

CH2MHILL

Draft Field Sampling Plan Addendum for Screening Sites

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FЯOM:	CH2M HILL
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Introduction

As part of a continuing program of evaluating its hazardous waste management practices, the United States Army is performing Remedial Investigations/Feasibility Studies (RI/FS) at the Defense Distribution Depot Memphis Tennessee (DDMT). Previously completed site investigations at DDMT have confirmed the existence of contamination, and RI/FS investigations are underway to determine the extent of this contamination and appropriate remedial actions at the Main Installation, which consists of Operable Units 2, 3, and 4 (OU-2, 3 and 4). This Technical Memorandum presents a sampling plan for additional environmental characterization of surface soil, subsurface soil, surface water and sediment, and some site-specific groundwater locations. The environmental sampling proposed herein is based on a review of the initial Main Installation Fluvial Aquifer was proposed in to the BCT in a Technical Memorandum issued on May 8, 1998, and further discussed in the June, 1998, partnering meeting.

DDMT has initiated a series of environmental contamination investigations and remediation projects under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Base Realignment and Closure Act (BRAC). The sites investigated fall into three categories:

- 1. Screening Sites where environmental contamination was suspected but not confirmed. The objective of the environmental sampling was to determine if a release to the environment had occurred and therefore sample locations were biased to areas where releases would have been suspected. Screening Sites are located within each of the Main Installation Operable Units.
- RI sites where existing environmental contamination was evaluated for nature and extent. The objective of the environmental sampling was to evaluate the type of contamination and its horizontal and vertical extent.

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3. Base Relocation and Closure (BRAC) property parcels where environmental sampling was performed to determine if the property was suitable for transfer or lease. The objective of the BRAC sampling was to determine if chemicals existed in the surface soil and subsurface soil in concentrations that might present a concern for industrial and, in the case of Parcel 2, residential uses.

A Field Sampling Plan (FSP) was approved for Screening Sites in 1995, and the field investigation implementing this plan occurred in late 1996 and early 1997. Results of the field investigations were presented in a series of Letter Reports in 1997 and 1998. The data were also reviewed by the BRAC Cleanup Team (BCT) during a series of meetings in the summer and fall of 1997 wherein recommendations on additional characterization were made and documented in the meeting minutes.

During these meetings, the BCT determined that a comprehensive and conservative riskbased approach to evaluating the environmental data was needed. Following EPA Region IV guidance on performing a preliminary risk assessment, a Preliminary Risk Evaluation Report (CH2M HILL, 1998) was prepared on a BRAC parcel and CERCLA site basis. The risks calculated in the Preliminary Risk Evaluation (PRE) were also used as a basis for requiring additional sampling.

A series of sites was proposed for Early Removal (ER) action in the 1995 FSP, prior to inclusion of DDMT in the BRAC program. Most of these sites are in Dunn Field, only three were identified in the Main Installation. The requirements for early action have changed under BRAC, focusing on expedited removals for sites in parcels that are a priority for lease or transfer. Characterization of these sites is proposed prior to ER action.

Methodology

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Data from the Screening Sites and RI Results of the field investigations, the BRAC Sampling Recommendations (Woodward Clyde, 1996) and the results of the Preliminary Risk Evaluation (CH2M HILL, 1998) were reviewed in preparation for updating the FSPs. CH2M HILL's risk assessment staff reviewed the updated risk-based screening levels and all the available data to ensure that enough were available to complete the risk assessment before preparing the revised FSPs for each site presented below.

In addition, CH2M HILL staff field verified the proposed sampling locations, and staking and photographing each proposed sample location.

The collection of additional data is generically proposed to satisfy one of the following considerations.

Sufficient Number of Data Points. The number of usable data points was tabulated to assess whether a sufficient number existed to perform a risk assessment. Specific criteria used were if there was enough of data points to support a statistical estimate of the exposure concentration at each site and if the analytical methods were sufficient to characterize the site. If an insufficient data population existed for a site, additional data has been proposed.

Definition of the Extent of Contamination. Results of the field investigations indicated some samples at a site that exceeded the screening criteria for certain parameters. The

configuration of these samples was reviewed to assess whether additional samples were needed to adequately characterize the area exceeding health-based criteria.

Characterization of the Nature of Contamination. If earlier sampling at a site indicated the presence of a contaminant in some of the samples, sampling for additional types of contamination may need to occur.

Assurance of Absence of Contamination. A sufficiently broad spectrum of analyses is also necessary to fully understand the nature of contamination at each site. If a site is judged free of contamination, the number of samples and the suite of analyses should be reviewed for adequacy. The current knowledge of recent past use may not be an adequate indicator of the potential contaminants at a site.

Evaluation of Groundwater Contamination. At some sites, surface and subsurface soil concentrations exceed criteria that signify the potential for transfer from soil to groundwater via leaching. Additional subsurface soil sampling may be proposed or grab samples of groundwater may be obtained to directly determine if an impact to groundwater is occurring.

Sufficiency for Feasibility Studies. Feasibility samples are proposed at sites where remedial activities are likely and data are needed to evaluate the feasibility of different remedial technologies. If, for instance, surface soil at a particular site contains elevated concentrations of arsenic and subsurface soil does not, then samples would be collected from 0 to 6 inches, 6 to 12 inches and 12 to 18 inches to determine if removing the surface soil was a feasible remedial option. TCLP samples may be collected to determine if the surface soil could be covered without the risk of the contaminants leaching to the groundwater. Geotechnical samples may be collected to evaluate if other technologies such as soil vapor extraction, solidification or other engineering control may be applicable at the site. Geotechnical testing will include grain size distribution, moisture content, pH, alkalinity, cation exchange capacity, and total organic carbon.

Changes to Field or Laboratory Methods

EPA has promulgated a change in the methods for collection and analysis of VOC's in soil. The sampling proposed in this addendum to the FSP incorporates this methodology for VOC analysis of soils. Previous methods have demonstrated a significant low bias in the quantitation of VOC's in soil samples (EPA, 1997).

The samples collected as implementation of the 1995 FSPs were analyzed by the traditional "purge-and-trap" procedures outlined in Update II to SW-846 (Method 5030A,Revision 1, 1992). However, on June 13, 1997, Method 5030B and Method 5035 were promulgated in SW-846 (Update III). This update removed the option for analysis of soil / sediment by Method 5030 and replaced it with Method 5035, "Closed-System Purge-and-Trap and Extraction for Volatile Organics in Soil and Water Samples". Method 5035 has several options in sample collection: field preserving with methanol or sodium bisulfite or collecting in EnCore samplers and submitting to the laboratory for preservation within the specified 48 hours.

Revised Site Sampling and Analysis Plans

For each of the screening sites that require additional sampling, a synopsis of the revised sampling plan is presented below. A figure is presented for each site showing both the previous sampling locations (including sampling performed by other firms) and any new sampling proposed in this addendum. A table for each site itemizes each new proposed sample, and provides the rationale and proposed suite of analyses.

OU-2 Screening Sites (SS)

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Sites 31, 32, & 33 (co-located sites in OU#2, Parcel 35)–Former Spray Paint Booth, Sand Blasting Waste Accumulation Area, and Sand Blasting Waste Drum Storage Area. The chemicals of potential concern (COPCs) detected at co-located Screening Sites 31 and 33 and RI Site 32 include antimony, arsenic, cadmium, chromium, lead, PAH compounds, dieldrin, PCBs, and DDT.

Eight additional surface soil samples (SS-33G through N) are needed to complete the horizontal delineation of metals contamination (Figure 1), differentiate between tri-valent and hex-valent chromium, and provide a consistent data set using uniform methodology and analytical technique. Four of the surface soil samples (SS-33G, I, K, and M) will be analyzed for Priority Pollutant Metals (PPM) and for Cr species differentiation; the other four samples will be analyzed for PPM. Additionally, sample SS-33J will be analyzed for Target Compound List / Target Analyte List (TCL/TAL) compounds. To complete the assessment of depth of surface soil contamination, three sample depths (i.e., 0.0 to 0.5, 0.5 to 1.0, and 1.0 to 1.5 ft.) will be sampled at six different locations and analyzed for PPM and geotechnical parameters (Table 1). The depth distributions will be used to evaluate soil quantities for remediation.

Site 82: Flammables Buildings 783 and 793. No additional environmental sampling is planned for this site. The only field activity needed at this site is a current photograph.

Site 84: Building 972. The lateral extent of polyaromatic hydrocarbons (PAHs) in surface soil is an issue at this site at SS-84C (Figure 3). Two surface soil samples (from 0.0 to 1.0 feet) will be taken 10 feet east and west of the railroad tracks, and analyzed for PAHs. One of the samples will also be analyzed for TAL/TCL (Table 3) to support the risk assessment.

Site 89: Building 1089.

At this site, PPM are the only analyses proposed for the additional sampling (Table 3). One groundwater grab sample (HY-05) will be collected by direct push methods to assess if groundwater is impacted by metals downgradient of the elevated chromium in the subsurface at SB-69]. Groundwater samples will only be analyzed if the turbidity in the samples can be maintained at less than or equal to 25 Nephelometric Turbidity Units (NTU). If metals in groundwater are above the criteria or the turbidity is not achieved, additional vertical delineation of subsurface soils will occur at SS-89], the area of highest surface concentration of lead and chromium, to a depth of 40 feet. Five surface soil samples

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will be collected at depth intervals of 0.0 to 1.0 feet to assess the lateral extent of metals in surface soil (Figure 3).

For the feasibility studies, PPM samples will be collected at 4 locations at 6-inch intervals from 0.0 to 1.5 feet to investigate the possible depth of soil removal. In addition, geotechnical parameters and TCLP metals and PAH will be analyzed from a 0.0 to 1.5- ft composite interval at two of the FS locations. At the other two locations, TCLP metals will be collected from the upper 6 inches at one location and from 0.0 to 1.0 ft at the second location.

BRAC Site (Parcel 26), RR Tracks East of Building 970. To delineate the PAH contamination in surface soils, four additional surface soil samples (0.0 to 1.0 foot interval) will be taken near previous BRAC sample locations, and analyzed for PAHs (Figure 4). Two sample locations will be sampled at 6-inch intervals to 1.5 feet and analyzed for PAHs, to assist with determining the possible depth of removal for the feasibility study. At these same two FS locations, a geotechnical suite and PAH TCLP will be obtained from a 0.0 to 1.5-foot composite sample (Table 4).

OU-3 Screening Sites

Site 51: Lake Danielson Outlet Drainage Ditch.

One surface soil sample (SS-51D) will be collected and analyzed for PPM and pesticides to confirm reports of elevated arsenic and dieldrin in the ditch soils (Table 5).

See Figure 5 for the new sample location.

Site 65: XXCC-3 Building 249.

The parameters detected at SS 65 include PAH compounds, cadmium, DDE and DDT.

Eight soil sampling sites (SS-65F through K, and FS-65A and B) will be sampled to evaluate the extent of PAHs in near-surface soils and provide data for assessing the extent of potential remediation (Figure 6). The two FS samples will be sampled at three depth intervals (i.e., 0.0 to 0.5, 0.5 to 1.0, and 1.0 to 1.5 ft). All soil samples will be analyzed for PAH. The six surface soil (SS prefix) samples will also be analyzed for pesticide/PCB concentrations, and two surface soil locations (i.e., SS-65H and I) will be analyzed for TCL/TAL compounds. The two FS sample sites will also be analyzed for geotechnical suite and TCLP PÄH from a total depth composite sample (Table 6).

Site 66: POL Building 253. PAH compounds were detected at SS 66 at concentrations exceeding residential risk-based criteria. Four surface soil samples (SS-66B through E) will be collected from north of the asphalt to confirm elevated PAH concentrations reported historically. All samples will be analyzed for PPM, PAHs, and pesticide/PCB concentrations (Table 7)

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See Figure 7 for the new sample locations.

Site 67: Installation Gas Station, Building 257. Parameters detected at SS 67 include arsenic and dieldrin in the surface soils and BTEX compounds in the subsurface soils.

One groundwater grab sample will be collected from beneath the site and analyzed for BTEX to evaluate whether this site has impacted groundwater quality. The sample will be taken from beneath the fuel transfer area (Figure 8). Soil samples will be collected at depths of 8 to 10 and 18 to 20 feet from the same push location as the groundwater sample and the soil samples (SB-67C) analyzed for VOC concentration and geotechnical parameters to allow for a Feasibility Study if contamination is confirmed (Table 8).

Site 68: POL Building 263. To further characterize the site and provide a consistent data set indicative of current conditions, an additional surface soil sample and subsurface soil sample (depth of 8 to 10 ft) will be collected at boring SB-68C just northeast of Building 263 (Table 9). Historical data from this site were collected under to wide a set of data quality objectives to be useful in assessing disposition of this site. The boring samples will be analyzed for TAL/TCL compounds. See Figure 9 for the new boring location.

Site 75: Unknown Wastes Near Building 689. PAH compounds were detected at SS 75 at concentrations exceeding the screening criteria. Four additional surface soil samples will be collected to delineate the lateral extent of PAH contamination in the surface soil. The samples will be collected 30 feet northwest, 30 ft northeast, 30 ft southeast and 30 ft southwest of Sample SS75A. The samples will be analyzed for PAH and TAL/TCL compounds (Table 10). See Figure 10 for the sample locations.

Site 77: Unknown Wastes Near Buildings 689 and 690

The parameters detected at SS 77 include antimony, arsenic, dieldrin and PAH compounds.

Four locations will be sampled for soil; two locations, SS-77E and SS-77F, will be from the 0.0 to 1.0 foot interval, and will be analyzed for PPM and PAH concentrations to provide data for a risk assessment (Figure 11). The other two locations, FS-77G and H, will be sampled at three depth intervals (i.e., 0.0 to 0.5, 0.5 to 1.0, and 1.0 to 1.5 ft) and analyzed for the same parameters as the SS locations samples. Geotechnical parameters and TCLP metals and PAH will be analyzed from a 0.0 to 1.5 ft composite interval at the FS locations (Table 11).

Site 78: Alcohol, Acetone, Toluene, & Hydrofluoric Acid Area Building 689. One groundwater grab sample (HY-03) will be collected and analyzed for VOCs to evaluate whether there has been transfer of VOCs from the site. Soil from the intervals of 8 to 10 and 18 to 20 feet will be collected at the same location and analyzed for geotechnical parameters (Figure 12). To evaluate the lateral and vertical extent of TCE (if found in the groundwater grab sample) a second phase of sampling will collect soil northwest and southwest of SB-76B. Soil will be collected from 1 to 3, 4 to 6, 18 to 20, 28 to 30 and 38 to 40 feet below land surface at locations SB-78D and E, and analyzed for VOC concentrations (Table 12)

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OU-4 Screening Sites

Site 35: Defense Reutilization Marketing Office Building T-308: Hazardous Waste Storage. COPCs for SS 35 include arsenic in the surface soils and total chromium and lead in the subsurface soils.

Four surface soil samples (i.e., SS-35A through D) will be collected to evaluate and analyze for PPM to confirm reports of elevated arsenic and provide data to support risk assessment of this site (Table 13). See Figure 13 for the new sample locations.

Sites 36 through 39 (Co-located sites in OU#4,): DRMO Drum Storage Area. The COPCs detected in the soil for Sites 36 through 39 include arsenic, chromium, antimony, lead, cadmium, copper, PAH compounds, DDT, 1,1,2,2-tetrachloroethane and trichloroethane (TCE).

One groundwater grab sample (HY-02) will be collected by direct push methods to evaluate the presence of VOC contamination in the area between the concrete pad and the road just north of the site (Figure 14). Three surface soil samples (SS-36A through C) will be collected to the east and south of SS-5. One will be analyzed for PPM and PAH to confirm the results from previous sample SS-5, and two will be analyzed for PPM and TAL/TCL compounds to evaluate lateral extent of metals in surface soils (Table 14).

Site 42: Former PCP Dip Vat Area. The COPCs for Site 42 include dieldrin, PCP and dioxins/furans. Two additional surface soil samples (SS42F and SS42G) will be collected to characterize the extent of contamination at north half of the site (Table 15). The samples will be analyzed for PAH compounds, pesticides/PCB, and TAL/TCL compounds. See Figure 15 for the proposed sample locations.

Site 43: Former Underground PCP Tank Area. The COPCs for Site 43 include arsenic and dioxins in the surface soil. One additional surface soil sample (SS43F) will be collected to characterize the extent of surface soil contamination at the southern half of the site, near SS43B (Figure 16). The sample will be analyzed for pesticides, PCBs and PAH compounds (Table 16).

Site 46: Pallet Drying Area. One surface soil sample (SS-46F; see Table 17) will be collected from a depth of 0.0 to 1.0 (oot, from a location near SS-46C to allow evaluation of PAH, pesticide, and PCB concentrations in this area (Figure 17).

Site 56: West Gate Water Storm Drainage Canal. The only field activity needed at this site is a current photograph. No additional environmental sampling is planned for this site.

Site 72: Waste Oil (PDO Yard). Two surface soil samples are needed to verify historical data and document the lateral extent of wastes (SS-72] and SS-72K, respectively) associated with

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releases from this site. Both samples will be collected from the 0.0 to 1.0 foot depth in the area north of the railroad spur (Figure 18) and analyzed for PPM (Table 18).

Site 79: Fuels, Miscellaneous Liquids, Wood, and Paper. PPM and PAHs are the environmental concerns at this site. One 20-foot boring will be drilled southeast of Building 702, downgradient of the arsenic contamination, to confirm the presence of chromium at SB-79C (Figure 19). In an attempt to define the source of contamination at SS-79A, two additional surface soil samples (from 0.0 to 1.0 feet) will be taken and analyzed for PPM and PAHs. One more surface soil sample will be taken 50 feet south of SS-79A to assess the extent of contamination south of the railroad tracks.

Three locations will be sampled at 6-inch intervals to 1.5 feet for the feasibility study, and analyzed for PPM. In addition, a geotechnical suite and metals TCLP will be analyzed from a 0.0 to 1.5-ft and 0.0 to 0.5-ft composite sample at two of the sites. A metals TCLP will be taken from 0.0 to 1.0 foot at the third sampling location (Table 19).

Site 80: Fuel and Cleaner Dispensing, Building 72. Surface soil contamination is a concern at this site, and six surface soil samples are proposed to obtain additional information about the lateral extent of metals, PAHs, and PCBs at Site 80 (Figure 20). Each sample will be taken from 0.0 to 1.0 feet in depth, and analyzed for either PPM, PAHs, PCBs, or some combination of these (Table 20).

Site 83: Dried Paint Disposal Area. One groundwater grab sample (HY-06) will be collected by direct push methods to assess if groundwater is impacted by metals downgradient of elevated chromium in SB-89B (Figure 21). Eleven surface soil samples (from 0.0 to 1.0 feet) will be collected and analyzed for PPM to assess the lateral extent of surface soil metal contamination.

Six locations will be sampled at 6-inch intervals to 1.5 feet for the feasibility study, and analyzed for PPM. In addition, a geotechnical suite and metals TCLP will be analyzed from a 0.0 to 0.5-ft composite sample at two of the sites (Table 21).

MISCELLANEOUS SCREENING SITE

Offsite Drainage Pathways Site No additional sampling is proposed for the offsite drainage pathways at DDMT, as sufficient information exists.

References

CH2M HILL. Final Preliminary Risk Evaluation. Prepared for United States Army Engineering Support Center, Huntsville, Alabama. April 1998.

"Determination of Volatiles in Soil–Directive for Change", Memorandum from Norman Niedergang, Director, Waste, Pesticides and Toxics Division, U.S. EPA Region 5, December 22, 1997.

Woodward-Clyde. Sampling and Analysis Recommendations. 1996.

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Table 8 - XXCC-3, Bidg 249 ndom to Field Sempling Pian ndom 11 - Main Installation August, 1998			Sample	Location/Basis	North of AR tracks wast	ol Bidg 249 noisr ramp	North of FIR tracks east of Bkdg 249 near ramp	Al FR tracks south of the east side of Bidg 245	AI RR tracks south of
Site 65 Proposed Adde DDMT Dailvery		Sample	Interval	Ð	5				0.0-0.5, 0.5-
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			-	Description	XXCC-3, Bidg 249				
			Site	No.	65				
			Parcol	Ňo,	-				

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Type Site SS

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Evaluata extent of PAHs in the southwest portion of Bidg 249. Evaluate extent of PAHa in the southeast portion of Bidg 249. callect georechnical suite and PAH TCLP trans 0-1.5 fl composite. Coffect geotectmical suits and PAH TCLP from 0-0.5 ft composite. Commenta Evaluate extent of PAHs and pesticides east of SS-65E. Ц ---_ --_ • _ ---Nonh of the west side of Bidg 249 Al AR tracks south of the west side of Bidg 249 Northeast of Bldg 249 0.0-0.5, 0.5, AI RR tracks south of 1.0, 1.0-1 The west side of Bidg 249 1.0, 1.0-1 the east side of Bidg 249 3 FS-658 SS-65K **5S-65** SS-651

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				Comments	Páka may ka alavatad		the asphalt.				
			Ц								
			TAL								
		808		Past/PCB		-			-		-
		Analy		PAH		-]	-	-	-
				VOC		_					
				Mdd		-			-	-	-
				ATEX	5						
ole 7 (Building 253) Flain Fraisting Plan 11 - Main Insistintion 11, 1923			Sampte Location/Reals		North of surface sold	sample SS-66A to make sure the elevated PAHs	were not from asphalt.				
₽¥ 	Sita 66 - PO sad Addendur f Delivery Ord	ſ	Samplo	Interval Interval		5		-			
	Prepo DOM			Proposed Secola ID	California La	SS-66B			SS-66C	55-660	SS-66E
					avination Builduras	Provide a confirmation	sample north of the ssphalt	_			
				Description	POL (Building 253)						
	ļ		80	ż	89						
		_	Parcel	2	-		-	_	_		
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		Comments	Direct Push Technology (DPT) Graundwater Grab Sample.	Direct Push Technology (DFT) Soil Semples.
		Geatech. Sulte		
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	164	PeetPC		
1	Analy	PAH		
	ļ	о Х		N
		PPM Metals		
151. 194n 10an		BTEX	-	
Table & Iation Gas Stellon, Eidg Endom Io Flaid Sampling P Drider 11 - Main Instalt August, 1990		Sample LocationBasis	Localud nbar fuel transfer åreå	Located naar fuel transfer erea
Site 67 - Insta Proposed Adds DOMT Oether		Sample Interval (n)	¥.	B-10, 18-20
		Proposad Samola ID	LO-YH	SB-67C
		Sempling	Datarmine if there has been an impect to groundwater from benzene in subsurface sol	Feasbillty Study Information
			installation, Bldg 257.	
		815 15	6	
		Parcel	2 7	
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s 68 - POL Build) dendum to Field ery Order 11 - Mi August, 1998	Sample Loc	Northeast of B
Site Proposed Ad DDNT Delivi	Sample Interval (f)	0-1, 8-10
	Proposed Sample ID	3 9-68C

:	Table 9	13 - POL Stalding 263	indum to Field Sumpling Plan	r Order 11 - Main Installation	August, 1998
	-	The W - P	Addendur	Livery Drd	δny

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	Commenta	
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	TAL	2
8	Past PCB	
Analysis	PAH	
	v0C	
	Mdd	
	ВТЕХ	
	Sample Location/Basis	Northeast of Bidg 263
	Sample Interval (f)	0-1, 8-10
	Proposed Sample ID	5B-68C
	Sampling <u>Objective</u>	Site Characterization
	Description :	POL Building 253
	Sito No.	69
ĺ	Parcel No.	-
	2 ž	-
ſ	Type of Site	SS

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# Table 19 Sits 75 - Unknown Wassen Neer Building 649 Proposed Addendum to Field Sampling Plan ODMT Delivery Onder 11 - Main Installation August, 1938

|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ļ                                                                                                                           |   | ĺ                                       |                                           |                                           |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|---|-----------------------------------------|-------------------------------------------|-------------------------------------------|
|        | Contraction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                             |   |                                         |                                           |                                           |
|        | Teble                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                             |   | -                                       |                                           |                                           |
|        | Ţ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                             |   | -                                       |                                           |                                           |
| 503    | PesuPCB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                             |   |                                         |                                           |                                           |
| Analys | H¥d                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | -                                                                                                                           |   | ÷                                       | -                                         | -                                         |
|        | VOC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                             |   |                                         |                                           |                                           |
|        | ejejøyj<br>Melej                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             | i |                                         |                                           |                                           |
|        | BTEX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                             |   | _                                       |                                           |                                           |
|        | Sampla Location Basia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | proximately 30 inel<br>timest of 55-75.4                                                                                    |   | pproximalely 30 feet normaas:<br>SS-75A | proximately 30 heet<br>uthread of \$5-75A | sproutmately 30 feet<br>unreast of SS-75A |
| L      | -,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ₹₹                                                                                                                          |   | ₹ 5                                     | ¥ 9                                       | 28                                        |
| -      | Semple<br>Interval<br>(11)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2<br>2<br>2<br>2<br>2                                                                                                       |   | 0-1<br>0-1                              | 0-1<br>100                                | 0-1<br>100                                |
| _      | Proposed Interval<br>Sample ID (ft)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | S\$-75C P-1 Ag                                                                                                              |   | 65-750 0-1 A                            | 55-75E 0-1 Ar                             | SS-75F 0-1 A                              |
|        | Proposed Interval<br>Sempling Objective Sample ID (11)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Determine terorsi extent of P.A.H SS-75C D-1 Ap<br>Dortaminetten in surface soli                                            |   | 8.55-750 0-1 Au                         | av 0-1 55-756 0-1 Av                      | SS-75F D-1 A                              |
|        | Description Sempling Objective Sample ID (11)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Unumown Wastins near Delinearia tanianti artianti ol P.A.H. SS-75C D-1 Aq<br>Bufiding 888 containtrution in surface aci     |   | SE-75D 0-1 M                            | 55-75E 0-1 44                             | SS-75F 0-1 4                              |
|        | i Site Sempla Sempling Colective Sample (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 75 Uncorrown Waterins near Detinearia lariant ol P.A.H. SS-75C D-1 Aq<br>Bufdung 682 contaumination in surface soil         |   | SE-75D 0-1 M                            | 10 22-15E 0-1 10 200                      | SS-75F D-1 A                              |
|        | Parcei Site Sempte Sempte Sempte (11) Semp | 21 75 Unurrown Wastins neur Delanoania laiorta (xrant ol P.X.H. SS-75C D-1 Act<br>Bundung 889 containtration in surface uci |   | 0.1 AI                                  | 55-75E 0-1 44                             | SS-75F D-1 A                              |
|        | OU      Parcei      Sample        OU      Parcei      Ste        No.      No.      No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1 21 75 Undrawn Wastins naur Delmoans laioft arsant of PAH SS-75C D-1 Ad<br>Budding 889 containtration in surface uci       |   |                                         | 55-75E 0-1 At 20                          | 1 SE-75F D-1 K                            |

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|                                                                                                                            |          |        | Comments                 | Corridor seems to be     | contaminated on north side | neer AA.  |                  |                      |                      | Collect geotechnical suite | and PAH and Metals TCLP | from 0-1.5 ft composite. |        |            |   |
|----------------------------------------------------------------------------------------------------------------------------|----------|--------|--------------------------|--------------------------|----------------------------|-----------|------------------|----------------------|----------------------|----------------------------|-------------------------|--------------------------|--------|------------|---|
|                                                                                                                            |          |        | TCL                      |                          |                            |           |                  |                      |                      |                            |                         |                          |        |            |   |
|                                                                                                                            |          |        | TAL                      |                          |                            |           |                  |                      |                      |                            |                         |                          |        |            |   |
|                                                                                                                            |          | _      | Pest PCB                 |                          |                            |           |                  |                      |                      |                            |                         |                          |        |            |   |
|                                                                                                                            | na)y 505 |        | PAH                      |                          |                            | -         |                  |                      | -                    |                            |                         |                          | ы      | <b>6</b> 1 | , |
|                                                                                                                            | •        |        | VOC                      |                          |                            |           | -                | •                    |                      |                            |                         |                          |        |            | 1 |
|                                                                                                                            |          |        | Mdd                      |                          |                            | -         |                  | _                    | -                    |                            |                         |                          | 9      | e.         | 1 |
| nd 630<br>na n                                                                                                             |          |        | OTEX                     |                          |                            |           |                  |                      |                      |                            |                         |                          |        |            |   |
| Table 11<br>m Wastee Near Building 583 4<br>dendum 15 Field Sampling Fi<br>ery Order 11 - Maein Installalu<br>August, 1998 |          |        | Sample<br>Location/Basis | East of existing samples | on noth side of            | corridor. | West of existing | samples on the north | side of the corridor | Collected at SS-77C to     | help determine depth of | potential soil romoval   |        |            |   |
| te 77 - Unionaw<br>Proposed Ac<br>DDATT Delfy                                                                              |          | Sampte | interval<br>(ft)         | 0-1                      |                            |           |                  |                      |                      | 0.0-0.5, 0.5               | 1.0, 1.0-1.5            |                          |        |            |   |
| 3                                                                                                                          |          |        | Propased<br>Semple 1D    |                          |                            | SS-77E    |                  |                      | SS-T/F               |                            |                         |                          | FS-77G | 56.77U     |   |
|                                                                                                                            |          |        | Sampling Objective       | Evaluate risk of PAH     | In surface soil            |           | •                |                      |                      |                            |                         |                          |        |            |   |
|                                                                                                                            |          | •      | Description              | Unknown Wastes           | Near Building 689          | and 690   |                  |                      |                      |                            |                         |                          |        |            |   |
|                                                                                                                            |          |        | 20 X                     | 1                        |                            |           |                  |                      |                      |                            |                         |                          |        |            |   |
|                                                                                                                            |          |        | Parcel<br>No.            | 22                       |                            |           |                  |                      |                      |                            |                         |                          |        |            |   |
|                                                                                                                            |          |        | 8 g                      | -                        |                            |           |                  |                      |                      |                            |                         |                          |        |            |   |
|                                                                                                                            |          | , be   | ۍ<br>چ                   | SS                       |                            |           |                  |                      |                      |                            |                         |                          |        |            |   |

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|          |                                                                  |                                                         |         |        | Comments              | First phase of characterization. | Use quick tumaround lab   | semples; siso collect    | geolechnical Suite at 8-10 and | 18 to 20 ft. | Sacond phase, contrigent on   | presence of VOCs to         | groundwater from Site 78. |   | Second phase, contingent on   | presence of VOCs in         | groundwater from Site 78. |
|----------|------------------------------------------------------------------|---------------------------------------------------------|---------|--------|-----------------------|----------------------------------|---------------------------|--------------------------|--------------------------------|--------------|-------------------------------|-----------------------------|---------------------------|---|-------------------------------|-----------------------------|---------------------------|
|          |                                                                  |                                                         |         |        | ŢĊĹ                   |                                  |                           |                          |                                |              |                               |                             |                           |   |                               |                             |                           |
|          |                                                                  |                                                         |         |        | TAL                   |                                  |                           |                          |                                |              |                               |                             |                           |   | _                             | -                           |                           |
|          |                                                                  |                                                         |         |        | Pest PCB              |                                  |                           |                          |                                |              |                               |                             |                           |   |                               |                             |                           |
|          |                                                                  |                                                         | Analyse |        | PAH                   |                                  |                           |                          |                                |              |                               |                             |                           |   |                               |                             |                           |
|          |                                                                  |                                                         |         |        | Š                     |                                  |                           |                          |                                | -            |                               |                             | -                         | 5 |                               |                             | u                         |
|          | g                                                                |                                                         |         |        | Wdd                   |                                  |                           |                          |                                |              |                               |                             |                           |   |                               |                             |                           |
|          | 9 gribliu 8                                                      |                                                         |         |        | BTEX                  |                                  |                           |                          |                                |              |                               |                             |                           |   |                               | -                           |                           |
| Table 12 | ene und Hydroftuaric Acid Array,<br>Indum to Fleid Sampling Pian | y Order 11 - Muin Ins <b>tall</b> ation<br>August, 1998 |         |        | Sample Location/Basts | Collect groundwater sample       | to determine if YOCs have | reignated to groundwater |                                |              | Evaluate varical and          | horizontal extent northwest | ol 58-788,                |   | Evaluate verical and          | horizontal extent southwost | of SB-768.                |
|          | I, Acatome, Toh.<br>Proposed Addi                                | DOMT Deliver                                            |         | Sample | (ft)                  | ¥Z                               | -                         | _                        |                                |              | 1-3, 4-0, 10-                 | 20, 28-30,                  | 999                       |   | 1-3, 4-8, 18-                 | 20, 28-30,                  | 3840                      |
|          | Site 76 - Alcahol                                                |                                                         |         |        | Sample ID             | 17-03                            |                           |                          |                                |              | (S8-780                       |                             |                           |   | SB-78E                        |                             |                           |
|          |                                                                  |                                                         |         |        | Sampling Objective    | Determine d there has            | been transfer of VOCs to  | groundwaler and evaluate | walar (gwals                   |              | Evaluate lateral and vertical | extent of TCE if found in   | groundwater,              |   | Evaluate lateral and vertical | extent of TCE if lound in   | groundwater.              |
|          |                                                                  |                                                         | -       |        | . Description         | Atcohol, Acetone,                | Toluone and Hydrofluoric  | Acid Area, Building 689. |                                |              |                               | <i>y</i>                    |                           |   |                               |                             |                           |
|          |                                                                  |                                                         |         | -      | No.                   | 6,                               |                           |                          |                                |              |                               |                             |                           |   |                               | _                           |                           |
|          |                                                                  |                                                         |         |        | No.                   | 21                               |                           |                          |                                |              |                               |                             |                           |   |                               |                             |                           |

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|----------------------------------------------------------------------------------------------|-----------|--------|------------------------|-------------------------------|--------------------------|----------------------------------|-----------------------------------------|----------------------|---------|-----------------------------|---------------|-----------------------|------------------------------|---------------------------|------------------|----------------------|------------------------------|---------------------------|-------------------|
|                                                                                              |           |        | TCL                    |                               |                          |                                  |                                         |                      |         |                             |               |                       |                              |                           |                  |                      |                              |                           |                   |
|                                                                                              |           |        | TAL                    |                               |                          |                                  |                                         |                      |         |                             |               |                       |                              |                           |                  |                      |                              |                           |                   |
|                                                                                              |           |        | Per PCB                |                               |                          |                                  |                                         |                      |         |                             |               |                       |                              |                           |                  |                      |                              |                           | _                 |
|                                                                                              | Knary te: |        | PAH                    |                               |                          |                                  |                                         |                      |         |                             |               |                       |                              |                           |                  |                      |                              |                           |                   |
|                                                                                              |           |        | 202                    |                               |                          |                                  |                                         |                      | I       |                             |               |                       |                              |                           |                  |                      |                              |                           |                   |
|                                                                                              |           |        | Mdd                    |                               |                          |                                  |                                         | •                    | -       |                             | -             | _                     |                              | _                         | -                |                      |                              |                           | -                 |
|                                                                                              |           |        | BTEX                   |                               |                          |                                  |                                         |                      |         |                             |               |                       |                              |                           |                  |                      |                              |                           |                   |
| olo 13<br>VO Bidg. T-JCB<br>r to Field Sampling Plan<br>r 11 - Main Installation<br>st, 1998 |           |        | Samula I onation/Bacis |                               | NGG1 33-4 83 8           | confirmation sample for          | arsenic                                 |                      |         | Northwest of building       | 308           | Southeast of building | 308                          |                           |                  | West of building 308 |                              |                           |                   |
| Tat<br>Site 35 - DAA<br>dendum<br>edivery Orde<br>Augu                                       |           | Samplo | Interval<br>(M)        |                               | -                        | -                                | 2                                       |                      |         |                             | _             |                       |                              |                           |                  |                      |                              |                           |                   |
| Propose                                                                                      |           |        | Proposod               |                               |                          |                                  |                                         |                      | 55-33A  |                             | SS-35B        |                       |                              |                           | 55-35C           |                      |                              |                           | SS-35D            |
|                                                                                              |           |        |                        | Stampured underview           | Confirm prosonce of      | elevated arsanic reported in     | historical sample SS4.                  |                      |         | Provide additional data for | risk analysis | Continu presence of   | alevated arsenic reported in | historical sample SS4 and | ovaluale extent. | Confirm presence of  | elevated arsonic reported in | historical sample SS4 and | evoluato exterti. |
|                                                                                              |           | _      |                        |                               | Detense Reutilization    | Marketing Office                 | (DRMO) Building T-                      | 306: Hazardous Weste | Storage |                             |               |                       |                              |                           |                  |                      |                              |                           |                   |
|                                                                                              |           |        | Ste<br>Ste             | ģ                             | 35                       |                                  |                                         |                      |         |                             |               |                       |                              |                           |                  |                      | _                            |                           |                   |
|                                                                                              |           |        | Parcel                 | , DN                          | 5                        |                                  |                                         |                      |         |                             |               |                       |                              |                           |                  |                      |                              |                           |                   |
|                                                                                              | ļ         |        | 5                      | No.                           | 4                        |                                  |                                         | _                    |         |                             |               |                       |                              |                           |                  |                      |                              |                           |                   |
|                                                                                              |           | μo     | ä                      | Site                          | SS                       |                                  |                                         |                      |         |                             |               |                       |                              |                           |                  |                      |                              |                           |                   |

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|   |          |        |          | Comments              | Direct Push Technology (DPT) | Groundwater Sample.     |                            |                            | Confirm results of SS-5       |                                                |                                                      | -            |
|---|----------|--------|----------|-----------------------|------------------------------|-------------------------|----------------------------|----------------------------|-------------------------------|------------------------------------------------|------------------------------------------------------|--------------|
|   |          |        |          | TCL                   | _                            | -                       |                            |                            | _                             |                                                |                                                      | -            |
|   |          |        |          | TAL                   |                              |                         |                            |                            |                               |                                                | -                                                    | -            |
|   |          |        |          | Perl/ PCB             |                              |                         |                            |                            |                               |                                                |                                                      |              |
|   | Analysis |        |          | PAH                   |                              |                         |                            |                            | •                             |                                                |                                                      |              |
|   |          |        |          | Ş                     | -                            |                         |                            |                            |                               | _                                              |                                                      |              |
|   |          |        |          | Mdd                   |                              |                         |                            |                            | 1                             |                                                | -                                                    | -            |
| ļ |          |        |          | BTEX                  |                              |                         |                            |                            |                               |                                                |                                                      |              |
|   |          |        |          | Sampie Location/Busia | Evoluate groundwaler         | impact in area north of | concrete pad between       | Perimeter Rd. and the pad. | At SS-5 to confirm historical | f03U!!3                                        | South of SS-5                                        | East of SS-5 |
|   |          | Sample | Interve) | Ę                     | A M                          |                         |                            |                            | 0-1                           |                                                | 5                                                    | 5            |
|   |          |        | Proposed | Sample 10             | 10-VH                        |                         |                            |                            | SS-36A                        |                                                | SS-36B                                               | S5-38C       |
|   |          |        |          | Sampiing Objective    | Evaluate presence of         | VOCs in groundwater due | to elevated concentrations | (n <b>so</b> il.           | Need confirmation of Mon      | levels of lead, chromium<br>and SVOCs at SS-5. | Determine lateral extent of metals in surface soils. |              |
|   |          |        |          | Oescription           | ORMO Drum Storage            | 1                       |                            |                            |                               |                                                |                                                      |              |
|   |          | _      | 215      | ŝ                     | Se 30                        | _                       |                            | _                          |                               |                                                |                                                      |              |
|   |          |        | Parcel   | óz                    | 5                            |                         |                            |                            |                               |                                                |                                                      |              |
|   |          |        | 9        | Ś                     | •                            |                         |                            |                            |                               |                                                |                                                      |              |
|   |          | Type   | ō        | 20                    | 55                           |                         |                            |                            |                               |                                                |                                                      |              |

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|                                                                                                                 |                  |                    | Ĕ                     | -                                                                |                                                                 |
|                                                                                                                 |                  |                    | Į                     | -                                                                |                                                                 |
|                                                                                                                 | 2                |                    | Pest/PCB              |                                                                  | 1                                                               |
|                                                                                                                 | <b>Analyses</b>  |                    | PAH                   |                                                                  | -                                                               |
|                                                                                                                 |                  |                    | VOC                   |                                                                  |                                                                 |
|                                                                                                                 |                  |                    | PPM                   |                                                                  |                                                                 |
|                                                                                                                 |                  |                    | BTEX                  |                                                                  |                                                                 |
| Table 15<br>Former PCP Dip Vat Arta<br>Former PCP Dip Vat Arta<br>Former 11 - Main fratallation<br>August, 1998 |                  |                    | Sample Location/Busis | n Open Storage Area X06<br>o characterize north half<br>M site.  | n Opon Starage Area X05<br>o cheractarize north half<br>é site. |
| 51te 42 -<br>Proposed Add<br>DDMT Delive                                                                        | $\left  \right $ | Sample<br>Interval | Ê                     |                                                                  | 2 2 0                                                           |
|                                                                                                                 |                  | Proposad           | Sample ID             | SS-42F                                                           | SS-42G                                                          |
|                                                                                                                 |                  |                    | Sampling Objective    | Need to analyzo for all<br>related compounds lor<br>further site |                                                                 |
|                                                                                                                 |                  | • •                | Description           | Former PCP Oip<br>Vat Area                                       |                                                                 |
|                                                                                                                 |                  | Sta                | ź                     | Ş₽                                                               |                                                                 |
|                                                                                                                 |                  | Parrel             | o<br>Z                | 8                                                                |                                                                 |
|                                                                                                                 |                  | B                  |                       | -                                                                |                                                                 |
|                                                                                                                 |                  | و ۲<br>م           |                       | S                                                                |                                                                 |

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|                                                                                          |         | Contiments                 | Sample SS-43F will  | characterize the southern half | of he site.                      |
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|                                                                                          |         |                            |                     |                                |                                  |
|                                                                                          |         | T<br>T                     | _                   |                                |                                  |
|                                                                                          | 5       | PestPC                     | -                   |                                |                                  |
|                                                                                          | Analyse | PAH                        | -                   |                                |                                  |
|                                                                                          |         |                            |                     |                                |                                  |
| \$ F _                                                                                   |         | PPM<br>Motals              |                     |                                |                                  |
| ank Are<br>ling Pla<br>tellation                                                         |         | BTEX                       |                     |                                |                                  |
| Table 15<br>er underground PCP 1<br>dendum to Fleid Samp<br>August, 1998<br>August, 1998 |         | Sample<br>Location/Basis   | Near SS-43B         |                                |                                  |
| 43 - Form<br>posed Add<br>MT Defive                                                      |         | Sample<br>Interval<br>(11) | 0-1                 |                                |                                  |
| Pro<br>Pro<br>CD                                                                         |         | Proposed<br>Samole ID      | SS-43F              |                                |                                  |
|                                                                                          |         | Sempling Objective         | Need to enalyze all | related compounds for          | turther site<br>characterization |
|                                                                                          |         | Description                | Former underground  | PCP Tenk Area                  |                                  |
|                                                                                          |         | Site<br>No.                | 43<br>1             |                                |                                  |
|                                                                                          |         | Parcel<br>No.              | ន                   |                                |                                  |
|                                                                                          | ┝       | 55<br>8. 9                 | 4                   |                                |                                  |
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|                                                                                                                      | 1       |        | 걸                     |                         |                                                        |
|                                                                                                                      |         |        | TAL                   |                         |                                                        |
| :                                                                                                                    |         |        | PestPCB               | -                       |                                                        |
|                                                                                                                      | Anatyce |        | PAH                   | -                       |                                                        |
|                                                                                                                      |         |        | Š                     |                         |                                                        |
|                                                                                                                      |         |        | PPU:<br>Metala        |                         |                                                        |
|                                                                                                                      |         |        | втех                  |                         |                                                        |
| 7 John 17<br>- Pallai Orying Arna<br>Indum ta Field Sumpling Plan<br>- Ordar 11 - Majni Installation<br>August, 1998 |         |        | Sample Location/Basis | IAA SS-48 C             |                                                        |
| Sta 46<br>Proposed Adde<br>UDLT Definery                                                                             |         | Sample | (Interval)            | 10                      |                                                        |
|                                                                                                                      |         |        | Proposed<br>Sample ID | SS-46F                  |                                                        |
|                                                                                                                      |         |        | Semetion Oblamba      | Name in analyze for all | related compounds for<br>further site characterization |
|                                                                                                                      |         |        | Teac dailor.          | Dollar Orden Area       |                                                        |
|                                                                                                                      |         | _      | Site                  |                         | ?                                                      |
|                                                                                                                      |         |        | Parcel<br>81-         |                         | 3                                                      |
|                                                                                                                      | Ĺ       |        | 33                    | 2                       | t                                                      |
|                                                                                                                      |         | TYPe   | 5                     |                         | 8                                                      |

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|                                                                                               |         |   |                    | ដ              |                       |                              |                                                                                   |                             |       |                                                               |
|                                                                                               |         |   |                    | TAL            |                       |                              |                                                                                   |                             |       |                                                               |
|                                                                                               |         |   |                    | Past/PCB       |                       |                              |                                                                                   |                             |       |                                                               |
|                                                                                               | nalysos |   |                    | PAH            |                       |                              | ·                                                                                 |                             |       |                                                               |
|                                                                                               | Ā       |   |                    | νος            | _                     |                              |                                                                                   |                             |       |                                                               |
|                                                                                               |         |   | Mdd                | fdotale.       |                       |                              |                                                                                   |                             |       |                                                               |
| Į                                                                                             |         |   |                    | BTEX           |                       |                              |                                                                                   |                             |       |                                                               |
| Table 18<br>•Wasta 01 (PDO Yard)<br>endum to Fledd Sampting P<br>y Orden 31 - Main Instaltati |         |   | Sample             | Location/Besis | Just north of the end | of the RR spur noar<br>SS-41 | North of the end of<br>the RR spur<br>epproximately 30 fool<br>northwest of SS-41 |                             |       |                                                               |
| Site 72.<br>Proposed Add                                                                      |         |   | Sample<br>Interval | ( <b>u</b> )   | 0-1                   |                              | 2                                                                                 |                             |       |                                                               |
|                                                                                               |         |   | Proposed           | Sample (D      | 55-72.1               |                              | SS-72K                                                                            |                             |       |                                                               |
|                                                                                               |         |   |                    |                |                       |                              | Sampling Objective                                                                | Confirm historical data for | SS-11 | Lateral delineation of lead<br>and chromlum<br>concentrations |
|                                                                                               |         |   |                    | Description    | Wasta oli (PDO        | Yerd)                        |                                                                                   |                             |       |                                                               |
|                                                                                               | L       |   | Sie                | ź              | 72                    |                              |                                                                                   |                             |       |                                                               |
|                                                                                               |         | - | Parcol             | o<br>Z         | 15                    |                              |                                                                                   |                             |       |                                                               |
|                                                                                               |         |   | 8                  | ź              | 4                     |                              |                                                                                   |                             |       |                                                               |
|                                                                                               |         |   | Type<br>of         | Site           | 55                    |                              |                                                                                   |                             |       |                                                               |

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|                                                                                                                              |        | Comments              | Metals of concern are lead,<br>arsenic, chromiush                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                   |                                    |                                                                      | Geolectruical surja and<br>Metals TCLP from 0-1.5 ft<br>composite.                        |                                  | Collect Metals TCLP from 0.0<br>1.0 |
|------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------------------------|-------------------------------------|
|                                                                                                                              |        | TCL                   | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                   |                                    |                                                                      |                                                                                           |                                  |                                     |
|                                                                                                                              |        | TAL                   | E.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                   |                                    |                                                                      |                                                                                           |                                  |                                     |
|                                                                                                                              | 10     | Pest PCB              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                   |                                    |                                                                      |                                                                                           |                                  |                                     |
|                                                                                                                              | Analys | РАН                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -                                                                                                 | -                                  | -                                                                    |                                                                                           |                                  |                                     |
|                                                                                                                              |        | VOC                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                   |                                    |                                                                      |                                                                                           |                                  |                                     |
|                                                                                                                              |        | ры                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -                                                                                                 | -                                  | -                                                                    | m                                                                                         | e.                               | 5                                   |
| ž                                                                                                                            |        | RTEX                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                   |                                    |                                                                      | -                                                                                         |                                  |                                     |
| Table 19<br>Litenerus Liquida, Wood, end P.<br>Micum to Field Sampling Plan<br>Korder 11 - Main Installation<br>August, 1996 |        | Sampia Location/Basis | Southeast of Building 702<br>on the south sids of the<br>AR tracks which is<br>downgradient of the<br>atsenic contantinetion.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | fuel east of loading dock                                                                         | Vear P.R. tracks east of SS<br>19A | 50 teal south of SS-79A                                              | lust east of loading dock                                                                 | Veor RR tracks east of SS<br>19A | io feet south of SS-79A             |
| Fuels, Misce<br>spowed Adde<br>DMT Defiven                                                                                   |        | Semple<br>Interval    | 9, 01 0 1<br>9, 01 0<br>9, 01 0<br>9, 01 0<br>9, 01 0<br>1<br>9, 0<br>10<br>1<br>9, 0<br>10<br>1<br>9, 0<br>10<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 |                                                                                                   | 1                                  | <u></u>                                                              | 0.0.55<br>1.5-1.0,<br>1.5-1.0,                                                            | <u> &lt; r-</u>                  | <u>נה</u>                           |
| 23<br>23<br>25<br>20<br>20                                                                                                   |        | Proposed<br>Sample (D | Dar-42                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 062-55                                                                                            | SS-79E                             | SS-79F                                                               | FS-78A 0                                                                                  | FS-79B                           | FS-79C                              |
|                                                                                                                              |        | Sempling Objective    | Confirm the presence of<br>chromium at SB-79C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Determine if the<br>contermination at SS-79A<br>originated from the RR<br>trecks or Building 702. | -                                  | Determine the extent of<br>motets and PAHs south of<br>the FR tracks | Feasibility Study<br>Information - Ventical extent<br>of metals in near-surface<br>stoll. |                                  |                                     |
|                                                                                                                              |        | Description           | Fuots, Miscallaneous<br>Liquida, Wood, and<br>Paper                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <u> </u>                                                                                          |                                    |                                                                      | <u> </u>                                                                                  | _                                |                                     |
|                                                                                                                              |        | Site<br>No.           | 8/                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                   |                                    |                                                                      |                                                                                           |                                  |                                     |
|                                                                                                                              |        | Parcol<br>ND.         | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                   |                                    |                                                                      |                                                                                           |                                  |                                     |
|                                                                                                                              |        | D a                   | ч<br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                   |                                    |                                                                      |                                                                                           |                                  |                                     |
|                                                                                                                              | ,      | Site of               | S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                   |                                    |                                                                      |                                                                                           |                                  |                                     |

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|                                                                                                          |          | Comments.                      |                                                                |                                                     |                                                                   |                                                                   |                                                                                             |                                                                                              |
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|                                                                                                          | ļ        | 1<br>C                         |                                                                |                                                     |                                                                   |                                                                   |                                                                                             |                                                                                              |
|                                                                                                          |          | TAL                            |                                                                |                                                     |                                                                   |                                                                   |                                                                                             |                                                                                              |
|                                                                                                          |          | Pest PCB                       | -                                                              |                                                     |                                                                   |                                                                   | -                                                                                           | -                                                                                            |
|                                                                                                          | Analyses | РАН                            | -                                                              |                                                     | -                                                                 | -                                                                 |                                                                                             |                                                                                              |
|                                                                                                          |          | voc                            |                                                                |                                                     |                                                                   |                                                                   |                                                                                             |                                                                                              |
|                                                                                                          |          | Mdd                            |                                                                | -                                                   | -                                                                 | -                                                                 |                                                                                             |                                                                                              |
|                                                                                                          |          | BTEX                           |                                                                |                                                     |                                                                   |                                                                   |                                                                                             |                                                                                              |
| ble 20<br>er Olspersing, Building 72<br>a to Field Sampling Man<br>er 11 - Main Instatiation<br>at, 1998 |          | Sampie<br>Locetion/Basis       | Northeast of SB-BGA                                            | Southwest of SB-80B                                 | Southeast of SS-808                                               | Southeast of SS-80B                                               | Near SS-80A                                                                                 | Near SS-80B                                                                                  |
| Ta<br>Juel and Ctean<br>ed Addendum<br>Delivery Ordu<br>Augu                                             |          | Samplo<br>Interval<br>(It)     | <del>0</del> 1                                                 | 5                                                   | 5                                                                 | 6-1                                                               | 6                                                                                           | 0-1                                                                                          |
| Sita 80 - Fi<br>Propose<br>DDMT                                                                          |          | Proposed<br>Sample (D          | 55-800                                                         | SS-BOE                                              | SS-BOF                                                            | SS-80G                                                            | SS-BOH                                                                                      | SS-80                                                                                        |
|                                                                                                          |          | Sampling Objectiv <del>e</del> | Determine lateral extent of<br>PCB and PAH in surface<br>soli. | Cetermine lateral extent of metats in surface soil. | Determine lateral extent of<br>Metals and PAH in surface<br>soil. | Determine lateral extent of<br>Metels and PAH in surface<br>soll. | Confirm presence and<br>potentially determine lateral<br>extent of PCBs in surface<br>soil. | Contitra presence and<br>potentielly delermine falenal<br>extent of PCBs in surface<br>soil. |
|                                                                                                          |          | Description                    | Fuel and Cleaner<br>Dispensing, Building<br>72                 |                                                     |                                                                   |                                                                   |                                                                                             |                                                                                              |
|                                                                                                          |          | Site<br>No.                    | 8                                                              |                                                     |                                                                   |                                                                   |                                                                                             |                                                                                              |
|                                                                                                          |          | Parcel<br>No.                  | 8                                                              |                                                     |                                                                   |                                                                   |                                                                                             |                                                                                              |
|                                                                                                          |          | 2 ș                            | च                                                              |                                                     |                                                                   |                                                                   | _                                                                                           |                                                                                              |
|                                                                                                          |          | Site of B                      | SS                                                             |                                                     |                                                                   |                                                                   |                                                                                             |                                                                                              |

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|--------------------------------------------------------|--------------------------|------------------------------------------|--------------------|-------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------------------------|----------------------------------------|-------------------------------|------------------------------|---------------------------------------------|--------------------------------------------------|---------------------------|-----------------|-------------------|-------------------------------------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------|--------------|--------------|--------------------------------------------------------------------------|
|                                                        |                          |                                          |                    | Commente                                        | Contropent on ability to<br>teample metals using push<br>and obtain turbidity of test<br>them 25 MTUs. | Continum metals are the only<br>parameter of concern |                                        |                               |                              |                                             |                                                  |                           |                 |                   |                                                 |                                                 |                                                                                                |                                                                       |                 | Collect geotechnical suits<br>and TCLP metals from = 0-<br>0.5 commons. |              |              | Collect geometrycal suits<br>and TCLP metals from a 0-<br>0.5 composite. |
|                                                        |                          |                                          |                    | L L                                             |                                                                                                        |                                                      |                                        |                               |                              |                                             |                                                  |                           |                 |                   | ł                                               |                                                 |                                                                                                |                                                                       |                 |                                                                         |              |              |                                                                          |
|                                                        |                          |                                          |                    | F                                               | £                                                                                                      |                                                      |                                        |                               |                              |                                             |                                                  |                           |                 |                   |                                                 |                                                 |                                                                                                |                                                                       |                 |                                                                         |              |              |                                                                          |
|                                                        |                          |                                          |                    |                                                 |                                                                                                        |                                                      |                                        |                               |                              |                                             |                                                  |                           |                 |                   |                                                 |                                                 |                                                                                                |                                                                       |                 |                                                                         |              |              |                                                                          |
|                                                        |                          |                                          | Analys             |                                                 | Ĩ.                                                                                                     |                                                      |                                        |                               | ļ                            |                                             |                                                  |                           |                 |                   |                                                 |                                                 |                                                                                                |                                                                       |                 |                                                                         |              |              |                                                                          |
|                                                        |                          |                                          |                    | 2                                               |                                                                                                        |                                                      |                                        |                               |                              |                                             |                                                  |                           |                 |                   |                                                 |                                                 |                                                                                                |                                                                       |                 |                                                                         |              |              |                                                                          |
|                                                        |                          |                                          |                    |                                                 | -                                                                                                      | -                                                    | -                                      | -                             | -                            | -                                           |                                                  |                           |                 |                   | -                                               | -                                               | -                                                                                              | 0                                                                     |                 | m                                                                       | 6            | 6            | 6                                                                        |
|                                                        |                          |                                          |                    |                                                 |                                                                                                        |                                                      |                                        |                               |                              |                                             |                                                  |                           |                 |                   |                                                 |                                                 |                                                                                                |                                                                       |                 |                                                                         |              |              |                                                                          |
| tie 21<br>Vaim Olgoeul Area<br>o to Field Samting Plan | um to Field Sampling Pun | Ser 11 - Main Installation<br>pust, 1994 |                    | Ramula Localicadiasis                           | Downgradieni ol elevated<br>chromium in 58-699.                                                        | Ensi al 949                                          | East of AR tracks<br>adjacent to SEQ3E | Southeast of concrete<br>perd | Southwest of concrete<br>pad | West of concrete pad<br>ocross the Rethradd | Northwest of the concrete<br>pad across the road | West of building 849 next | to the building | h month of SB-633 | East of the AR (racks, 100<br>it norm of SB-63B | East of the RA tracks, 100<br>A south of 58-838 | Endi of the HR tracks, 200<br>ft south of SB-83B                                               | Adjacent to concrete pad<br>to determine possible<br>depth of namorel |                 |                                                                         |              |              | À                                                                        |
|                                                        | pueppy period            | int Cethery O<br>Uk                      |                    | Sample<br>Interval                              | NA                                                                                                     | 5                                                    |                                        |                               |                              |                                             |                                                  |                           |                 |                   |                                                 |                                                 |                                                                                                | 0.0-0.5, 0.5                                                          | 0.0-0.5, 0.5    | 0.0-0.5, 0.5                                                            | 0.0-0.5, 0.5 | 0.0-0.5, 0.5 | 0.0-0.5, 0.5<br>1,0, 1.0-1.5                                             |
|                                                        | E                        | 5                                        |                    | Proposed<br>Samola ID                           | BOAH                                                                                                   | OCN-SS                                               | 55-80E                                 | 55-83F                        | 55-63G                       | HE8-SS                                      | 55-831                                           | 53-831                    | 200             | ¥72-55            | SS-6JL                                          | 55-83M                                          | SS-83M                                                                                         | FS-830                                                                | f <b>G</b> , OP | F5-83Q                                                                  | F5-83R       | F5-835       | F5-8JT                                                                   |
|                                                        |                          |                                          | Samuling Oblactive | Delemane I groundwater b<br>impacted by metals. | Delemine lateral extent of<br>surface soll contemination                                               |                                                      |                                        |                               |                              |                                             |                                                  |                           |                 |                   |                                                 |                                                 | Feasibulty Study<br>Information - Evaluate<br>vertical extent of metals in<br>meas-studies and |                                                                       |                 |                                                                         |              |              |                                                                          |
|                                                        |                          |                                          |                    | Cescriotion                                     | Dried Paint Disposal<br>Area                                                                           |                                                      |                                        |                               |                              |                                             |                                                  |                           | -               |                   |                                                 |                                                 |                                                                                                | •                                                                     |                 |                                                                         |              |              |                                                                          |
|                                                        |                          |                                          |                    |                                                 | 3                                                                                                      |                                                      |                                        |                               |                              |                                             | _                                                |                           |                 |                   |                                                 |                                                 |                                                                                                |                                                                       |                 |                                                                         |              |              |                                                                          |
|                                                        |                          |                                          |                    | Parcel<br>No.                                   | 8                                                                                                      |                                                      |                                        |                               |                              |                                             |                                                  |                           |                 |                   |                                                 |                                                 |                                                                                                |                                                                       |                 |                                                                         |              |              |                                                                          |
|                                                        |                          |                                          |                    | g ş                                             | -                                                                                                      |                                                      |                                        |                               |                              |                                             |                                                  |                           |                 |                   |                                                 |                                                 |                                                                                                |                                                                       |                 |                                                                         | . <u> </u>   |              |                                                                          |
|                                                        |                          |                                          |                    | 6 6 8                                           | 5                                                                                                      |                                                      |                                        |                               |                              |                                             |                                                  |                           |                 |                   |                                                 |                                                 |                                                                                                |                                                                       |                 |                                                                         |              |              |                                                                          |

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Surface Soil Sampling Location (mg/kg)
 Soil Boring Sampling Location (mg/kg)

Proposed Sampling Location

- (Q) Qualifer Definitions
  - indicates unqualified detection
    indicates estimated where ensure
  - Indicates estimated value above detection limit, but below reporting limit.

Site 33, Sandblasting Waste Drum Storage Constituents Exceeding Risk-Based Criteria Defense Distribution Depot Memphis, TN



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Surface Soil Sampling Location (mg/kg) Soil Boring Sampling Location (mg/kg) 1.1

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Sediment Sample Location (mg/kg) Proposed Soil Sample Location

= - indicates unqualified detection Surface Water Sampling Location (mg/L) J - indicates estimated value above detection

limit, but below reporting limit.

Site 51, Lake Danielson Outlet Drainage Ditch **Constituents Exceeding Risk-Based Criteria** Defense Distribution Deput Memphis, TN



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limit, but below reporting limit



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