' east of the two eastern corners of building 80 from similar depth and tested for same parameters as SWMU 3.
SWMU5	Further investigation after building demolition.
	Lead contaminated soil removal and confirmation sampling at sample location B05SUMP01.
SWMU 6 - Building 11	Excavation of soil and concrete, and subsequent confirmation sampling (four samples) below the east end of the former building.
SWMU 10	Characterize, remove, and dispose of burn ash residue and collect confirmation samples.
	Remove STP septic tank and collect soil samples.
	Munitions debris investigation work plan based on geophysical survey.
SWMU24-Building 15	Excavation and disposal of SVOC, metals, pesticides, and PCB contaminated soils. Conduct confirmation sampling.
	Conduct further investigation after building demolition based on detected SSL exceedances below the concrete slab.
SWMU 37	Removal of soil from floor drain and sump containing detected SVOC and cobalt contamination. Confirmation samples.
	Define lateral extent of SVOCs and metals contaminated soils located at former sampling locations B9SE01, B9SE02, and B9SE04 and evaluate associated risk.
	Further characterization and possible remediation in the service trench.
SWMU 40	Remove miscellaneous debris and scrap from the storage yard west of and around Building 10.
	Resample location 1140DISPOSAL-SB25-01D for PCBs.
	Remove the 2000-gallon UST east of building 14 and sample.
	Submit an investigation work plan to identify metallic anomalies found during geophysical investigation at Building 29.
	Remove residual coal from Structure 57 within Parcel 7. Conduct confirmation sampling.
SWMU 45	Remove underground piping and valve box and complete investigation.
SWMU 45, AOC 46, and AOC 51	Remove USTs and -500 ft of piping and conduct characterization sampling.
SWMU50	Perform soil sampling postponed due to heavy congestion of utility lines.
AOC 48	Further characterization and removal of PCB contaminated soil and confirmation sampling.

Site/Location	Action Required
AOC 52	Removal, characterization, and disposal of coal ash used for road bed material and confirmation sampling.
AOC 75	Removal of PCB contaminated soil and confirmation sampling.

Failure to track deferred corrective actions may result in missed requirements that could prevent corrective action complete determinations. Remobilization to the site to conduct further investigation and remediation would likely result in increased costs for the Army. Provide a table that tracks all deferred corrective action in the revised Plan.

Permittee Response: Concur. The Phase 2 RFI Work Plan, Revision 2, includes Table 2.1, which tracks the deferred corrective actions.

3. Sample Data and Laboratory Report Link

NMED Comment: The Permittee provided data and laboratory data reports in the Final RCRA Facility Investigation Report Parcel 11 Revision 2 (RFI Report) with no indication of where a specific data point is referenced within a specific laboratory data report. This results in delays for the reviewer when attempting to cross-reference the lab report for a specific data point. Provide a cross-reference in a table or the database that ties each sample to the filename of the associated data report provided in the appendices for all future reports.

Permittee Response: Concur. Analytical data in the Phase 1 and Phase 2 RFI Report will be provided as Level II data in digital format with searchable electronic data tables.

4. Step-out Samples to Define Nature and Extent of Contamination

NMED Comment: The Permittee has determined that samples with concentrations below the SSLs collected 30-feet distant from detected contamination are sufficient to define the nature and extent. NMED does not agree. The purpose of the grid sampling is to locate areas of contamination, which must be refined by further investigation to define the nature and extent of the contamination. Failure to properly define the lateral extent of contamination will likely result in the requirement to remove all soils between the location where contamination has been identified and the locations where extent has been defined, which would likely result in unnecessary remediation cost for the Permittee.

The Permittee has proposed a wide range of distances for step-out samples in the Plan. While initial sampling may have been performed on larger grid spacing to cover large areas, once contamination is located, step-out samples must be collected at smaller intervals to define the nature and extent of the contamination. Step-out samples to define the nature and lateral extent of contamination must first be collected at locations five to ten feet from the original sample location in at least four directions. Should there be an expectation that contamination extends beyond five to ten feet from the original sample, propose to collect samples at more than one distance from the original sample. This applies to all proposed step-out samples and those required based on these comments. Revise the Plan accordingly.

Permittee Response: Concur. Step-out samples to define the nature and lateral extent of contamination will be collected five to ten feet (or beyond at more than one distance as

necessary) from the original sample location in four directions, unless the lateral extent of contamination is already defined in one or more directions. Planned samples to define the nature and lateral extent of contamination are described in **Tables 3.3, 4.3, 5.2, 6.3, 7.3, 8.3, 9.3, 9.4, 9.5, 9.6, 9.7, 10.3, 11.2, and 12.2** of the Phase 2 RFI Work Plan, Revision 2.

SPECIFIC COMMENTS

5. Section 1.2, Background Information, p 1-3

Permittee Statement: "SWMU 5 - Building 5. The Army recommended continued groundwater monitoring under the site wide monitoring program."

NMED Comment: Building 5 has been in use by the Permittee until recently. Therefore, further investigation of SWMU 5 is likely required following building demolition. In addition, lead was detected at a concentration of 827 mg/kg in the B5SUMP01 sample. No remedial action or further sampling was reported for this location. Removal of lead contaminated soil and confirmation sampling is required at location B5SUMP01. Include this on the list of deferred work in future documents. See Comment 2.

Permittee Response: Concur. The deferred corrective actions for SWMU 5 - Building 5 are listed in Table 2.1 of the Phase 2 RFI Work Plan, Revision 2. Text in Section 2.1 has been revised as follows: "1. SWMU 5 – Building 5. The Army recommended continued groundwater monitoring under the site wide monitoring program. In 2000, lead was detected in sediment in sample B5SUMP01 at a concentration of 827 milligrams per kilogram (mg/kg), which exceeds the current U.S. Environmental Protection Agency (USEPA) Residential Regional Screening Level (RSL) of 200 mg/kg (USEPA, 2024). Any further remedial actions, if necessary, will occur following demolition of the building. This will be a future RCRA corrective measures phase."

6. Section 1.2, Background Information, p 1-3

Permittee Statement: "AOC 48 - Building 34. The Army recommended no further action."

NMED Comment: The RFI Report states, "[a]rochlor 1254 was detected in the sediment sample collected from manhole A1 (SS004D) at a concentration of 1,700 ug/kg, exceeding the SSL of 1,120 ug/kg." No further characterization or remediation has been completed at this site. Therefore, NMED does not agree with the Permittee's conclusion. Propose removal of the sediment in manhole A1 and confirmation sampling in the revised Plan.

Permittee Response: Concur. The deferred corrective action for AOC 48 - Building 34 is listed in Table 2.1 of the Phase 2 RFI Work Plan, Revision 2. Text in Section 2.1 has been revised as follows: "2. AOC 48 – Building 34. Arochlor-1254 was detected in the sediment sample from the storm sewer manhole (1148MANA1-SS004D-SO) at a concentration of 1,700 µg/kg. A risk assessment will be conducted at Building 34 and included in the Phase 1 and 2 RFI Report. If there are unacceptable risks from PCBs in sediment, removal of PCB contaminated sediment and confirmation sampling at sample location 1148MANA1-SS004D-SO will be recommended. This will be a future RCRA corrective measures phase."

7. Section 1.2, Background Information, p 1-3

Permittee Statement: "SWMU 37. The Army recommended removal of soil from floor drain and sump. This will be a future RCRA corrective measures phase."

NMED Comment: The Permittee has not addressed the SVOC contamination found at several surface sample locations in SWMU 37. Table 9-2 of the RFI Report identifies multiple SVOC exceedances at sampling locations B9SE01, B9SE02, and B9SE04. The Permittee must propose step-out surface samples at each location to define the lateral extent of contamination. While cleanup may not be required at the site, the risk associated with exposure to SVOCs in surface soil must be defined. Propose to collect step-out samples at each of the three locations in the revised Plan.

In addition, the Permittee failed to report the SVOC exceedances in the triplicate sample for 1137PIT-SS020D-SO located within the service trench. Reporting only the lower value is misleading. In all future documents where sample results are reported, the Permittee must discuss the highest concentration detected in any duplicate or triplicate sample set. Further characterization and possible remediation is required at the service trench. Propose further sampling to characterize the SVOC contamination in the service trench.

The Permittee also failed to report the chromium SSL exceedance in the triplicate sample for 1137PIT-SS020D-SO. Again, reporting only the lower value is misleading. Propose further sampling to characterize the chromium contamination in the service trench.

Permittee Response: Concur. Step-out samples will be collected to define the lateral and vertical extent of PAH contamination at B9SE-01, B9SE-02, and B9SE-04 as described in Section 8.5 of the Phase 2 RFI Work Plan, Revision 2, for Parcel 11.

The deferred corrective action for SWMU 37 – Building 9 is listed in Table 2.1 of the Phase 2 RFI Work Plan, Revision 2. Text in Section 2.1 has been revised as follows: *"4. SWMU 37 – Building 9. PAHs and chromium exceeded NMED Human Health Direct Contact soil screening levels (SSLs) in the triplicate sample for 1137PIT-SS020D-SO located within the service trench in Building 9. As this sample is located within existing Building 9, the Army proposes to defer additional sampling at this location until the building and/or the soil from the floor drains and sumps are removed. This will be a future RCRA corrective measures phase."*

8. Section 3.0, SWMU 3 - Fenced Storage Yard

Permittee Statement: "Therefore, one sample will be collected approximately 2.0 feet below ground surface (bgs) from each of the two sample locations (SS177D and SS243D) where DRO was detected above the SSL in 2009. The samples will be analyzed for DRO by EPA Method 8015 modified."

NMED Comment: The second sample location proposed above is not accurate. The location that exceeded the DRO SSL in 2009 was SS234D, not SS243D. Revise the Plan accordingly.

Permittee Response: Concur. The text in Section 3.5 of the Phase 2 RFI Work Plan for Parcel 11 has been revised as follows: *"Therefore, one sample will be collected approximately 2.0 feet bgs from each of the two sample locations (1103DRMO-SS177D-SO and 1103DRMO-SS234D-SO) where DRO was detected above the SSL in 2009. The samples will be analyzed for DRO by EPA Method 8015D."*

9. Section 3.0, SWMU 3 - Fenced Storage Yard

Permittee Statement: "For those locations where the lateral extent is not defined, surface samples (0.5 to 1.0 foot bgs) will be collected at a distance of 20.0 feet from the original sample location in the direction indicated in Table 3-1."

NMED Comment: Samples containing contaminant detections below the SSLs from 30 feet away do not define the nature and extent of contamination. Propose step-out samples five to ten feet from the corresponding sample points in all directions for the two locations where SVOC concentrations exceed the SSLs. See Comment 4.

Permittee Response: Concur. The text in Section 3.5 of the Phase 2 RFI Work Plan for Parcel 11 has been revised as follows: "*For those locations where the lateral extent is not defined, surface samples (0.5 to 1.0 foot bgs) will be collected at a distance of 10.0 feet from the original sample location in all directions as indicated in **Table 3.2.***"

10. Section 4.0, SWMU 6-Former Building 11 and AOC 47-TPL Spill of Photoflash Powder, p 4-1

Permittee Statement: "The Army proposes to collect additional samples at the location of RFI samples SB04 and SB05 at greater depths to define the vertical extent of DRO contamination. To further characterize the site, the Army proposes collecting additional samples at soil borings SB03, SBI7, and SB20 at greater depths."

NMED Comment: The statement above is confusing in that there are multiple boring locations labeled SB03, SB04, and SB05 at the site. Provide complete sampling location descriptions in the revised Work Plan. In addition, the additional samples proposed at SB17 and SB20 are likely too distant to characterize the lateral extent of contamination. Propose appropriate step-out samples for locations SB04 and SB05 in the revised Plan.

Permittee Response: Concur. Text in Section 4.5 of the Phase 2 RFI Work Plan, Revision 2 has been revised: "*To delineate vertical extent of DRO contamination at 1147SPIL-SB04 and 1147SPIL-SB05, additional samples are proposed at the following intervals: 4.5 to 5.0 ft bgs, 7.5 to 8.0 ft bgs, 9.5 to 10.0 ft bgs, 14.5 to 15.0 ft bgs, and 19.5 to 20.0 ft bgs. To delineate the lateral extent of DRO (as DRO extended) contamination at 1147SPIL-SB04 and 1147SPIL-SB05, step-out samples are proposed 10 feet west, south, and east of 1147SPIL-SB04 (1106BLDG11-SB23, 1106BLDG11-SB24, and 1106BLDG11-SB25, respectively) and 10 feet east, northeast, and west of 1147SPIL-SB05 from the following intervals: 0.5 to 1.0 ft bgs, 2.5 to 3.0 ft bgs, 4.5 to 5.0 ft bgs, 7.5 to 8.0 ft bgs, 9.5 to 10.0 ft bgs, 14.5 to 15.0 ft bgs, and 19.5 to 20.0 ft bgs.*" Proposed samples are summarized on **Table 4.3** of the Phase 2 RFI Work Plan, Revision 2.

11. Section 6.0, SWMU 23 -Building 7 and Building 8, p 6-1

Permittee Statement: "The RFI Report recommended additional sampling at location SS009D at greater depths to define the vertical extent of DRO and lead results above the SSL."

NMED Comment: The Permittee inappropriately used the chromium III SSL for comparison to total chromium results. When compared to the appropriate SSL, the chromium concentration at SS009D exceeded the SSL. Propose to analyze samples from SS009D for chromium in addition to DRO and lead in the revised Plan. In addition, the lateral extent of lead and

chromium contamination at SS009D is not defined to the west. Propose to collect a soil sample from 6 to 12 inches bgs approximately 10 feet west of SS009D to be analyzed for lead and chromium in the revised Plan.

Permittee Response: Concur. The text in Section 6.5 has been revised as follows: " *Soil sampling is proposed at previous locations 1123YARD-SS008D, 1123YARD-SS009D, and 1123YARD-SS010D to evaluate vertical extent. Three soil borings (1123YARDSB08, 1123YARDSB09, and 1123YARDSB10) will be advanced and samples collected from 4.5 to 5.0 feet bgs and analyzed for TAL metals, VOCs, SVOCs, pesticides, DRO extended, and PCBs. In addition, soil samples from proposed boring 1123YARDSB09 will be collected from 1.5 to 2 feet and 2.5 to 3 feet and analyzed for lead, total chromium, and DRO extended.*

One step-out location (1123YARDSB30) is proposed 10 feet west of previous location 1123YARD-SS009D towards Building 7. A soil sample will be collected at 0.5 to 1.0 foot as requested in Comment 11 (NMED, 2018) and analyzed for DRO extended, total chromium, and lead to evaluate lateral extent west towards Building 7."

12. Section 6.0, SWMU 23 -Building 7 and Building 8, p 6-1

Permittee Statement: "The RFI Report also recommended sampling one of the RFI surface soil sample locations in the area between Buildings 7 and 8 (sample ID SS007D) at greater depths for SVOCs related to an exceedance of the SSL for benzo(a)pyrene."

NMED Comment: The proposed sampling does not provide an appropriate step-out sample to the south for location SS007D. Propose an appropriate step-out sample for this location to define the lateral extent of SVOC contamination to the south. See Comment 4.

Permittee Response: Concur. Text in Section 6.5 has been revised as follows: "*Six soil borings are proposed to investigate the lateral and vertical extent of SVOCs at former location 1123YARDSS007D. The first three borings (1123YARDSB07D, 1123YARDSB16D, and 1123YARDSB17D) are proposed to be advanced at the previous locations 1123YARD-SS007D, 1123YARD-SS016D, and 1123YARD-SS017D and samples will be collected from 1.5 to 2 feet and 2.5 to 3 feet. Three additional borings (1123YARDSB23D, 1123YARDSB24D, and 1123YARDSB25DSO) are proposed approximately 10 feet south of these locations near the road, and soil samples will be collected from 0.5 to 1.0 foot, 1.5 to 2 feet and 2.5 to 3 feet. All of these samples will be analyzed for PAHs."*

13. Section 6.0, SWMU 23 -Building 7 and Building 8, p 6-1

Permittee Statement: "A soil sample collected in 2000 (B9SE-04) related to the wash rack drain had a benzo(a)pyrene concentration of 2,350 ug/kg. The Army recommends that samples be collected at 2.0 to 2.5 feet and 3.0 to 3.5 feet at the same location (sample ID 1123DRAINAGESB34)."

NMED Comment: The lateral extent of contamination has not been defined at B9SE-04. The proposed sampling does not provide for any step-out sampling to define the lateral extent of contamination. Propose appropriate step-out samples for this location to define the lateral extent of SVOC contamination in all four directions at depths that correspond to the contaminant detections. See Comment 4.

Permittee Response: Concur. Samples will be collected to define the lateral and vertical extent of PAH contamination at B9SE-04 as described in Section 8.5 of the Phase 2 RFI Work Plan for Parcel 11: *“Sediment sample B9SE-04-01 had a benzo(a)pyrene concentration of 2.35 mg/kg, which exceeded the SSL of 0.621 mg/kg at the time of the RFI and exceeds the current lowest SSL of 1.12 mg/kg for residential direct contact. Since the sample was collected at a depth of 1.0 foot, the Army recommended in Section 7.6 of the RFI Report (USACE, 2014) that samples be collected at 2 to 2.5 feet and 3 to 3.5 feet at the same location (1137DRAIN-SB08 on Figure 8.3), unless there is a concrete ditch bottom. If there is a concrete ditch bottom, the Army recommended to collect a sample on top of the concrete and not below it. Four step-out borings are proposed approximately ten feet from this point in four directions to define the lateral and vertical extent of PAHs (1137DRAIN-SB09 through 1137DRAIN-SB12 on Figure 8.2). Samples within the drainage ditch upstream and downstream of these locations will be collected at depths of 0.5 to 1.0 foot, 2.0 to 2.5 feet, and 3.0 to 3.5 feet. If there is a concrete ditch bottom, the Army will collect a sample on top of the concrete and not below it. All of these samples will be analyzed for PAHs.”*

14. Table 6-1, SWMU 23: Summary of Previous Samples Collected with Levels Exceeding the SSL for Benzo(a)pyrene, p 6-T1

NMED Comment: The table indicates that the lateral extent of contamination is defined to the east and west for the contamination found at 1123DRAINAGE-SS028D-SO and 1123DRAINAGE-SS028D-SO. No sampling has been conducted in these directions; therefore, the lateral extent has not been defined. The table also indicates that the lateral extent of contamination has been defined in any direction but south for 1123OUTFALLSB01-OOD. This is not accurate. Remove inaccurate information from the revised plan.

Permittee Response: Clarification. These samples are discussed in the last bullet of Section 6.3.1 of the Phase 2 RFI Work Plan for Parcel 11 as follows: *“Sample 1123DRAINAGE-SS028D-SO had a benzo(a)pyrene concentration of 0.81 J mg/kg, which exceeded the previous SSL of 0.621 mg/kg at the time of the RFI but does not exceed the current SSL of 1.12 mg/kg for residential direct contact. Sample 1123DRAINAGE-SS029D-SO had a benzo(a)pyrene concentration of 0.36 J mg/kg, which did not exceed the SSL of 0.621 mg/kg at the time of the RFI and also does not exceed the current SSL. Several other PAHs were detected below SSLs. Since these concentrations are below current residential direct contact SSL, no additional sampling is proposed.”*

15. Section 7.0, SWMU 24 - Building 15, p 7-1

Permittee Statement: "Levels of arsenic, cadmium, iron, and lead were reported above the SSLs at a depth of 2.0 feet bgs in RFI samples SB12-02D and SB13-02D. The Army proposes to collect soil samples at a depth of 3.5 to 4.0 feet bgs to define the vertical extent at these locations (sample IDs 1124BLDG15-SB12-3.5-4.0D-SO and 1124BLDG15-SB13-3.5-4.0D-SO). An additional sample will be collected 30.0 feet north and east of SB13 at three different depths (0.0 to 0.5 foot, 2.0 to 2.5 feet, and 3.5 to 4.0 feet) to define the horizontal extent of metal contamination (sample ID 1124BLDG15-SB30)."

NMED Comment: Samples collected 30 feet away will not adequately define the nature and extent of contamination at locations SB 12 or SB13. The Permittee proposed only one boring to the northeast. Propose to collect samples five to ten feet distant in all four directions from the locations of both SB 12 and SB 13 in order to define the nature and extent of contamination.

Propose to collect three samples from 0.0 to 0.5 feet bgs, 2.0 to 2.5 feet bgs, and 3.5 to 4.0 feet bgs at each boring location. See Comment 4.

In addition, the Permittee inappropriately used the chromium III SSL for comparison to total chromium results. When compared to the appropriate SSL, the chromium concentration at SB12-02D exceeded the standard. Ensure chromium is included in the metals analyses for the samples associated with boring SB 12.

Permittee Response: Concur. Samples will be collected to define the vertical extent of arsenic, cadmium, iron, and lead contamination at 1124BLDG15-SB12 and 1124BLDG15-SB13 as described in Section 7.5 of the Phase 2 RFI Work Plan for Parcel 11: *“Nature and extent of arsenic, cadmium, iron, manganese, and lead contamination in soil was not defined at sample locations 1124BLDG15-SB12 and 1124BLDG15-SB13, and nature and extent of total chromium in soil was not defined at sample location 1124BLDG15-SB12. The Army proposes to collect soil samples at a depth of 3.5 to 4.0 feet bgs to define the vertical extent of contamination at these locations (proposed sample IDs 1124BLDG15-SB30-3.5-4.0D-SO and 1124BLDG15-SB31-3.5-4.0D-SO) to be analyzed for TAL metals (including chromium). To define horizontal extent of contamination at 1124BLDG15-SB12 and 1124BLDG15-SB13, the Army proposes to collect soil samples ten feet in four directions from both sample locations at three depths (0.0 to 0.5 foot bgs, 2.0 to 2.5 feet bgs, and 3.5 to 4.0 feet bgs) (proposed sample IDs 1124BLDG15-SB32, 1124BLDG15-SB33, 1124BLDG15-SB34, 1124BLDG15-SB35, 1124BLDG15-SB36, 1124BLDG15-SB37, 1124BLDG15-SB38, 1124BLDG15-SB39) to be analyzed for arsenic, cadmium, iron, manganese, lead, and chromium per NMED Comment 15 (NMED, 2018).”*

16. Section 7.0, SWMU 24 - Building 15, p 7-1

NMED Comment: The RFI Report states, “[s]ample SB10-00D had a dieldrin concentration of 680 ug/kg, which exceeds the SSL of 304 ug/kg. The Army concludes that both the horizontal and vertical extent of dieldrin contamination have been defined by the sampling conducted under this work plan.” The Permittee provided no justification for this conclusion and NMED does not agree that the horizontal extent of contamination has been defined. Propose to collect appropriate step-out samples to define the lateral extent of pesticide contamination at boring SB 10.

Permittee Response: Concur. Samples will be collected to define the vertical extent of dieldrin contamination at 1124BLDG15-SB10 as described in Section 7.5 of the Phase 2 RFI Work Plan for Parcel 11: *“Lateral extent of pesticide contamination at soil boring 1124BLDG15-SB10 was not defined. Therefore, step-out samples will be collected ten feet in all four directions from the soil sample location 1124BLDG15-SB10 at depths of 0.0 to 0.5 foot bgs and 2.0 to 2.5 feet bgs (proposed sample IDs 1124BLDG15-SB40, 1124BLDG15-SB41, 1124BLDG15-SB42, 1124BLDG15-SB43).”*

17. Section 7.0, SWMU 24 - Building 15, p 7-1

NMED Comment: The RFI Report states, “[s]ample SS052D had a benzo(a)pyrene concentration of 770 ug/kg, which exceeds the SSL of 621 ug/kg. The Army concludes that the horizontal and vertical (by sample SB17-02D) extent of benzo(a)pyrene contamination have been defined by the sampling conducted under this work plan.” In addition, the benzo(b)fluoranthene concentration at this location exceeds the current SSL. The horizontal and vertical nature and extent of contamination at this location have not been defined. While SB17

may define lateral extent to the east, it does not provide vertical extent. Propose to collect step-out samples to the north, south, and west of location SS052D to define the lateral extent of SVOC contamination, as well as deeper samples at location SS052D to define the vertical extent of SVOC contamination.

Permittee Response: Concur. Samples will be collected to define the lateral and vertical extent of PAH contamination at 1124BLDG15-SS052D as described in Section 7.5 of the Phase 2 RFI Work Plan for Parcel 11: *“Lateral and vertical extent of PAHs contamination to the north, south, and west of sample location 1124BLDG15-SS052D is not defined. Step-out samples will be collected ten feet to the north, south, and west of the original sample location (proposed sample IDs 1124BLDG15-SB44, 1124BLDG15-SB45, 1124BLDG15-SB46) at depths of 0.0 to 0.5 foot bgs, 2.0 to 2.5 feet bgs, and 3.0 to 3.5 feet bgs, as well as 2.0 feet bgs at the previous sample location (1124BLDG15-SS052D) at a depth of 2.0 to 2.5 feet bgs (proposed sample ID 1124BLDG15-SB56-2.0-2.5D-SO).”*

18. Section 7.0, SWMU 24 - Building 15, p 7-1

NMED Comment: Table 8-10 of the RFI Report indicates that the arsenic concentration at SB01 surface sample was 3.2 mg/kg. A duplicate sample was collected at this location that contained an arsenic concentration of 16 mg/kg. Reporting the lower number is misleading. In all future documents where sample results are included, the Permittee must discuss the higher detected concentration from any duplicate or triplicate sample set. Propose to collect appropriate step-out samples in all directions to define the lateral extent of arsenic contamination at location SB01.

Permittee Response: Concur. Samples will be collected to define the nature and lateral extent of arsenic contamination at 1124BLDG15-SB01 as described in Section 7.5 of the Phase 2 RFI Work Plan: *“Lateral extent of arsenic contamination at soil location 1124BLDG15-SB01 is not defined. Step-out samples will be collected ten feet in four directions (proposed sample IDs 1124BLDG15-SS47-0.0-0.5D-SO, 1124BLDG15-SS48-0.0-0.5D-SO, 1124BLDG15-SS49-0.0-0.5D-SO, 1124BLDG15-SS50-0.0-0.5D-SO) from soil sample location 1124BLDG15-SB01 at a depth of 0.0 to 0.5 foot bgs.”*

19. Section 8.1, SWMU 40, Building 10 and Storage Yard, p 8-1

NMED Comment: The Permittee failed to address multiple SSL exceedances in SWMU 40, many due to the use of the chromium III SSL vs the total chromium SSL. Samples 1140DISPOSAL-SB20, 1140DISPOSAL-SB38, 1140DISPOSAL-SB39, 1140DISPOSALS44, 1140DISPOSAL-SB47, 1140DISPOSAL-SB53, 1140DISPOSAL-SB55, 1140STRUCT57-SS035D-SO, and 1140STRUCT57-SS036D-SO all contained concentrations that exceeded the chromium SSL. In addition, sample 1140DISPOSAL-SB15 contained a concentration that exceeded the arsenic SSL and background range. These locations require further characterization and possible remediation. Propose appropriate step-out samples to define the lateral extent of contamination, as well as deeper samples at each of the locations above to define the vertical extent of contamination in the revised Plan.

Permittee Response: Concur with the addition of step-out samples to define horizontal extent of total chromium concentrations at 1140DISPOSAL-SB20, 1140DISPOSAL-SB38, 1140DISPOSAL-SB39, 1140DISPOSAL-SB44, 1140DISPOSAL-SB47, 1140DISPOSAL-SB53,

1140DISPOSAL-SB55, 1140STRUCT57-SS035D-SO, and 1140STRUCT57-SS036D-SO as described in Sections 9.5.1 and 9.5.6 of the Phase 2 RFI Work Plan.

The following text has been added to Section 9.5.1: *“The RFI samples 1140DISPOSAL-SB20-00D-SO, 1140DISPOSAL-SB38-00D-SO, 1140DISPOSAL-SB39-00D-SO, 1140DISPOSAL-SB44-00D-SO, 1140DISPOSAL-SB47-00D-SO, 1140DISPOSAL-SB53-00D-SO, and 1140DISPOSAL-SB55-00D-SO had exceedances above the SSL for total chromium (96.6 mg/kg). These concentrations were incorrectly compared to the SSL for chromium III during the RFI. As a result, the lateral extent of chromium contamination is not defined for these sample locations. To define the lateral extent of chromium, step-out samples will be collected 10 feet in each direction from the original sample locations from the depth intervals of 0.0 to 0.5 foot and 1.0 to 1.5 feet at each location and will be analyzed for total chromium (1140DISPOSAL-SB68 through 1140DISPOSAL-SB71, 1140DISPOSAL-SB72 through 1140DISPOSAL-SB75, 1140DISPOSAL-SB76 through 1140DISPOSAL-SB79, 1140DISPOSAL-SB80 through 1140DISPOSAL-SB83, 1140DISPOSAL-SB84 through 1140DISPOSAL-SB87, 1140DISPOSAL-SB88 through 1140DISPOSAL-SB91, and 1140DISPOSAL-SB92 through 1140DISPOSAL-SB95, respectively, on Figure 9.8).”*

Since chromium concentrations in the deeper (0.5 to 1.0 foot) samples at 1140DISPOSAL-SB20-00D-SO, 1140DISPOSAL-SB38-00D-SO, 1140DISPOSAL-SB39-00D-SO, 1140DISPOSAL-SB44-00D-SO, 1140DISPOSAL-SB47-00D-SO, 1140DISPOSAL-SB53-00D-SO, and 1140DISPOSAL-SB55-00D-SO do not exceed the current NMED Direct Contact SSL for total chromium, the vertical extent is defined at these locations.

The following text has been added to Section 9.5.6: *“The RFI samples 1140STRUCT57-SS035D-SO and 1140STRUCT57-SS036D-SO had exceedances above the NMED Direct Contact SSL for total chromium (96.6 mg/kg) with concentrations of 98 mg/kg and 340 mg/kg, respectively. These concentrations were incorrectly compared to the SSL for chromium III during the RFI (USACE, 2014). As a result, the lateral and vertical extents of chromium contamination are not defined for these sample locations. To define the lateral extent of chromium, step-out surface soil samples will be collected 10 feet in each direction from the original sample locations from the depth intervals of 0.0 to 0.5 foot (1140STRUCT57-SB182D-SO through 1140STRUCT57-SB189D-SO on **Figure 9.12**). To define the vertical extent of chromium, one sample will be collected at each of the original sample locations from a depth of 1.0 to 1.5 feet bgs (1140STRUCT57-SB190D-1.0-1.5-SO and 1140STRUCT57-SB191D-1.0-1.5-SO on **Figure 9.12**).”*

Concur with step-out samples to define horizontal extent of arsenic at 1140DISPOSAL-SB15 as described in Section 9.5.1 of the Phase 2 RFI Work Plan: *“To define the lateral extent of arsenic at 1140DISPOSAL-SB15-00D-SO, step-out samples will be collected 10 feet in each direction from the original sample location from the depth intervals of 0.0 to 0.5 foot and 1.0 to 1.5 feet at each location and will be analyzed for arsenic (1140DISPOSALS B96 through 1140DISPOSALS B99 on **Figure 9.8**).”*

Since arsenic concentrations in the deeper (0.5 to 1.0 foot) sample at 1140DISPOSAL-SB15 does not exceed the current NMED Direct Contact SSL for arsenic, the vertical extent is defined at this location.

20. Section 8.1, SWMU 40, Building 10 and Storage Yard, p 8-1

NMED Comment: The RFI Report states, "[n]o PCBs or TAL metals were detected in the MI samples at concentrations exceeding the screening criteria." The MI samples were inappropriately directly compared to SSLs. When evaluated appropriately, it is apparent that further investigation is required at the decision units where samples 1140BLDG10-SS010BM-SO, 1140BLDG10-SS015AM-SO, and 1140BLDG10-SS019AM-SO exceeded the background UTL for lead and multiplication of each of the sample's lead concentration by the number of subsamples exceeds the SSL. In the revised work plan, propose subdivision and further characterization of the three decision units represented by these sample locations.

Army Response: Concur with further characterization of the previous multi incremental sampling units as described in Section 9.5.1 of the Phase 2 RFI Work Plan for Parcel 11: *"Four discrete surface soil samples will be collected from the depth interval of 0.5 to 1.0 foot within the decision unit corresponding to 1140BLDG10-SS010BM-SO (1140DISPOSAL-SS21-0.5-1.0D-SO through 1140DISPOSAL-SS24-0.5-1.0D-SO on Figure 9.8) and 0.0 to 0.5 foot within decision units corresponding to 1140BLDG10-SS015AM-SO and 1140BLDG10-SS019AM-SO (1140DISPOSAL-SS25-0.0-0.5D-SO through 1140DISPOSAL-SS28-0.0-0.5D-SO and 1140DISPOSAL-SS28-0.0-0.5D-SO 1140DISPOSAL-SS32-0.0-0.5D-SO, respectively, on Figure 9.8)."*

21. Section 8.2, SWMU 40, Buildings 12 and 13, p 8-1

Permittee Statement: "The RFI indicates SS051D, SS053D, SS037D, and SS049D exceeded one or more of the previous SSLs. The horizontal extent of all these samples with the exception of SS037D has been defined by adjacent samples, the buildings, and the railroad tracks, but the vertical extent has not been defined. The horizontal extent at sample SS037D has not been defined in the north or east directions."

NMED Comment: Neither buildings nor railroad tracks define the extent of contamination. Therefore, the horizontal extent of contamination for SS051D, SS053D, SS042D, and SS049D have not been defined. In addition, the horizontal extent of contamination at SS037D has not been defined to the south and west. Propose appropriate step-out samples across the train tracks for SS051D, SS053D, SS042D, and SS049D and samples 10 feet south and west of SS037D to be collected at depths corresponding to where contamination was previously detected to define the lateral extent of contamination.

Permittee Response: Concur with additional sampling for RFI sample locations 1140BLDG12TRACT-SS042D-SO and 1140BLDG12TRACT-SS051D-SO as described in Section 9.5.2 of the Phase 2 RFI Work Plan for Parcel 11: *"The RFI sample 1140BLDG12TRACT-SS042D-SO had exceedances above the SSL of several SVOCs and Aroclor-1254. The RFI also indicates 1140BLDG12TRACT-SS051D-SO, 1140BLDG12TRACT-SS053D-SO, 1140BLDG12TRACT-SS037D-SO, and 1140BLDG12TRACT-SS049D-SO had one or more PAH concentrations exceeding the previous SSLs. Since that time, the SSLs for PAHs have increased; therefore, samples collected at 1140BLDG12TRACT-SS053, 1140BLDG12TRACT-SS051D-SS037D-SO, 1140BLDG12TRACT-SS051D-SS049D-SO no longer exceed. Therefore, a further definition of the extent of PAH contamination at these locations is not proposed."*

To define the lateral and vertical extent of contamination at 1140BLDG12TRACT-SS042D-SO and -SS051D-SO, samples will be collected 10 feet in each direction from the original sample

locations (1140BLD12TRACT-SB59 through 1140BLD12TRACT-SB62 and 1140BLD12TRACT-SB64 through 1140BLD12TRACT-SB67, respectively, on **Figure 9.9**) at depths of 0.0 to 0.5 feet and 1.0 to 1.5 feet. An additional sample will be collected below both 1140BLDG12TRACT-SS042D-SO and -SS051D-SO (1140BLD12TRACT-SB63-1.5-2.0D-SO and 1140BLD12TRACT-SB68-1.5-2.0D-SO, respectively on **Figure 9.9**) at a depth of 1.5 to 2.0 feet. Samples will be analyzed for PAHs as specified in **Table 9.4**, and the samples collected at SS042D-SO will also be analyzed for PCBs.”

The PAH concentrations at samples collected at 1140BLDG12TRACT-SS053, -SS037D-SO, and -SS049D-SO do not exceed current NMED Direct Contact SSLs.

22. Figure 8-3, Phase 2 Sample Locations: SWMU 40 - Building 12 and Building 13, p 8-F3

NMED Comment: The figure is missing an important sample location that provides lateral extent of contamination located at SB42. SB41 is not depicted on the map. Include all former sample locations used to define lateral extent of contamination on all maps that indicate where step-out samples will be collected to define the lateral extent of contamination in all future work plans and reports. Revise the Plan accordingly.

Permittee Response: Concur. Samples 1140DISPOSAL-SB41 and -SB42 were collected on the north end of Building 10 and appear on Figure 9.2. The revised Phase 2 RFI Work Plan figures now include all previous sample locations.

23. Section 8.3, SWMU 40, Building 14, p 8-2

Permittee Statement: "The RFI Report noted that sample SB06-00D showed a DRO concentration of 670 mg/kg, exceeding the SSL of 520 mg/kg. The SSL for DRO has subsequently been revised to 1,000 mg/kg; therefore, there is no exceedance, and no additional samples are planned at this location."

NMED Comment: As stated in previous disapproval comments, the justification stated above in [sic] not adequate. Revise the Plan to indicate that a deeper sample was also collected that contained a DRO concentration below the [sic] both the SSL at the time of sample collection and the current SSL, which indicates a decreasing trend with depth.

Permittee Response: Concur. The following text has been added to Section 9.3.1.1 of the Phase 2 RFI Work Plan: *“The RFI Report noted that sample 1140BLDG14-SB06-00D-SO showed a DRO concentration of 670 mg/kg, exceeding the previous SSL of 520 mg/kg. However, a deeper sample, collected from 1.0 foot bgs at the same location (1140BLDG14-SB06-01D), showed a DRO concentration of 480 mg/kg, indicating a decreasing trend with depth. The SSL for DRO has subsequently been revised to 1,000 mg/kg; therefore, there is no exceedance for either sample, and no additional sampling is proposed at this location.”*

24. Section 8.3, SWMU 40, Building 14, p 8-2

Permittee Statement: "Sample SB03-00D showed several SVOC concentrations above the SSL. Sample SB03-01D, directly underneath, also showed concentrations of benzo(a)pyrene above the SSL. The horizontal and vertical extent of contamination has not been defined at this location. A soil sample will be collected at the same location as SB03 at a depth of 2.0 to 2.5 feet to define the vertical extent. Additional samples will be collected 10 feet to the north, east,

and south at depths of 0.0 to 0.5 foot, 0.5 to 1.0 foot, and 2.0 to 2.5 feet at each location. All samples will be analyzed for SVOCs.

Sample SB07-01D identified lead concentrations of 510 mg/kg, exceeding the SSL of 400 mg/kg. The horizontal and vertical extent has not been defined at this location. A soil sample will be collected at the same location as SB07 at a depth of 1.5 to 2.0 feet. Additional samples will be collected 10.0 feet north and west of SB07 at depths of 0.5 to 1.0 foot and 1.5 to 2.0 feet. All samples will be analyzed for lead."

NMED Comment: Add an SVOC sample location to the revised work plan 10 feet west of SB03 to define the lateral extent of contamination. In addition, add a sample location to the revised work plan 10 feet south of SB07 to define the lateral extent of lead contamination. Propose to collect samples at the same depths as the other step-out samples.

Permittee Response: Concur. The following text has been added to Section 9.5.3 of the Phase 2 RFI Work Plan: "A soil sample will be collected at the same location as 1140BLDG14-SB03 at a depth of 2.0 to 2.5 feet to define the vertical extent of PAHs (1140BLDG140-SB11-2.0-2.5D-SO on **Figure 9.10**). Additional samples will be collected 10 feet to the north, south, east, and west of 1140BLDG14-SB03 at depths of 0.0 to 0.5 foot, 0.5 to 1.0 foot, and 2.0 to 2.5 feet at each location (1140BLDG140-SB12 through 1140BLDG140-SB15 on **Figure 9.10**). All samples will be analyzed for PAHs as specified in **Table 9.5**."

*A soil sample will be collected at the same location as 1140BLDG14-SB07-01D at a depth of 1.5 to 2.0 feet to define the vertical extent of lead at this location (1140BLDG140-SB16 on **Figure 9.10**). Additional samples will be collected 10 feet north, south, and west of 1140BLDG14-SB07 at depths of 0.5 to 1.0 foot and 1.5 to 2.0 feet (1140BLDG140SB17 through 1140BLDG140-SB19 on **Figure 9.10**). All samples will be analyzed for lead."*

25. Section 8.4, SWMU 40, Building 29, p 8-2

Permittee Statement: "The RFI Report noted that sample SS004D showed an arsenic concentration of 43 mg/kg and an iron concentration of 170,000 mg/kg. The Army concludes that a release has occurred with respect to arsenic at this location and that the extent of the release has not been defined. One sample will be collected at the same location as SS004D at a depth of 1.5 to 2.0 feet. Additional samples will be collected 25.0 feet from SS004D in each direction, at depths of 0.5 to 1.0 foot and 1.5 to 2.0 feet, in order to define the horizontal extent. All samples will be analyzed for arsenic and iron, although the Army does not intend to plan further action based solely on iron results.

The RFI samples SS019D and SS021D contain concentrations of lead and arsenic exceeding the SSL. The Army does not believe the arsenic concentrations at these locations are indicative of a release. The vertical and horizontal extent of lead contamination has not been defined. Samples will be collected at the same locations at a depth of 1.5 to 2.0 feet. Additional samples will be collected from approximately 25.0 feet to the north, west, and south of SS019D and to the north, south and east of SS021D from depths of 0.5 to 1.0 foot and 1.5 to 2.0 feet. All samples will be analyzed for lead."

NMED Comment: Propose appropriate step-out samples at 10 feet intervals to define the extent of contamination and minimize the potential extent of remedial excavation. Propose multiple step-out samples to define the nature and extent of contamination, if needed. See Comment 4.

Permittee Response: Concur. The following text has been added to Section 9.5.4 of the Phase 2 RFI Work Plan: *“One sample will be collected at the same location as 1140BLDG29-SS004D-SO at a depth of 1.5 to 2.0 feet to define the vertical extent of arsenic and iron contamination (1140BLDG290-SB23-1.5-2.0D-SO on **Figure 9.11**). Additional samples will be collected 10 feet from 1140BLDG29-SS004D-SO in each direction, at depths of 0.5 to 1.0 foot and 1.5 to 2.0 feet, in order to define the lateral extent of arsenic and iron in soil (1140BLDG29-SB24 through 1140BLDG029-SB27 on **Figure 9.11**). All samples will be analyzed for arsenic and iron, although the Army does not intend to plan further action based solely on iron results.*

*Samples will be collected at the locations of 1140BLDG29-SS019D-SO and 1140BLDG29-SS021D-SO at a depth of 1.5 to 2.0 feet to define the vertical extent of lead at these locations (1140BLDG29-SB28-1.5-2.0D-SO and 1140BLDG29-SB29-1.5-2.0D-SO, respectively, on **Figure 9.11**). Additional samples will be collected from approximately 10 feet in each direction of the original sample locations from depths of 0.5 to 1.0 foot and 1.5 to 2.0 feet to define the lateral extent of lead (1140BLDG29-SB30 through 1140BLDG29-SB37). All samples will be analyzed for lead.”*

26. Section 8.5, SWMU 40, Building 36, p 8-3

Permittee Statement: "The RFI sample SS176D was collected beneath the floor drain of Building 36, and had concentrations of arsenic, iron, and benzo(a)pyrene above the SSL. Based on the RFI Report, horizontal extent of the release is defined by the building slab. A single sample will be collected at the same location as SS176D from a depth of 1.5 to 2.0 feet below the floor drain to define the vertical extent. Samples will also be collected from the north, south, east, and west of SS176D as close to the edge of the concrete slab as possible at a depth of 0.5 to 1.0 foot and 1.5 to 2.0 feet. The samples will be analyzed for SVOCs, arsenic, and iron."

NMED Comment: Lateral extent of contamination cannot be defined by a building slab. In addition, the proposed samples at the edge of the slab may be too distant to define the nature and extent of contamination. Additional step-out samples maybe required. If the Permittee expects the contamination to be limited to less than a 10 feet radius, propose appropriate step-out samples in the revised Plan. See Comment 4.

Alternately, as NMED assumes Building 36 will be demolished soon, the Permittee may propose to defer the sampling at these locations until the building is removed. The location of the floor drain must be accurately located so that the appropriate sampling locations can be identified once the building is removed. If this alternative is chosen, the Permittee must list the deferred work in the table described in Comment 2. Revise the Plan accordingly.

In addition, the Permittee inappropriately used the chromium III SSL for comparison to total chromium results. When compared to the appropriate SSL, the chromium concentration at SS176D exceeded the SSL. Ensure chromium is included in the metals analyses for the samples associated with SS176D.

Permittee Response: The Army is proposing to defer sampling at this location until the building is removed. This has been noted in the table above in Comment 2. The following text has been included as Section 9.5.5 in the Phase 2 RFI Work Plan for Parcel 11: *“The RFI sample 1140BLDG36-SS176D-SO was collected beneath the floor drain of Building 36, and had concentrations of arsenic, iron, and benzo(a)pyrene above the SSLs. The RFI Report concluded that lateral extent of the release was defined by the building slab. However, according to Comment 26 of the disapproval letter for the 2018 RFI Phase 2 Work Plan (NMED, 2018), the*

*lateral extent of contamination cannot be defined by a building slab. Comment 26 further noted, "NMED assumes Building 36 will be demolished soon, the Permittee may propose to defer the sampling at these locations until the building is removed. The location of the floor drain must be accurately located so that the appropriate sampling locations can be identified once the building is removed." As such, the Army proposes to defer sampling at this location until the building is removed (see **Table 2.1**)." Deferred samples collected in the vicinity of 1140BLDG36-SS176D-SO will be analyzed for PAHs and TAL metals, including chromium, for comparison against the most current NMED Direct Contact SSLs for soil.*

27. Table 8-6, SWMU 40: Summary of Previous Samples Collected with Levels Currently or Historically Exceeding the SSL for Benzo(a)pyrene - Coal Tanks, p 8-T11

NMED Comment: The table indicates that the lateral extent of contamination is defined to [sic] in all directions for SB 175. This is not accurate. Lateral extent is not defined to the west. Propose an additional step-out sample 10 feet west of SB 175 and revise the information in the table in the revised plan.

Permittee Response: Information from previous Table 8-6 is now in Table 9.1. The concentrations of benzo(a)pyrene detected at 1140STR58TANK-SS158D-SO, -SS159D-SO, -SS160D-SO, -SS161D-SO, -SS167D-SO, -SS171D-SO, -SS172D-SO, -SS173D-SO, and -SS175D-SO do not exceed the current SSL of 1.12 mg/kg. As such, these samples were removed from Table 9.1 of the Phase 2 RFI Work Plan for Parcel 11 and no further delineation samples are proposed.

28. Section 9.0, SWMU 45, Building 6 (Gas Station), AOC 46 (Structure 65 - Former AST Located Near Building 11), and AOC 51 (Structure 64 - Former UST at Building 11), p 9-1

Permittee Statement: "The RFI Report noted that one sample (SB07-15) collected at Building 6, the former gas station, showed a concentration of 1,2,4-trimethylbenzene above the SSL. The Army concludes that a release has occurred with respect to VOCs at this location. The vertical extent was defined by a sample collected at the same location at a depth of 30.0 feet which showed no VOCs above the SSL. The horizontal extent was defined to the north, west, and southwest. Additional borings are proposed to the east and south of boring SB07."

NMED Comment: Lateral extent of contamination has not been defined in any direction. Again, samples 30 feet distant with concentrations below the SSL do not define the nature and extent of contamination at SB07. Propose appropriate step-out sampling locations in four directions to define the lateral extent of VOC contamination at location SB07. See Comment 4.

Permittee Response: Concur. The following text has been added to Section 10.5 of the Phase 2 RFI Work Plan: *"To define the lateral extent of VOC and GRO contamination at previous sample location 1145BLDG6-SB07, soil samples 1145BLDG6-SB14-SO, 1145BLDG6-SB15-SO, 1145BLDG6-SB16-SO, and 1145BLDG6-SB17-SO are proposed 10 feet in each direction of 1145BLDG6-SB07 at depths of 0.0 to 0.5 foot bgs and 0.5 to 1.0 foot bgs and analyzed for VOCs and GRO."*

29. Section 10.0, SWMU 50, Structure 35 (Former Underground Storage Tank), p 10-1

Permittee Statement: "The samples will be analyzed for VOCs, gasoline-range organics (GRO), DRO, and lead."

NMED Comment: This site has the potential for a variety of contaminants and has not been sampled appropriately to eliminate any analytical suite at this time. Therefore, include TAL metals, SVOCs, PCBs, pesticides, and herbicides in the proposed analyses for the samples to be collected at this location in the revised Plan.

Permittee Response: Concur. The following text has been added to Section 11.5 of the RFI Phase 2 Work Plan for Parcel 11: *"The Phase 2 RFI activities will include drilling and sampling of one soil boring located near existing well MW-1. The boring will be drilled using hollow stem auger drilling techniques with split spoon soil samples collected every 5.0 feet to a depth of 5.0 feet below the water table. Based on water table elevations observed during previous characterization efforts (depth to groundwater measured at approximately 40.0 feet bgs), it is assumed that discrete samples (1150S35-SB07-SO as shown on **Figure 11.1**) will be collected from approximately 5.0, 10.0, 15.0, 20.0, 25.0, 30.0, 35.0, 40.0, and 45.0 feet bgs for a total of nine samples and two duplicate samples (11 samples total). The soil samples will be analyzed for VOCs, SVOCs, GRO, DRO, TAL metals, PCBs, pesticides, and herbicides.*

Prior to soil sampling, a private utility contractor will be utilized to locate utilities within the proposed area of the boring. This step will be done in conjunction with review of utility drawings and coordination with the installation caretaker."

30. Section 12.1.4.3, Vapor Intrusion, p 12-3

Permittee Statement: "At SWMUs or AOCs where volatile analytes are detected, the VI pathway will be considered potentially complete, and a qualitative evaluation will be conducted."

NMED Comment: The Plan only allows for a qualitative evaluation of the vapor intrusion pathway. This is inaccurate since Section 12.1.6.4 presents a tiered approach to the vapor intrusion pathway, which could include collection of soil gas data and a quantitative assessment. Clarify the text to indicate the evaluation of the vapor intrusion pathway will follow the methodology outlined in Section 12.1.6.4 in the revised Plan.

Permittee Response: Concur. At SWMUs or AOCs where volatile analytes are detected, the VI pathway will be evaluated as outlined in Section 14.1.3.3. The following text has been added to Section 14.1.3.3, *"If sufficient lines of evidence are developed to support that volatile analytes in soil are unlikely to pose health risks through the VI pathway, then no further evaluation or mitigation of the VI pathway will occur. If there are not sufficient lines of evidence to rule out health risks through the VI pathway, then additional evaluation of the VI pathway through a site-specific assessment, potentially including sampling of soil-gas, or additional evaluation and/or sampling of groundwater may be recommended in the conclusions of the Phase 1 and Phase 2 RFI Report."*

31. Section 12.1.4.4, Soil to Groundwater, p 12-4

Permittee Statement: "The NMED risk guidance (NMED, 2017a) requires that the potential for COPCs in shallow soil to leach to shallow groundwater, which is subsequently used as a potable water source, be evaluated if this exposure pathway is potentially complete for a site."

NMED Comment: The Plan states that the soil-to-groundwater pathway is only required to be evaluated if the groundwater is used as a potable water source. For future reference, note that the NMED Soil Screening Guidance does not include this caveat but rather addresses protection of groundwater. This pathway is required to be evaluated regardless if the underlying

groundwater is being used as a potable water source. Revise the Plan to remove reference to a "potable" water source.

Permittee Response: Concur. Section 12.1.4.4 Soil to Groundwater is now Section 14.1.3.4 Soil to Groundwater. The text has been revised as follows:

"The NMED risk guidance (NMED, 2022) requires that the potential for COPCs in shallow soil to leach to shallow groundwater be evaluated for protection of groundwater. Groundwater is known to be present below Parcel 11 and, therefore, this pathway will be considered potentially complete."

32. Section 12.1.6.1, Risk Screening (Part 1), p 12-6

Permittee Statement: "The most protective screening level for each analyte for potentially complete pathways is used in the risk screening step."

NMED Comment: It is not clear what this step entails. Section 5.0 of the NMED Soil Screening Guidance requires that both carcinogenic and noncarcinogenic toxicity must be evaluated for chemicals that exhibit both forms of toxicity. The February 2017 update to the guidance included both cancer and non-cancer screening levels for all chemicals as appropriate. The more conservative of the cancer and non-cancer screening levels is no longer an acceptable approach, as it potentially underestimates total risk/hazard. Revise the Plan to include screening for both cancer and non-cancer toxicity.

Permittee Response: Concur. Previous Section 12.1.6.1, Risk Screening (Part 1) has been deleted. The steps for evaluating human health risks have been revised in Sections 14.1.5.1 through 14.1.5.6 of the Phase 2 RFI Work Plan. The first step is the identification of COPCs as described in Section 14.1.5.1 Identification of Chemicals of Potential Concern (Step 1, Part 1): *"Site specific COPCs will be determined by comparing the maximum detected concentrations (or 95% upper confidence limits [UCLs]) of preliminary COPCs to the most protective direct contact SSLs (or USEPA RSL if an SSL is not available)."* Details for evaluating cumulative risk using both cancer and noncancer screening levels are discussed in Section 14.1.5.3 Cumulative Risk Evaluation (Steps 2, 3, and 4).

33. Section 12.1.6.2.4, Conduct Statistical Evaluation of Metals, p 12-8

Permittee Statement: "The additional evaluation may include a comparison of the maximum concentration in the sample set to the maximum concentration in the background data set, comparison of the range of concentrations in the sample data set to the range of concentrations in the background data, comparison of the 95% upper confidence limit (UCL) to the maximum concentration in the background data set, or may proceed to a more robust statistical evaluation as described in Section 2.8.3.2 of the NMED risk guidance (NMED, 2017a) using ProUCL statistical software (most current version)."

NMED Comment: The Permittee states that if the maximum detected concentration is greater than the background reference value, comparison to the maximum background concentration and/or the range of background detections is allowed to rule out the chemical as being site related. The NMED Soil Screening Guidance does not allow for these types of comparisons for discrete data. Rather, the data must be compared statistically to assess whether the site data are statistically different from background. If sufficient data are not available to conduct a statistical analysis, then lines of evidence may be used (refer to Section 2.8.3.2 of the NMED

Soil Screening Guidance). Revise the Plan to remove comparisons to background maximums and background ranges (with the exception of arsenic).

Permittee Response: Concur. Previous Section 12.1.6.2.4, Conduct Statistical Evaluation of Metals is now under Section 14.1.5.2 of the Phase 2 RFI Work Plan. The text is revised as follows:

"The additional evaluation may include a comparison of the maximum concentration in the sample set to the maximum concentration in the background data set, comparison of the 95% upper confidence limit (UCL) to the maximum concentration in the background data set, or may proceed to a more robust statistical evaluation as described in Section 2.8.3.2 of the NMED risk guidance (NMED, 2022) using ProUCL statistical software (most current version)."

If you have questions or require further information, please contact me at Cheryl.a.frischkorn.civ@army.mil, 505-629-7951 or George.h.cushman.civ@army.mil 703-455-3234 (Temporary Home Office, preferred) or 703-608-2245 (Mobile).

Sincerely,



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