APPENDIX D

INVESTIGATION DERIVED WASTE MANAGEMENT REPORT

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INVESTIGATION-DERIVED WASTE CHARACTERIZATION AND DISPOSAL PLAN

FOR THE

PHASE II REMEDIAL INVESTIGATION OF DEMOLITION AREA 2
AT THE RAVENNA ARMY AMMUNITION PLANT, RAVENNA, OHIO

PREPARED FOR

US ARMY OPERATIONS SUPPORT COMMAND
CONTRACT NO. DAAA09-01-G-0009
DELIVERY ORDER NO. 0009

NOVEMBER 2002

INVESTIGATION-DERIVED WASTE CHARACTERIZATION AND DISPOSAL PLAN

FOR THE
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OF DEMOLITION AREA 2
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Prepared by

SpecPro, Inc.
8451 State Route 5
Ravenna, OH 44266

CONTENTS

TABLES

ACRONYMS

DOD	Department of Defense
EPA	U.S. Environmental Protection Agency
GPS	global positioning system
IDW	investigation-derived wastes
Ohio EPA	Ohio Environmental Protection Agency
OSC	Operations Support Command
PPE	personal protective equipment
RVAAP	Ravenna Army Ammunition Plant
TCLP	Toxicity Characteristic Leaching Procedure
USACE	US Army Corps of Engineers
UXO	unexploded ordnance

1.0 INTRODUCTION

Investigative activities conducted during the Phase II RI of Demolition Area 2 at the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio, resulted in the generation of investigation-derived wastes (IDW) consisting of soil and water wastes. The IDW was generated in the course of drilling, sampling, and decontamination activities. The purpose of this report is to characterize and classify the IDW for disposal. The report includes a summary of the IDW generated and its origin; classification of the IDW and recommendations for disposal; and a review of the analytical results used for waste characterization. This document follows guidance established by the USACE and the Ohio EPA regarding IDW disposition at RVAAP.

2.0 OPERATIONAL HISTORY AND WASTE GENERATION

Information regarding the operational history and suspected contaminants at Demolition Area 2 is presented in Section 1 of the *Work Plan and Sampling and Analysis Plan Addenda for the Phase II Remedial Investigation of Demolition Area 2 at the Ravenna Army Ammunition Plant, Ravenna, Ohio.* Section 7 of this Addendum describes procedures used for sampling and managing IDW at RVAAP.

Soil and water (groundwater and decontamination water) IDW generated during activities at Demolition Area 2 are listed, by container, in Table 2-1 below.

Table 2-1. IDW Inventory

Container Number	Container Type & Size	Contents	Volume	Source of Waste
DA2DET1B-001	55 Gal. Closed Top	Purge Water	<1/2 Full	Monitoring Well DET1-B
DA2DET2-001	55 Gal. Closed Top	Purge Water	<1/2 Full	Monitoring Well DET-2
DA2DET3-001	55 Gal. Closed Top	Purge Water	<1/2 Full	Monitoring Well DET-3
DA2DET4-001	55 Gal. Closed Top	Purge Water	<1/2 Full	Monitoring Well DET-4
DA2MW104-001	55 Gal. Closed Top	Development/Purge Water	Full	Monitoring Well 104
DA2MW104-002	55 Gal. Closed Top	Development/Purge Water	1/2 Full	Monitoring Well 104

Container Number	Container Type & Size	Contents	Volume	Source of Waste
DA2MW105-001	55 Gal. Closed Top	Development/Purge Water	Full	Monitoring Well 105
DA2MW105-002	55 Gal. Closed Top	Development/Purge Water	1/2 Full	Monitoring Well 105
DA2MW105-003	55 Gal. Closed Top	Development/Purge Water	1/2 Full	Monitoring Well 105
DA2MW106-001	55 Gal. Closed Top	Development/Purge Water	<1/2 Full	Monitoring Well 106
DA2MW106-002	55 Gal. Closed Top	Development/Purge Water	<1/2 Full	Monitoring Well 106
DA2MW107-001	55 Gal. Closed Top	Development/Purge Water	2/3 Full	Monitoring Well 107
DA2MW107-002	55 Gal. Closed Top	Development/Purge Water	1/2 Full	Monitoring Well 107
DA2MW108-001	55 Gal. Closed Top	Development/Purge Water	Full	Monitoring Well 108
DA2MW108-002	55 Gal. Closed Top	Development/Purge Water	<1/2 Full	Monitoring Well 108
DA2MW109-001	55 Gal. Closed Top	Development/Purge Water	Full	Monitoring Well 109
DA2MW109-002	55 Gal. Closed Top	Development/Purge Water	1/2 Full	Monitoring Well 109
DA2MW110-001	55 Gal. Closed Top	Development/Purge Water	1/2 Full	Monitoring Well 110
DA2MW110-002	55 Gal. Closed Top	Development/Purge Water	<1/2 Full	Monitoring Well 110
DA2MW111-001	55 Gal. Closed Top	Development/Purge Water	1/2 Full	Monitoring Well 111
DA2MW111-002	55 Gal. Closed Top	Development/Purge Water	<1/2 Full	Monitoring Well 111
DA2MW112-001	55 Gal. Closed Top	Development/Purge Water	1/2 Full	Monitoring Well 112
DA2MW112-002	55 Gal. Closed Top	Development/Purge Water	1/2 Full	Monitoring Well 112
DA2MW113-001	55 Gal. Closed Top	Development/Purge Water	Full	Monitoring Well 113
DA2MW113-002	55 Gal. Closed Top	Development/Purge Water	1/2 Full	Monitoring Well 113
DA2Poly-001	500 Gal. Poly	Drill Rig Decon Water/Soil	275 Gal.	Drill Rig Decon
DA2RO-001	15 Cu. Yd. Roll-off	Soil Cuttings	<1/2 Full	Surface/Subsurface Soil
Decon-01	55 Gal. Closed Top	Drill Rig Decon Water/Soil	Full	DET 1-B Installation
Decon-02	55 Gal. Closed Top	Drill Rig Decon Water/Soi	Full	DET 1-B Installation
Decon-03	55 Gal. Open Top	Soil/Water from UXO Wash	Full	UXO Decon Operations
Decon-04	55 Gal. Open Top	Soil/Water from UXO Wash	Full	UXO Decon Operations
Decon-05	55 Gal. Open Top	Soil/Water from UXO Wash	Full	UXO Decon Operations
Decon-06	55 Gal. Open Top	Soil/Water from UXO Wash	Full	UXO Decon Operations

Container Number	Container Type & Size	Contents	Volume	Source of Waste
DET1-01	55 Gal. Open Top	Soil Cuttings	Full	Monitoring Well DET1
DET1-02	55 Gal. Open Top	Soil Cuttings	Full	Monitoring Well DET1
DET1B-01	55 Gal. Open Top	Soil Cuttings	Full	Monitoring Well DET1-B
DET1B-02	55 Gal. Open Top	Soil Cuttings	Full	Monitoring Well DET1-B
Purge-01	55 Gal. Closed Top	Purge Water	Full	Monitoring Well DET1-B
WBGMW012-001	55 Gal. Closed Top	Development/Purge Water	2/3 Full	Monitoring Well WBG-012
WBGMW013-001	55 Gal. Closed Top	Development/Purge Water	Full	Monitoring Well WBG-013

3.0 MANAGEMENT OF ENVIRONMENTAL MEDIA

All environmental media were managed in a manner that minimized potential risk to human health and the environment. IDW was handled as nonhazardous material pending waste characterization and classification based on analytical results. The Facility-Wide SAP (USACE 2001) and the Phase II RI Work Plan/Sampling and Analysis Plan (2002) contain approved procedures used for containerizing and handling IDW.

Indigenous solid IDW (soil and rock cuttings) generated during the Phase II RI from soil and sediment from depths < 1.8 meters (6 feet), including residual surface and subsurface soil sampling; and borehole installations >1.8 meters (6 feet) in depth were collected and contained in a lined roll-off box. The roll-off box was covered with a tarp to prevent the introduction of rainwater to the soils, and was staged at Demolition Area 2. Indigenous solid IDW (soil and rock cuttings) generated during the abandonment of background well DET-1 and in the installation of background well DET-1B was contained in open-top 55-gallon drums and was staged in Building 1502. Sludge generated from the decontamination wash of UXO at Demolition Area 2 was contained in open-top 55-gallon drums and was staged in Building 1B-13 Load Line 7.

All liquid indigenous (groundwater) IDW generated from monitoring well installation, development, and purging was segregated by sample station and placed into closed-top 55-gallon drums. All groundwater containers were staged at Demolition Area 2 but will be moved to Building 1037 for staging prior to pick-up for disposal. All liquid non-indigenous (decontamination rinse water) IDW was segregated by waste stream and was either contained in labeled DOT-approved, 55-gallon closed-top drums or in a closed poly tank. Drill rig decon water from the installation of well DET1-B was staged at Building 1502; water from the Phase II RI decontamination operations was staged at Building 1037.

4.0 DISCUSSION OF ANALYTICAL RESULTS

Per Section 7.4 of the Facility-Wide SAP (2001), the analytical results from environmental samples collected during the Phase II RI are used, where possible, to characterize IDW for each sampling medium. Where correlative environmental samples do not exist, waste characterization samples were collected in accordance with Section 7 of the Work Plan and Sampling and Analysis Plan Addendum. The IDW characterization results are presented in Appendix A.

5.0 RECOMMENDATIONS FOR DISPOSAL

Table 7-1 of the Facility-Wide SAP (2001) shows the maximum concentration of contaminants for the toxicity characteristic for hazardous wastes per 40 CFR 261.24. Analytical results for the IDW are compared with these criteria to determine whether waste containers are potentially hazardous or non-hazardous.

For the characterization of IDW solid wastes (e.g., soils) as non-hazardous or hazardous, the Resource Conservation and Recovery Act (RCRA) regulatory limit will be compared to the mean contaminant level as presented in Appendix A. Although the analysis conducted on the materials was a total analysis, the Toxicity Characteristic Leaching Procedure (TCLP) methodology will be used for waste classification by applying a twenty-fold dilution factor to total results for comparison to TCLP. For purposes of hazardous waste determination, if a given analyte is found to exceed 20 times the regulatory limit, it is being considered a RCRA-hazardous waste due to the dilution factor inherent in the TCLP method for solid materials. Analytical results for liquids were directly compared to the regulatory limits to determine hazardous waste applicability.

5.1 Soils

As previously discussed, excess soils were generated from monitoring well installation and from locations where soils samples were collected. All excess soils generated during the Demolition Area 2 Phase II RI were placed in a roll-off container staged at Building 1502 (DA2RO-001). Analytical data generated from these sample points were compared to regulatory TCLP criteria and to sitewide background criteria to characterize DA2RO-001 for disposal.

Based on this comparison, it is recommended that this container be classified as contaminated, non-hazardous and sent off-site for non-hazardous disposal to a licensed solid waste facility.

In addition to container DA2RO-001, several additional containers (55-gal. drums) of excess soil were generated during the previous installation of a new background well (DET-1B) and the abandonment of the previous background well (DET-1) at Demolition Area 2 (container numbers DET1-01, DET1-02, DET1B-01, DET1B-02) and from a UXO decontamination wash during UXO clearance activities at Demolition Area 2 (container numbers Decon-03 through -06). Analytical results from composite samples taken of the respective containers were also compared to regulatory TCLP criteria and to sitewide background criteria for disposal characterization purposes. Based on this comparison, it is recommended that these containers be classified as contaminated, non-hazardous and that they be combined with container DA2RO-001 for non-hazardous disposal to a licensed solid waste facility.

5.2 Groundwater

Excess groundwater was generated during well installation, development, and sampling activities associated with the Phase II RI at Demolition Area 2. In addition, excess groundwater from the installation/development of background well DET1-B was also generated and is currently staged in Building 1502. A comparison of analytical data generated from groundwater sampling activities indicated that no regulatory criteria for RCRA hazardous waste determinations were exceeded. It is recommended that all containers of excess groundwater be classified as contaminated, non-hazardous and that they be sent off-site for disposal to a permitted water treatment facility.

5.3 Decontamination Fluids

A waste sample collected from decontamination fluids generated during the decontamination of the drill rig used during the Phase II RI at Demolition Area 2 (container number DA2Poly-001) indicated that all analytes were below TCLP threshold values and therefore is classified as non-hazardous. It is recommended that this container be classified as contaminated, non-hazardous, and that it be sent off-site for disposal to a permitted water treatment facility.

A waste sample collected from decontamination fluids generated from the installation of well DET1-B at Demolition Area 2 (container numbers Decon-01 and -02) indicated that all analytes were below TCLP threshold values and therefore these containers are classified as non-hazardous. It is recommended that these containers be considered as contaminated, non-hazardous, and that they be sent off-site for disposal to a permitted water treatment facility.

5.4 Summary of Disposal Recommendations

Table 5-1 presents a summary of the waste classification and recommended disposal options presented in Section 5.

Table 5-1. Summary of Waste Classification and Recommended Disposal Options

Container Number	Media	Waste Criteria	Disposal Recommendation
DA2DET1B-001	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2DET2-001	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2DET3-001	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2DET4-001	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW104-001	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW104-002	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW105-001	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW105-002	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW105-003	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW106-001	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW106-002	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW107-001	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW107-002	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW108-001	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW108-002	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW109-001	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW109-002	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW110-001	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW110-002	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW111-001	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW111-002	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW112-001	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW112-002	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW113-001	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2MW113-002	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2Poly-001	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
DA2RO-001	Soil	Explosives Detected or Metals Above Background	Off-Site Non-Hazardous Disposal
Decon-01	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
Decon-02	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
Decon-03	Soil	Explosives Detected or Metals Above Background	Consolidate w/DA2RO-001 for Off-SiteDisposal
Decon-04	Soil	Explosives Detected or Metals Above Background	Consolidate w/DA2RO-001 for Off-SiteDisposal
Decon-05	Soil	Explosives Detected or Metals Above Background	Consolidate w/DA2RO-001 for Off-SiteDisposal
Decon-06	Soil	Explosives Detected or Metals Above Background	Consolidate w/DA2RO-001 for Off-SiteDisposal
DET1-01	Soil	Explosives Detected or Metals Above Background	Consolidate w/DA2RO-001 for Off-SiteDisposal
DET1-02	Soil	Explosives Detected or Metals Above Background	Consolidate w/DA2RO-001 for Off-SiteDisposal
DET1B-01	Soil	Explosives Detected or Metals Above Background	Consolidate w/DA2RO-001 for Off-SiteDisposal
DET1B-02	Soil	Explosives Detected or Metals Above Background	Consolidate w/DA2RO-001 for Off-SiteDisposal
Purge-01	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
WBGMW012-001	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal
WBGMW013-001	Water	Explosives Detected or Metals Above Background	Consolidate for Off-Site Non-Hazardous Disposal

6.0 REFERENCES

USACE 2001. *Facility-Wide Sampling and Analysis Plan for Environmental Investigations at the Ravenna Army Ammunition Plant, Ravenna, Ohio.*

APPENDIX A

INVESTIGATION-DERIVED WASTE
ANALYTICAL RESULTS SUMMARY

Analytical Results

Soils and Groundwater Generated From the Phase II RI
Demolition Area 2

SOILS

Analyte (Units)	Frequency of Detects	Minimum Detect	Maximum Detect	Average Result
Explosives/Propellants (ug/kg)				
HMX	4/158	100.00	580.00	202.91
Nitroglycerin	2/158	7200.00	31000.00	10216.46
o-Nitrotoluene	1/158	200.00	430.00	201.46
RDX	2/158	100.00	520.00	202.41
Tetryl	24/158	120.00	22000.00	613.42
2,4-Dinitrotoluene	5/173	58.00	600.00	122.63
2,4,6-Trinitrotoluene	7/158	40.00	3200.00	139.05
2-Amino-4,6-dinitrotoluene	3/158	65.00	570.00	106.40
4-Amino-2,6-dinitrotoluene	7/158	56.00	430.00	105.30
Inorganics (mg/kg)				
Aluminum	150/150	3840.00	23400.00	10782.47
Antimony	4/150	0.20	2.20	0.42
Arsenic	150/150	3.50	32.60	13.47
Barium	150/150	16.60	700.00	79.38
Beryllium	150/150	0.24	1.50	0.59
Cadmium	150/150	0.05	9.50	0.95
Calcium	150/150	117.00	34100.00	2473.67
Chromium	150/150	5.10	60.80	15.14
Chromium, Hexavalent	4/15	2.20	28.00	8.27
Cobalt	150/150	3.60	24.60	8.42
Copper	150/150	5.20	1210.00	72.73
Iron	150/150	9550.00	45800.00	24025.00
Lead	150/150	5.30	218.00	26.46
Magnesium	150/150	825.00	11000.00	2646.65
Manganese	150/150	75.80	2960.00	487.20
Mercury	90/150	0.02	18.10	0.63
Nickel	150/150	6.00	56.40	18.55
Potassium	150/150	290.00	2560.00	1041.39
Selenium	18/150	0.20	2.20	0.59
Silver	1/150	0.05	0.48	0.09
Sodium	15/150	16.80	223.00	56.53
Sulfide	150/150	50.00	2200.00	496.53
Vanadium	130/150	7.10	38.40	18.13
Zinc	150/150	24.30	2770.00	134.00
Volatile/Semi-Volatile Organics				
Acetone	18/18	9.40	86.00	28.41
di-n-Butyl Phthalate	1/15	150.00	860.00	362.00
Methylene Chloride	16/18	9.90	45.00	17.99
Toluene	1/18	2.00	7.00	5.37
4,4,4-DDD	1/15	1.7	26	3.49

GROUNDWATER

Analyte (Units)	Frequency of Detects	Minimum Detect	Maximum Detect	Average Result
Explosives/Propellants (µg/l)				
Nitrocellulose	19/19	0.18	1.30	0.42
RDX	5/19	0.28	0.66	0.50
2-Amino-4,6-dinitrotoluene	1/19	0.26	1.20	1.31
4-Amino-2,6-dinitrotoluene	1/19	0.26	0.47	0.27
Inorganics (µg/l)				
Aluminum	6/14	30.90	7340.00	479.86
Antimony	1/14	2.50	3.00	2.53
Arsenic	1/14	3.40	13.50	5.59
Barium	14/14	16.80	122.00	40.18
Cadmium	1/14	0.30	0.39	0.31
Calcium	14/14	30900.00	1660000.00	82822.22
Chromium	2/14	1.30	13.50	2.48
Chromium, Hexavalent	6/15	0.01	0.12	0.03
Cobalt	1/15	0.60	6.90	1.06
Copper	3/14	1.00	19.40	3.00
Iron	12/14	24.30	16600.00	1920.42
Lead	1/14	1.60	10.50	2.15
Magnesium	14/14	8760.00	53200.00	24642.22
Manganese	14/14	5.00	10990.00	305.40
Potassium	14/14	820.00	14300.00	3405.56
Sodium	14/14	3620.00	17300.00	8926.67
Vanadium	1/14	0.70	13.50	1.50
Zinc	3/14	4.00	61.70	11.69
Volatile/Semi-Volatile Organics (µg/l)				
Carbon Disulfide	19-Jan	0.59	1.30	0.91

Analytical Results

Drill Rig Decon – Demolition Area 2 Phase II RI

Summary of Analytical Results

Client ID: DRILL DECON
GPL ID: 210072-002-007-1/1
Matrix: WATER
Date Collected: 10/07/2002
Date Received: 10/08/2002

Prep Method: SW3010A
Prep Date: 10/10/2002
Prep Time: 00:00
Prep Batch: 57168

Analytical Method: SW6010B_TCLP
Date Analyzed: 10/11/2002
Time Analyzed: 17:27
Analysis Batch: 13806

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Arsenic	BQL	200	ug/L	U	1
Barium	BQL	1000	ug/L	U	1
Cadmium	BQL	60	ug/L	U	1
Chromium	BQL	50	ug/L	U	1
Lead	BQL	100	ug/L	U	1
Selenium	BQL	200	ug/L	U	1
Silver	BQL	30	ug/L	U	1

Summary of Analytical Results

Client ID: DRILL DECON
GPL ID: 210072-002-007-1/1
Matrix: WATER
Date Collected: 10/07/2002
Date Received: 10/08/2002

Prep Method: SW7470A_DIG
Prep Date: 10/10/2002
Prep Time: 00:00
Prep Batch: 57159

Analytical Method: SW7471A_TCLP
Date Analyzed: 10/11/2002
Time Analyzed: 13:09
Analysis Batch: 13806

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Mercury	BQL	2	ug/L	U	1

Summary of Analytical Results

Client ID: DRILL DECON
GPL ID: 210072-002-008-1/6
Matrix: WATER
Date Collected 10/07/2002
Date Received 10/08/2002

Prep Method: SW3510C
Prep Date: 10/10/2002
Prep Time: 00:00
Prep Batch: 57164

Analytical Method: SW8081A_TCLP
Date Analyzed: 10/11/2002
Time Analyzed: 15:28
Analysis Batch: 56726

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Chlordane	BQL	5.0	ug/L	U	1
Endrin	BQL	0.25	ug/L	U	1
Gamma-BHC (Lindane)	BQL	0.25	ug/L	U	1
Heptachlor	BQL	0.25	ug/L	U	1
Heptachlor Epoxide	BQL	0.25	ug/L	U	1
Methoxychlor	BQL	0.25	ug/L	U	1
Toxaphene	BQL	5.0	ug/L	U	1

Summary of Analytical Results

Client ID: DRILL DECON
GPL ID: 210072-002-008-1/6
Matrix: WATER
Date Collected: 10/07/2002
Date Received: 10/08/2002

Prep Method: EXT_SW8151
Prep Date: 10/10/2002
Prep Time: 17:31
Prep Batch: 57194

Analytical Method: SW8151A_TCLP
Date Analyzed: 10/15/2002
Time Analyzed: 20:16
Analysis Batch: 56808

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
2,4,5-TP (Silvex)	BQL	5.0	ug/L	U	1
2,4-D	BQL	5.0	ug/L	U	1

Summary of Analytical Results

Client ID: DRILL DECON
GPL ID: 210072-002-004-1/3
Matrix: WATER
Date Collected: 10/07/2002
Date Received: 10/08/2002

Prep Method: SW5030B
Prep Date: 10/23/2002
Prep Time: 00:00
Prep Batch: 57451

Analytical Method: SW8260B_TCLP
Date Analyzed: 10/23/2002
Time Analyzed: 15:40
Analysis Batch: 57014

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
1,1-Dichloroethene	BQL	100	ug/L	U	10
1,2-Dichloroethane	BQL	100	ug/L	U	10
1,4-Dichlorobenzene	BQL	100	ug/L	U	10
2-Butanone	BQL	100	ug/L	U	10
Benzene	BQL	100	ug/L	U	10
Carbon Tetrachloride	BQL	100	ug/L	U	10
Chlorobenzene	BQL	100	ug/L	U	10
Chloroform	BQL	100	ug/L	U	10
Tetrachloroethylene	BQL	100	ug/L	U	10
Trichloroethene	14	100	ug/L	J	10
Vinyl Chloride	BQL	100	ug/L	U	10

Summary of Analytical Results

Client ID: DRILL DECON
GPL ID: 210072-002-008-1/6
Matrix: WATER
Date Collected: 10/07/2002
Date Received: 10/08/2002

Prep Method: SW3510C
Prep Date: 10/10/2002
Prep Time: 19:16
Prep Batch: 57165

Analytical Method: SW8270C_TCLP
Date Analyzed: 10/11/2002
Time Analyzed: 17:45
Analysis Batch: 57115

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
1,4-Dichlorobenzene	BQL	50	ug/L	U	1
2,4,5-Trichlorophenol	BQL	50	ug/L	U	1
2,4,6-Trichlorophenol	BQL	50	ug/L	U	1
2,4-Dinitrotoluene	BQL	50	ug/L	U	1
2-methylphenol	BQL	50	ug/L	U	1
3 & 4-Methylphenol	BQL	50	ug/L	U	1
Hexachlorobenzene	BQL	50	ug/L	U	1
Hexachlorobutadiene	BQL	50	ug/L	U	1
Hexachloroethane	BQL	50	ug/L	U	1
Nitrobenzene	BQL	50	ug/L	U	1
Pentachlorophenol	BQL	100	ug/L	U	1
Pyridine	BQL	50	ug/L	U	1

Analytical Results

Soils and Groundwater Generated From The Installation of Well DET1-B

VISTA TECHNOLOGIES

Client Sample ID: DET-1B DECON

HPLC

Lot-Sample #...: A0H030231-001 Work Order #...: DHA2T101 Matrix.....: WG
Date Sampled...: 08/02/00 13:35 Date Received..: 08/03/00
Prep Date.....: 08/04/00 Analysis Date..: 08/12/00
Prep Batch #...: 0217537
Dilution Factor: 1 Method.....: SW846 8330

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,3-Dinitrobenzene	ND	0.20	ug/L
2,4-Dinitrotoluene	ND	0.13	ug/L
2,6-Dinitrotoluene	ND	0.13	ug/L
Nitrobenzene	ND	0.20	ug/L
1,3,5-Trinitrobenzene	0.19 J	0.20	ug/L
2,4,6-Trinitrotoluene	ND	0.20	ug/L
HMX	ND	0.50	ug/L
RDX	0.21 J	0.50	ug/L
Tetryl	ND	0.20	ug/L
2-Nitrotoluene	ND	0.20	ug/L
3-Nitrotoluene	ND	0.20	ug/L
4-Nitrotoluene	ND	0.20	ug/L

RROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	92	(32 - 127)

NOTE(S):

J Estimated result. Result is less than RL

2 DRUMS - 110 GAL Decon Water

VISTA TECHNOLOGIES

Client Sample ID: DET-1B DECON

TCLP Metals

Lot-Sample #...: A0H030231-001 Matrix.....: WG
Date Sampled...: 08/02/00 13:35 Date Received..: 08/03/00
Leach Date.....: 08/07/00 Leach Batch #..: PC22101

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0221277						
Arsenic	ND	0.50	mg/L	SW846 6010B	08/09-08/10/00	DHA2T103
		Dilution Factor: 1				
Barium	ND	10.0	mg/L	SW846 6010B	08/09-08/10/00	DHA2T104
		Dilution Factor: 1				
Cadmium	ND	0.10	mg/L	SW846 6010B	08/09-08/10/00	DHA2T105
		Dilution Factor: 1				
Chromium	ND	0.50	mg/L	SW846 6010B	08/09-08/10/00	DHA2T106
		Dilution Factor: 1				
Lead	ND	0.50	mg/L	SW846 6010B	08/09-08/10/00	DHA2T107
		Dilution Factor: 1				
Selenium	ND	0.25	mg/L	SW846 6010B	08/09-08/10/00	DHA2T108
		Dilution Factor: 1				
Silver	ND	0.50	mg/L	SW846 6010B	08/09-08/10/00	DHA2T109
		Dilution Factor: 1				
Mercury	ND	0.0020	mg/L	SW846 7470A	08/09-08/10/00	DHA2T10A
		Dilution Factor: 1				

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

VISTA TECHNOLOGIES

Client Sample ID: DET-1B

HPLC

Lot-Sample #...:	A0H030229-001	Work Order #...:	DHA2C101	Matrix.....:	WG
Date Sampled...:	08/02/00 09:20	Date Received..:	08/03/00		
Prep Date.....:	08/04/00	Analysis Date..:	08/12/00		
Prep Batch #...:	0217537				
Dilution Factor:	1	Method.....:	SW846 8330		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,3-Dinitrobenzene	ND	0.20	ug/L
2,4-Dinitrotoluene	0.47	0.13	ug/L
2,4,6-Trinitrotoluene	0.20	0.20	ug/L
HMX	ND	0.50	ug/L
2,6-Dinitrotoluene	0.20	0.13	ug/L
Nitrobenzene	ND	0.20	ug/L
1,3,5-Trinitrobenzene	ND	0.20	ug/L
RDX	ND	0.50	ug/L
Tetryl	ND	0.20	ug/L
2-Nitrotoluene	0.21	0.20	ug/L
3-Nitrocoluene	ND	0.20	ug/L
4-Nitrotoluene	0.22	0.20	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	102	(32 - 127)

1 DRUM - 50 GAL Purge water

VISTA TECHNOLOGIES

Client Sample ID: DET-1B

HPLC

Lot-Sample #...: A0H030229-001	Work Order #...: DHA2C101	Matrix.....: WG	
Date Sampled...: 08/02/00 09:20	Date Received..: 08/03/00		
Prep Date.....: 08/04/00	Analysis Date..: 08/12/00		
Prep Batch #...: 0217537			
Dilution Factor: 1	Method.....: SW846 8330		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,3-Dinitrobenzene	ND	0.20	ug/L
2,4-Dinitrotoluene	0.47	0.13	ug/L
2,4,6-Trinitrotoluene	0.20	0.20	ug/L
HMX	ND	0.50	ug/L
2,6-Dinitrotoluene	0.20	0.13	ug/L
Nitrobenzene	ND	0.20	ug/L
1,3,5-Trinitrobenzene	ND	0.20	ug/L
RDX	ND	0.50	ug/L
Tetryl	ND	0.20	ug/L
2-Nitrotoluene	0.21	0.20	ug/L
3-Nitrocoluene	ND	0.20	ug/L
4-Nitrotoluene	0.22	0.20	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	102	(32 - 127)

1 DRUM - 50 GAL Purge water

VISTA TECHNOLOGIES

Client Sample ID: DET-1B

DISSOLVED Metals

Lot-Sample #...: A0R030229-001 Matrix.....: WG
Date Sampled...: 08/02/00 09:20 Date Received..: 08/03/00

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0217110						
Aluminum	ND	0.20	mg/L	SW846 6010B	08/04-08/09/00	DHA2C10H
		Dilution Factor: 1				
Arsenic	ND	0.010	mg/L	SW846 6010B	08/04-08/09/00	DHA2C104
		Dilution Factor: 1				
Lead	ND	0.0030	mg/L	SW846 6010B	08/04-08/09/00	DHA2C107
		Dilution Factor: 1				
Antimony	ND	0.060	mg/L	SW846 6010B	08/04-08/09/00	DHA2C10L
		Dilution Factor: 1				
Barium	ND	0.20	mg/L	SW846 6010B	08/04-08/09/00	DHA2C10P
		Dilution Factor: 1				
Selenium	ND	0.0050	mg/L	SW846 6010B	08/04-08/09/00	DHA2C10A
		Dilution Factor: 1				
Beryllium	ND	0.0050	mg/L	SW846 6010B	08/04-08/09/00	DHA2C10T
		Dilution Factor: 1				
Thallium	ND	0.010	mg/L	SW846 6010B	08/04-08/09/00	DHA2C10E
		Dilution Factor: 1				
Cadmium	ND	0.0050	mg/L	SW846 6010B	08/04-08/09/00	DHA2C10W
		Dilution Factor: 1				
Calcium	**67.3**	5.0	mg/L	**SW846 6010B**	**08/04-08/09/00**	**DHA2C111**
		Dilution Factor: 1				
Chromium	ND	0.010	mg/L	SW846 6010B	08/04-08/09/00	DHA2C114
		Dilution Factor: 1				
Cobalt	ND	0.050	mg/L	SW846 6010B	08/04-08/09/00	DHA2C117
		Dilution Factor: 1				
Copper	ND	0.025	mg/L	SW846 6010B	08/04-08/09/00	DHA2C11A
		Dilution Factor: 1				
Iron	0.13	0.10	mg/L	SW846 6010B	08/04-08/09/00	DHA2C11E
		Dilution Factor: 1				

(Continued on next page)

VISTA TECHNOLOGIES

Client Sample ID: DET-1B

DISSOLVED Metals

Lot-Sample #...: A0H030229-001 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	22.9	5.0	mg/L	SW846 6010B	08/04-08/09/00	DHA2C11H
		Dilution Factor: 1				
Manganese	0.27	0.015	mg/L	SW846 6010B	08/04-08/09/00	DHA2C11L
		Dilution Factor: 1				
Nickel	ND	0.040	mg/L	SW846 6010B	08/04-08/09/00	DHA2C11P
		Dilution Factor: 1				
Potassium	ND	5.0	mg/L	SW846 6010B	08/04-08/11/00	DHA2C11T
		Dilution Factor: 1				
Silver	ND	0.010	mg/L	SW846 6010B	08/04-08/09/00	DHA2C11W
		Dilution Factor: 1				
Sodium	25.6	5.0	mg/L	SW846 6010B	08/04-08/09/00	DHA2C121
		Dilution Factor: 1				
Vanadium	ND	0.050	mg/L	SW846 6010B	08/04-08/09/00	DHA2C124
		Dilution Factor: 1				
Zinc	ND	0.020	mg/L	SW846 6010B	08/04-08/09/00	DHA2C127
		Dilution Factor: 1				
Mercury	ND	0.00020	mg/L	SW846 7470A	08/04-08/06/00	DHA2C12A
		Dilution Factor: 1				

EXECUTIVE SUMMARY - Detection Highlights

A0D060224

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
OD2SB-DET1B-0004S0 04/05/00 10:45 006				
Mercury	0.0077 B	0.12	mg/kg	SW846 7471A
Arsenic	16.9	0.58	mg/kg	SW846 6010B
Lead	12.2	0.35	mg/kg	SW846 6010B
Aluminum	12800	23.3	mg/kg	SW846 6010B
Barium	63.2	23.3	mg/kg	SW846 6010B
Beryllium	0.55 B	0.58	mg/kg	SW846 6010B
Calcium	5390	582	mg/kg	SW846 6010B
Cobalt	12.3	5.8	mg/kg	SW846 6010B
Chromium	17.4	1.2	mg/kg	SW846 6010B
Copper	20.0	2.9	mg/kg	SW846 6010B
Iron	29500	11.6	mg/kg	SW846 6010B
Potassium	2490	582	mg/kg	SW846 6010B
Magnesium	4860	582	mg/kg	SW846 6010B
Manganese	314	1.7	mg/kg	SW846 6010B
Sodium	65.8 B	582	mg/kg	SW846 6010B
Nickel	29.0	4.7	mg/kg	SW846 6010B
Vanadium	18.6	5.8	mg/kg	SW846 6010B
Zinc	67.7	2.3	mg/kg	SW846 6010B
Thallium	0.40 B	0.58	mg/kg	SW846 7841
Percent Solids	85.9	0.10	%	MCAWW 160.3 MOD
OD2SB-DET1B-0005S0 04/05/00 11:05 007				
4-Nitrotoluene	0.18 J	0.25	mg/kg	SW846 8330
Mercury	0.010 B	0.12	mg/kg	SW846 7471A
Arsenic	18.5	0.58	mg/kg	SW846 6010B
Lead	12.9	0.35	mg/kg	SW846 6010B
Aluminum	10700	23.2	mg/kg	SW846 6010B
Barium	49.0	23.2	mg/kg	SW846 6010B
Beryllium	0.41 B	0.58	mg/kg	SW846 6010B
Calcium	3840	581	mg/kg	SW846 6010B
Cobalt	13.0	5.8	mg/kg	SW846 6010B
Chromium	15.4	1.2	mg/kg	SW846 6010B
Copper	20.6	2.9	mg/kg	SW846 6010B
Iron	28300	11.6	mg/kg	SW846 6010B
Potassium	1770	581	mg/kg	SW846 6010B
Magnesium	4530	581	mg/kg	SW846 6010B
Manganese	373	1.7	mg/kg	SW846 6010B
Sodium	81.2 B	581	mg/kg	SW846 6010B
Nickel	28.6	4.6	mg/kg	SW846 6010B
Vanadium	15.3	5.8	mg/kg	SW846 6010B
Zinc	88.1	2.3	mg/kg	SW846 6010B
Thallium	0.41 B	0.58	mg/kg	SW846 7841

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EXECUTIVE SUMMARY - Detection Highlights

A0D060224

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
OD2SB-DET1B-0001SO 04/04/00 14:20 004				
Mercury	0.060 B	0.13	mg/kg	SW846 7471A
Arsenic	9.4	0.63	mg/kg	SW846 6010B
Lead	14.7	0.38	mg/kg	SW846 6010B
Aluminum	14400	25.1	mg/kg	SW846 6010B
Barium	57.1	25.1	mg/kg	SW846 6010B
Beryllium	0.24 B	0.63	mg/kg	SW846 6010B
Calcium	779	628	mg/kg	SW846 6010B
Cobalt	7.6	6.3	mg/kg	SW846 6010B
Chromium	16.9	1.3	mg/kg	SW846 6010B
Copper	21.2	3.1	mg/kg	SW846 6010B
Iron	21800	12.6	mg/kg	SW846 6010B
Potassium	1150	628	mg/kg	SW846 6010B
Magnesium	2470	628	mg/kg	SW846 6010B
Manganese	303	1.9	mg/kg	SW846 6010B
Sodium	64.0 B	628	mg/kg	SW846 6010B
Nickel	14.8	5.0	mg/kg	SW846 6010B
Vanadium	25.1	6.3	mg/kg	SW846 6010B
Zinc	71.9	2.5	mg/kg	SW846 6010B
Thallium	0.38 B	0.63	mg/kg	SW846 7841
Percent Solids	79.6	0.10	%	MCAWW 160.3 MOD
OD2SB-DET1B-0003SO 04/05/00 10:25 005				
Mercury	0.018 B	0.12	mg/kg	SW846 7471A
Arsenic	11.6	0.60	mg/kg	SW846 6010B
Lead	22.1	0.36	mg/kg	SW846 6010B
Aluminum	17100	23.9	mg/kg	SW846 6010B
Barium	99.2	23.9	mg/kg	SW846 6010B
Beryllium	0.62	0.60	mg/kg	SW846 6010B
Calcium	39100	597	mg/kg	SW846 6010B
Cobalt	13.9	6.0	mg/kg	SW846 6010B
Chromium	24.4	1.2	mg/kg	SW846 6010B
Copper	23.5	3.0	mg/kg	SW846 6010B
Iron	31000	11.9	mg/kg	SW846 6010B
Potassium	3390	597	mg/kg	SW846 6010B
Magnesium	8710	597	mg/kg	SW846 6010B
Manganese	453	1.8	mg/kg	SW846 6010B
Sodium	118 B	597	mg/kg	SW846 6010B
Nickel	34.7	4.8	mg/kg	SW846 6010B
Vanadium	27.7	6.0	mg/kg	SW846 6010B
Zinc	70.9	2.4	mg/kg	SW846 6010B
Thallium	0.41 B	0.60	mg/kg	SW846 7841
Percent Solids	83.8	0.10	%	MCAWW 160.3 MOD

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A0D060224

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
OD2SB-DET1B-0000FB 04/04/00 07:25 001				
Antimony	0.0024 B	0.0050	mg/L	SW846 6010B
Calcium	3.2 B	5.0	mg/L	SW846 6010B
Iron	0.38	0.10	mg/L	SW846 6010B
Potassium	0.58 B	5.0	mg/L	SW846 6010B
Magnesium	1.4 B	5.0	mg/L	SW846 6010B
Manganese	0.036	0.015	mg/L	SW846 6010B
Sodium	143	5.0	mg/L	SW846 6010B
Thallium	0.00070	0.0020	mg/L	SW846 7841
	Qualifiers: B,Wa			
OD2SB-DET1B-0002ER 04/05/00 09:50 002				
HMX	0.098 J	0.50	ug/L	SW846 8330
Calcium	0.41 B	5.0	mg/L	SW846 6010B
Iron	0.14	0.10	mg/L	SW846 6010B
Manganese	0.0061 B	0.015	mg/L	SW846 6010B
OD2SB-DET1B-0002S0 04/05/00 10:15 003				
4-Nitrotoluene	0.23 J	0.25	mg/kg	SW846 8330
Mercury	0.025 B	0.12	mg/kg	SW846 7471A
Arsenic	12.6	0.62	mg/kg	SW846 6010B
Lead	14.6	0.37	mg/kg	SW846 6010B
Aluminum	14400	24.6	mg/kg	SW846 6010B
Barium	59.0	24.6	mg/kg	SW846 6010B
Beryllium	0.59 B	0.62	mg/kg	SW846 6010B
Calcium	832	616	mg/kg	SW846 6010B
Cobalt	29.7	6.2	mg/kg	SW846 6010B
Chromium	19.1	1.2	mg/kg	SW846 6010B
Copper	21.3	3.1	mg/kg	SW846 6010B
Iron	29100	12.3	mg/kg	SW846 6010B
Potassium	1780	616	mg/kg	SW846 6010B
Magnesium	3760	616	mg/kg	SW846 6010B
Manganese	462	1.8	mg/kg	SW846 6010B
Sodium	82.7 B	616	mg/kg	SW846 6010B
Nickel	28.5	4.9	mg/kg	SW846 6010B
Vanadium	21.6	6.2	mg/kg	SW846 6010B
Zinc	66.5	2.5	mg/kg	SW846 6010B
Thallium	0.41 B	0.62	mg/kg	SW846 7841
Percent Solids	81.2	0.10	%	MCAWW 160.3 MOD

(Continued on next page)

Analytical Results

Soil Generated From UXO Decontamination
Demolition Area 2

Summary of Analytical Results

Client ID: LL7DECON SLUDGE
GPL ID: 210072-001-002-1/2
Matrix: SOIL
Date Collected: 10/07/2002
Date Received: 10/08/2002

Prep Method: SW3010A
Prep Date: 10/10/2002
Prep Time: 00:00
Prep Batch: 57168

Analytical Method: SW6010B_TCLP
Date Analyzed: 10/11/2002
Time Analyzed: 17:59
Analysis Batch: 13806

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Arsenic	BQL	200	ug/L	U	1
Barium	2920	1000	ug/L		1
Cadmium	162	60	ug/L		1
Chromium	BQL	50	ug/L	U	1
Lead	2690	100	ug/L		1
Selenium	BQL	200	ug/L	U	1
Silver	BQL	30	ug/L	U	1

Summary of Analytical Results

Client ID: LL7DECON SLUDGE
GPL ID: 210072-001-002-1/2
Matrix: SOIL
Date Collected: 10/07/2002
Date Received: 10/08/2002

Prep Method: SW7470A_DIG
Prep Date: 10/10/2002
Prep Time: 00:00
Prep Batch: 57159

Analytical Method: SW7471A_TCLP
Date Analyzed: 10/11/2002
Time Analyzed: 13:01
Analysis Batch: 13806

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Mercury	BQL	2	ug/L	U	1

Summary of Analytical Results

Client ID: LL7DECON SLUDGE
GPL ID: 210072-001-002-1/2
Matrix: SOIL
Date Collected: 10/07/2002
Date Received: 10/08/2002

Prep Method: SW3510C
Prep Date: 10/10/2002
Prep Time: 00:00
Prep Batch: 57164

Analytical Method: SW8081A_TCLP
Date Analyzed: 10/11/2002
Time Analyzed: 15:00
Analysis Batch: 56726

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Chlordane	BQL	5.0	ug/L	U	1
Endrin	BQL	0.25	ug/L	U	1
Gamma-BHC (Lindane)	BQL	0.25	ug/L	U	1
Heptachlor	BQL	0.25	ug/L	U	1
Heptachlor Epoxide	BQL	0.25	ug/L	U	1
Methoxychlor	BQL	0.25	ug/L	U	1
Toxaphene	BQL	5.0	ug/L	U	1

Summary of Analytical Results

Client ID: LL7DECON SLUDGE
GPL ID: 210072-001-002-1/2
Matrix: SOIL
Date Collected: 10/07/2002
Date Received: 10/08/2002

Prep Method: EXT_SW8151
Prep Date: 10/10/2002
Prep Time: 17:31
Prep Batch: 57194

Analytical Method: SW8151A_TCLP
Date Analyzed: 10/15/2002
Time Analyzed: 19:50
Analysis Batch: 56808

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
2,4,5-TP (Silvex)	BQL	5.0	ug/L	U	1
2,4-D	BQL	5.0	ug/L	U	1

Summary of Analytical Results

Client ID: LL7DECON SLUDGE
GPL ID: 210072-001-602-1/2
Matrix: WATER
Date Collected: 10/07/2002
Date Received: 10/08/2002

Prep Method: SW5030B
Prep Date: 10/23/2002
Prep Time: 00:00
Prep Batch: 57451

Analytical Method: SW8260B_TCLP
Date Analyzed: 10/23/2002
Time Analyzed: 15:04
Analysis Batch: 57014

Parameter	Result	Rep Limit	Units	Qualifier	D F
1,1-Dichloroethene	BQL	100	ug/L	U	10
1,2-Dichloroethane	BQL	100	ug/L	U	10
1,4-Dichlorobenzene	BQL	100	ug/L	U	10
2-Butanone	BQL	100	ug/L	U	10
Benzene	BQL	100	ug/L	U	10
Carbon Tetrachloride	BQL	100	ug/L	U	10
Chlorobenzene	BQL	100	ug/L	U	10
Chloroform	BQL	100	ug/L	U	10
Tetrachloroethylene	BQL	100	ug/L	U	10
Trichloroethene	BQL	100	ug/L	U	10
Vinyl Chloride	BQL	100	ug/L	U	10

Summary of Analytical Results

Client ID: LL7DECON SLUDGE
GPL ID: 210072-001-002-1/2
Matrix: SOIL
Date Collected: 10/07/2002
Date Received: 10/08/2002

Prep Method: SW3510C
Prep Date: 10/10/2002
Prep Time: 19:16
Prep Batch: 57165

Analytical Method: SW8270C_TCLP
Date Analyzed: 10/11/2002
Time Analyzed: 17:09
Analysis Batch: 57115

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
1,4-Dichlorobenzene	BQL	50	ug/L	U	1
2,4,5-Trichlorophenol	BQL	50	ug/L	U	1
2,4,6-Trichlorophenol	BQL	50	ug/L	U	1
2,4-Dinitrotoluene	BQL	50	ug/L	U	1
2-methylphenol	BQL	50	ug/L	U	1
3 & 4-Methylphenol	BQL	50	ug/L	U	1
Hexachlorobenzene	BQL	50	ug/L	U	1
Hexachlorobutadiene	BQL	50	ug/L	U	1
Hexachloroethane	BQL	50	ug/L	U	1
Nitrobenzene	BQL	50	ug/L	U	1
Pentachlorophenol	BQL	100	ug/L	U	1
Pyridine	BQL	50	ug/L	U	1