APPENDIX P
INVESTIGATION-DERIVED WASTE MANAGEMENT REPORTS

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Science Applications International Corporation

December 5, 2001

Mr. Glen Beckham
U.S. Army Corps of Engineers, Louisville District
ATTN: CELRL-PM-M
600 Martin Luther King, Jr. Place
Louisville, Kentucky 40202-0059

SUBJECT: Contract No. F44650-99-0007, ECAS 186, Phase II Remedial Investigations (RIs) for Load Lines 2, 3, and 4 at the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio

RE: Deliverable – Final Investigation-Derived Waste (IDW) Characterization and Disposal Report for Well Cuttings, Field Laboratory Reagents, and Miscellaneous Wastes

Dear Mr. Beckham:

Investigative activities conducted during the RIs of Load Lines 2, 3, and 4 (July 2001 through October 2001) at RVAAP resulted in the generation of IDW consisting of soil, groundwater, decontamination fluids, and field laboratory reagents. The purpose of this letter report is to characterize and classify for disposal IDW consisting of monitoring well soil and rock cuttings contained in roll-off boxes; one drum of field laboratory reagents (waste acetone); and one 5-gallon bucket of leaves, grass, and sticks contaminated with hydraulic fluid. This final characterization report incorporates all comments received from Ohio EPA, USACE, and RVAAP on the draft version issued on October 31, 2001. The characterization and classification of the remaining soil and water containers will be completed in separate letter reports to be submitted at a later date as the environmental samples needed for characterization are still pending analysis.

This report includes a summary of IDW generated and its origin (Table 1) and classification of the IDW and recommendations for disposal (Table 2). This document follows guidance established by the Facility-Wide Sampling and Analysis Plan (SAP) (USACE 2001), the Sampling and Analysis Plan Addendum No. 1 for the Phase II RI of Load Lines 2, 3, and 4 (USACE 2001), and the Ohio EPA (November 1997) regarding IDW disposition at RVAAP.

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Table 1. Summary of Load Lines 2, 3, and 4 Phase II RI IDW

CONTAINER NUMBER	CONTAINER TYPE AND SIZE	CONTENTS	GENERATION DATE (S)
LL2-1	10 cubic yard roll-off box	Drill cuttings from monitoring well installation	7/28/01 – 8/20/01
LL3-1	10 cubic yard roll-off box	Drill cuttings from monitoring well installation	8/8/01 – 8/20/01
LL4-1	20 cubic yard roll-off box	Drill cuttings from monitoring well installation	7/24/01 – 8/20/01
LAB-1	55-gallon closed-top drum	Acetone and residual sludge	7/29/01 – 10/4/01
LL3-8	5-gallon bucket	Leaves, grass and sticks contaminated with hydraulic fluid	8/11/01

Per Section 7 of the Facility-Wide SAP, indigenous IDW contained in roll-off boxes are characterized for disposal on the basis of composite samples collected and submitted for laboratory analysis of full toxicity characteristic leaching procedure (TCLP). One composite sample was collected from each roll-off box segregated by load line. Upon receipt of analytical results from the laboratory, the analytical results were reviewed to determine if any potentially hazardous waste exist. This review consisted of a comparison of the analytical results against the TCLP criteria presented in Table 7-1, Maximum Concentration of Contaminants for the Toxicity Characteristic (40 CFR 261.24) presented in the Facility-Wide SAP (USACE 2001).

Attachment 1 presents the analytical laboratory data for TCLP analysis for containers LL2-1 (sample ID LL20685), LL3-1 (sample ID LL30685), and LL4-1 (sample ID LL40981). All analytical results were below detection limits. Historical data for Load Lines 2, 3, and 4 and investigations at other areas of concern at RVAAP have shown this type of IDW not to exhibit the hazardous waste characteristics for D001 (ignitability) or D003 (reactivity) listings. Based on process knowledge, the potential exists for the presence of explosive compounds at levels less those defining explosive soil (i.e., less than 10 percent secondary explosive compound content), other organic compounds (i.e., polycyclic aromatic hydrocarbons), and inorganic compounds above facility-wide background levels. Therefore, the waste is considered non-hazardous, contaminated solid waste and disposal at a permitted solid waste facility is recommended for all three roll-off containers.

Acetone used as an extraction solvent and labware rinse reagent during explosives analysis is a RCRA listed hazardous waste (F003) per 40 CFR 261.31 and must be disposed as such. One 55-gallon drum consisting of acetone rinse and extract, and suspended solids (LAB-1) was generated during this investigation. Because the waste is a listed hazardous waste, no waste characterization sampling was performed. This container is recommended for immediate off-site disposal at a licensed disposal facility.

One five-gallon bucket of waste was collected after a small hydraulic fluid leak was detected on the drill rig used for monitoring well installation. Leaves, grass, and sticks that were visibly contaminated with hydraulic fluid were collected and containerized for disposal. The MSDS for the hydraulic fluid is included as Attachment 2. Hydraulic fluid is not considered a hazardous waste under 40 CFR 261. Disposal at a permitted solid waste facility is recommended.

Table 2. Summary of Final Waste Classification and Recommended Disposal Options

NON-HAZARDOUS, CONTAMINATED WASTE			
Container Number	**Medium**	**Waste Criterion**	**Disposal Recommendation**
LL2-1	soils	Inorganics, organics	Permitted Solid Waste Facility
LL3-1	soils	Inorganics, organics	Permitted Solid Waste Facility
LL4-1	soils	Inorganics, organics	Permitted Solid Waste Facility
LL3-8	debris	Hydraulic fluid	Permitted Solid Waste Facility
HAZARDOUS WASTE			
LAB-1	Acetone waste	Listed waste/F003	Permitted Facility

Please note that containers LL2-1, LL3-1, LL4-1, and LL3-8 have been characterized under provisions of the Facility-Wide SAP and SAP Addendum No. 1 using TCLP analyses and process knowledge. Unless RVAAP has additional information that would result in the IDW meeting, or containing materials that meet, the definition of a listed hazardous waste as defined in 40 CFR Part 261 Subpart D, it is recommended that the IDW, as presently characterized, be disposed as non-hazardous, contaminated solid waste.

Since RVAAP, under RCRA, is the generator of this material, SAIC requests concurrence or direction on the waste classification prior to disposal to ensure that the materials are properly disposed. Following your direction and immediate approval, we will proceed with the appropriate waste disposal.

If you have any questions or require additional information, please do not hesitate to contact me at (330) 405-5804.

Sincerely,

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

Martha Clough

Martha Clough
Project IDW Coordinator

cc: John Jent, USACE
Paul Zorko, USACE
Eileen Mohr, Ohio EPA
Mark Patterson, RVAAP
Kevin Jago, SAIC
Bob Smith, SAIC
Martha Turpin, SAIC
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Attachment 1
Analytical Data for Container IDs LL2-1, LL3-1, and LL4-1
Page 1 of 3

Sample Area	Station	Sample ID	Date	Time	Sample Desc.	Media Description	Analytical Description	Parameter Code	Chemical	RCRA Regulatory Level	Results	Units	Lab qualifier
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Herbicides	93-72-1	Silvex	1.0	0.1	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Herbicides	94-75-7	2,4-D	10.0	0.5	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Metals	7440-43-9	Cadmium	1.0	0.1	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Metals	7782-49-2	Selenium	1.0	0.25	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Metals	7440-22-4	Silver	5.0	0.5	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Metals	7440-47-3	Chromium	5.0	0.5	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Metals	7440-38-2	Arsenic	5.0	0.5	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Metals	7439-92-1	Lead	5.0	0.5	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Metals	7440-39-3	Barium	100.0	10	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Metals	7439-97-6	Mercury	0.2	0.002	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Pesticides and/or PCBs	8001-35-2	Toxaphene	0.5	0.02	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Pesticides and/or PCBs	57-74-9	Chlordane	0.03	0.005	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Pesticides and/or PCBs	1024-57-3	Heptachlor epoxide	0.008	0.0005	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Pesticides and/or PCBs	72-43-5	Methoxychlor	10.0	0.001	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Pesticides and/or PCBs	58-89-9	Lindane	0.4	0.0005	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Pesticides and/or PCBs	72-20-8	Endrin	0.02	0.0005	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Pesticides and/or PCBs	76-44-8	Heptachlor	0.008	0.0005	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Semi-Volatiles	88-06-2	2,4,6-Trichlorophenol	2.0	0.05	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Semi-Volatiles	65794-96-9	m+p Methylphenol	200.0	0.1	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Semi-Volatiles	106-46-7	1,4-Dichlorobenzene	7.5	0.05	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Semi-Volatiles	87-86-5	Pentachlorophenol	100.0	0.1	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Semi-Volatiles	110-86-1	Pyridine	5.0	0.1	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Semi-Volatiles	95-95-4	2,4,5-Trichlorophenol	400.0	0.05	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Semi-Volatiles	67-72-1	Hexachloroethane	3.0	0.05	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Semi-Volatiles	95-48-7	2-Methylphenol	200.0	0.05	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Semi-Volatiles	98-95-3	Nitrobenzene	2.0	0.05	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Semi-Volatiles	121-14-2	2,4-Dinitrotoluene	0.13	0.05	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Semi-Volatiles	118-74-1	Hexachlorobenzene	0.13	0.05	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Semi-Volatiles	87-68-3	Hexachlorobutadiene	0.5	0.05	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Volatiles	67-66-3	Chloroform	6.0	0.025	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Volatiles	107-06-2	1,2-Dichloroethane	0.5	0.025	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Volatiles	75-35-4	1,1-Dichloroethene	0.7	0.07	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Volatiles	78-93-3	2-Butanone	200.0	0.05	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Volatiles	56-23-5	Carbon tetrachloride	0.5	0.025	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Volatiles	108-90-7	Chlorobenzene	100.0	0.025	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Volatiles	127-18-4	Tetrachloroethene	0.7	0.07	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Volatiles	79-01-6	Trichloroethene	0.5	0.05	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Volatiles	75-01-4	Vinyl chloride	0.2	0.05	MG/L	U
Load Line 2	IDW	LL20685	8/26/2001	931	Grab	Waste Material	TCLP Volatiles	71-43-2	Benzene	0.5	0.025	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Herbicides	93-72-1	Silvex	1.0	0.1	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Herbicides	94-75-7	2,4-D	10.0	0.5	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Metals	7440-43-9	Cadmium	1.0	0.1	MG/L	U

Attachment 1
Analytical Data for Container IDs LL2-1, LL3-1, and LL4-1
Page 2 of 3

Sample Area	Station	Sample ID	Date	Time	Sample Desc.	Media Description	Analytical Description	Parameter Code	Chemical	RCRA Regulatory Level	Results	Units	Lab qualifier
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Metals	7782-49-2	Selenium	1.0	0.25	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Metals	7440-22-4	Silver	5.0	0.5	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Metals	7440-47-3	Chromium	5.0	0.5	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Metals	7440-38-2	Arsenic	5.0	0.5	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Metals	7439-92-1	Lead	5.0	0.5	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Metals	7440-39-3	Barium	100.0	10	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Metals	7439-97-6	Mercury	0.2	0.002	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Pesticides and/or PCBs	8001-35-2	Toxaphene	0.5	0.02	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Pesticides and/or PCBs	57-74-9	Chlordane	0.03	0.005	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Pesticides and/or PCBs	1024-57-3	Heptachlor epoxide	0.008	0.0005	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Pesticides and/or PCBs	72-43-5	Methoxychlor	10.0	0.001	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Pesticides and/or PCBs	58-89-9	Lindane	0.4	0.0005	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Pesticides and/or PCBs	72-20-8	Endrin	0.02	0.0005	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Pesticides and/or PCBs	76-44-8	Heptachlor	0.008	0.0005	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Semi-Volatiles	88-06-2	2,4,6-Trichlorophenol	2.0	0.05	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Semi-Volatiles	65794-96-9	m+p Methylphenol	200.0	0.1	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Semi-Volatiles	106-46-7	1,4-Dichlorobenzene	7.5	0.05	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Semi-Volatiles	87-86-5	Pentachlorophenol	100.0	0.1	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Semi-Volatiles	110-86-1	Pyridine	5.0	0.1	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Semi-Volatiles	95-95-4	2,4,5-Trichlorophenol	400.0	0.05	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Semi-Volatiles	67-72-1	Hexachloroethane	3.0	0.05	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Semi-Volatiles	95-48-7	2-Methylphenol	200.0	0.05	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Semi-Volatiles	98-95-3	Nitrobenzene	2.0	0.05	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Semi-Volatiles	121-14-2	2,4-Dinitrotoluene	0.13	0.05	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Semi-Volatiles	118-74-1	Hexachlorobenzene	0.13	0.05	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Semi-Volatiles	87-68-3	Hexachlorobutadiene	0.5	0.05	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Volatiles	67-66-3	Chloroform	6.0	0.025	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Volatiles	107-06-2	1,2-Dichloroethane	0.5	0.025	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Volatiles	75-35-4	1,1-Dichloroethene	0.7	0.07	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Volatiles	78-93-3	2-Butanone	200.0	0.05	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Volatiles	56-23-5	Carbon tetrachloride	0.5	0.025	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Volatiles	108-90-7	Chlorobenzene	100.0	0.025	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Volatiles	127-18-4	Tetrachloroethene	0.7	0.07	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Volatiles	79-01-6	Trichloroethene	0.5	0.05	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Volatiles	75-01-4	Vinyl chloride	0.2	0.05	MG/L	U
Load Line 3	IDW	LL30685	8/26/2001	1011	Grab	Waste Material	TCLP Volatiles	71-43-2	Benzene	0.5	0.025	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Herbicides	93-72-1	Silvex	1.0	0.1	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Herbicides	94-75-7	2,4-D	10.0	0.5	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Metals	7440-43-9	Cadmium	1.0	0.1	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Metals	7782-49-2	Selenium	1.0	0.25	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Metals	7440-22-4	Silver	5.0	0.5	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Metals	7440-47-3	Chromium	5.0	0.5	MG/L	U

Attachment 1
Analytical Data for Container IDs LL2-1, LL3-1, and LL4-1
Page 3 of 3

Sample Area	Station	Sample ID	Date	Time	Sample Desc.	Media Description	Analytical Description	Parameter Code	Chemical	RCRA Regulatory Level	Results	Units	Lab qualifier
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Metals	7440-38-2	Arsenic	5.0	0.5	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Metals	7439-92-1	Lead	5.0	0.5	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Metals	7440-39-3	Barium	100.0	10	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Metals	7439-97-6	Mercury	0.2	0.002	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Pesticides and/or PCBs	8001-35-2	Toxaphene	0.5	0.02	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Pesticides and/or PCBs	57-74-9	Chlordane	0.03	0.005	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Pesticides and/or PCBs	1024-57-3	Heptachlor epoxide	0.008	0.0005	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Pesticides and/or PCBs	72-43-5	Methoxychlor	10.0	0.001	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Pesticides and/or PCBs	58-89-9	Lindane	0.4	0.0005	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Pesticides and/or PCBs	72-20-8	Endrin	0.02	0.0005	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Pesticides and/or PCBs	76-44-8	Heptachlor	0.008	0.0005	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Semi-Volatiles	88-06-2	2,4,6-Trichlorophenol	2.0	0.05	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Semi-Volatiles	65794-96-9	m+p Methylphenol	200.0	0.1	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Semi-Volatiles	106-46-7	1,4-Dichlorobenzene	7.5	0.05	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Semi-Volatiles	87-86-5	Pentachlorophenol	100.0	0.1	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Semi-Volatiles	110-86-1	Pyridine	5.0	0.1	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Semi-Volatiles	95-95-4	2,4,5-Trichlorophenol	400.0	0.05	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Semi-Volatiles	67-72-1	Hexachloroethane	3.0	0.05	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Semi-Volatiles	95-48-7	2-Methylphenol	200.0	0.05	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Semi-Volatiles	98-95-3	Nitrobenzene	2.0	0.05	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Semi-Volatiles	121-14-2	2,4-Dinitrotoluene	0.13	0.05	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Semi-Volatiles	118-74-1	Hexachlorobenzene	0.13	0.05	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Semi-Volatiles	87-68-3	Hexachlorobutadiene	0.5	0.05	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Volatiles	67-66-3	Chloroform	6.0	0.025	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Volatiles	107-06-2	1,2-Dichloroethane	0.5	0.025	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Volatiles	75-35-4	1,1-Dichloroethene	0.7	0.07	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Volatiles	78-93-3	2-Butanone	200.0	0.05	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Volatiles	56-23-5	Carbon tetrachloride	0.5	0.025	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Volatiles	108-90-7	Chlorobenzene	100.0	0.025	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Volatiles	127-18-4	Tetrachloroethene	0.7	0.07	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Volatiles	79-01-6	Trichloroethene	0.5	0.05	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Volatiles	75-01-4	Vinyl chloride	0.2	0.05	MG/L	U
Load Line 4	IDW	LL40981	8/26/2001	1111	Grab	Waste Material	TCLP Volatiles	71-43-2	Benzene	0.5	0.025	MG/L	U

MATERIAL SAFETY DATA SHEET

Eastern Oil Company
590 S. Paddock
Pontiac, Michigan 48341

Emergency Telephone Number: (810)333-1333

SECTION I - PRODUCT IDENTIFICATION

Product Name:	Premium Hydraulic 32
Product Class:	Petroleum Oil
Chemical Family:	Petroleum Hydrocarbon

SECTION II - HAZARDOUS INGREDIENTS

Ingredient	CAS Number	Percent	TLV-ppm-mg/m3
None	N/A	N/A	N/A

NFPA HAZARD IDENTIFICATION: HEALTH=0 FIRE=1 REACTIVITY=0

Ingredients with (*) in CAS numbers are subject to reporting requirements of Section 313 Emergency Planning & Community Right to Know Act & 40CFR372.

SECTION III - PHYSICAL DATA

Boiling Point: 650°F	Specific Gravity: 0.86
Vapor Pressure: <0.1	Melting Point: N/A
Vapor Density: N/A	Evaporation Rate: Very Slow
Solubility in H2O: Nil	PH: N/A

Appearance & Odor: Light amber liquid with a slight petroleum odor.

SECTION IV - FIRE & EXPLOSION HAZARDS

Flash Point (Method Used):400°F COC Flammable Limits: N/D

Extinguishing Media: CO2, Dry Chemical, Chemical Foam, Water Fog

Special Fire Fighting Procedures: Wear self-contained breathing device when fighting fires in confined spaces.

Unusual Fire & Explosion Hazards: No unusual hazard

SECTION V - HEALTH HAZARD DATA

Effects of Overexposure: Prolonged contact with skin may result in mild skin irritation.

Primary Route(s) of Exposure: Inhalation, Ingestion, Eye contact, Skin contact

First Aid Procedures:
Inhalation: remove victim to fresh air
Ingestion: do not induce vomiting, seek medical attention
Eye Contact: flush with water for at least 15 minutes
Skin Contact: wash with soap and water

SECTION VI - REACTIVITY DATA

Stability: Unstable ( ) Stable (X)

Hazardous Polymerization: May Occur ( ) Will Not Occur (X)

Hazardous Decomposition of Products: CO, CO2, oxides of sulfur and asphyxiants.

Conditions to Avoid: None Known

Incompatibility (Materials to Avoid): strong oxidizers

SECTION VII - SPILL OR LEAK PROCEDURES

Steps to be taken in case material is spilled or released: Contain spill, clean up using an oil absorbent material. Comply with all applicable laws.

Waste Disposal Method: Per federal, state and local regulations.

SECTION VIII - SAFE HANDLING

Respiratory Protection: None normally required

Ventilation: Ventilate as needed to maintain workplace environment

Protective Gloves: Oil resistant

Other Protective Equipment: Safety goggles, oil resistant apron, eye bath and safety shower.

Hygienic Practices: Wash with soap and water after handling product. Wash contaminated clothing before reuse.

SECTION IX - SPECIAL PRECAUTIONS

Precautions to be taken in handling and storage: Keep away from open flame and sparks, rotate stock, keep container sealed and stored upright when not in use.
Other precautions: None known.

N/A = Not Applicable N/D = Not Determined

Date of Preparation: August 19, 1994 Revision Number:1

An Employee-Owned Company
Science Applications International Corporation

January 15, 2002

Mr. Glen Beckham
U.S. Army Corps of Engineers, Louisville District
ATTN: CELRL-PM-M
600 Martin Luther King, Jr. Place
Louisville, Kentucky 40202-0059

SUBJECT: **Contract No. F44650-99-0007, ECAS 186, Phase II Remedial Investigations (RIs) for Load Lines 2, 3, and 4 at the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio**

RE: **Deliverable – FINAL Investigation-Derived Waste (IDW) Characterization and Disposal Report for Development and Purge Water and Decontamination Fluids**

Dear Mr. Beckham:

Investigative activities conducted during the RIs of Load Lines 2, 3, and 4 (July 2001 through October 2001) at RVAAP resulted in the generation of IDW consisting of soil, groundwater, decontamination fluids, and field laboratory reagents. The purpose of this letter report is to characterize and classify for disposal IDW consisting of drums of development and purge water from the monitoring wells and decontamination fluids resulting from the decontamination process of sampling equipment and drill rigs. The characterization and classification of the remaining soil containers will be completed in a separate letter report as evaluation of characterization data are completed.

This report includes a summary of IDW generated and its origin (Table 1) and classification of the IDW and recommendations for disposal (Table 2). This document follows guidance established by the Facility-Wide Sampling and Analysis Plan (SAP) (USACE 2001), the Sampling and Analysis Plan Addendum No. 1 for the Phase II RI of Load Lines 2, 3, and 4 (USACE 2001), and the Ohio EPA (November 1997) regarding IDW disposition at RVAAP.

8866 Commons Blvd., Suite 201, Twinsburg, OH 44087 (330) 405-9810 • Fax: (330) 405-9811

Table 1. Summary of Load Lines 2, 3, and 4 Phase II RI IDW

CONTAINER NUMBER	CONTAINER TYPE	CONTENTS	GENERATION DATES
LL2mw59-1	55-GALLON STEEL CLOSED TOP	PURGE WATER	9/20/2001
LL2mw60-1	55-GALLON STEEL CLOSED TOP	PURGE WATER	9/19/2001
LL2mw261-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/25/2001-9/10/2001
LL2mw262-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/23/2001-9/7/2001
LL2mw263-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/24/2001-9/7/2001
LL2mw264-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/24/2001
LL2mw264-2	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/24/2001-9/10/2001
LL2mw265-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/25/2001-9/19/2001
LL2mw266-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/25/2001-9/10/2001
LL2mw267-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/25/2001-9/10/2001
LL2mw268-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/25/2001
LL2mw268-2	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/25/2001-9/7/2001
LL2mw269-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/25/2001-9/20/2001
LL2mw270-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/25/2001
LL2mw270-2	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/25/2001-9/7/2001
LL3mw232-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/23/2001-8/24/2001
LL3mw232-2	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/24/2001-9/11/2001
LL3mw233-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/22/2001
LL3mw234-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/24/2001-9/11/2001
LL3mw235-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/22/2001
LL3mw236-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/12/2001-9/11/2001
LL3mw237-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/23/2001-9/19/2001
LL3mw238-1	55-GALLON STEEL OPEN TOP	DEVELOPMENT WATER	8/24/2001-9/18/2001
LL3mw239-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/24/2001-9/18/2001
LL3mw240-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/24/2001-9/18/2001

CONTAINER NUMBER	CONTAINER TYPE	CONTENTS	GENERATION DATES
LL3mw241-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/22/2001-9/21/2001
LL3mw242-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/20/2001-9/20/2001
LL3mw243-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/21/2001
LL3mw243-2	55-GALLON STEEL CLOSED TOP	PURGE WATER	9/10/2001
LL4mw193-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/23/2001-9/6/2001
LL4mw194-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/21/2001-9/5/2001
LL4mw195-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/21/2001-9/5/2001
LL4mw196-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/14/2001-9/4/2001
LL4mw197-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/22/2001-9/5/2001
LL4mw198-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/23/2001-8/24/2001
LL4mw198-2	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/24/2001-9/6/2001
LL4mw199-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/22/2001-9/6/2001
LL4mw200-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/14/2001
LL4mw200-2	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/14/2001-8/21/2001
LL4mw200-3	55-GALLON STEEL CLOSED TOP	DEVELOPMENT/PURGE WATER	8/21/2001-9/6/2001
DECON PAD-1	55-GALLON STEEL CLOSED TOP	DECON WATER FROM DRILL RIG DECON PAD	7/24/2001- 7/28/2001
DECON PAD-2	55-GALLON STEEL CLOSED TOP	DECON WATER FROM DRILL RIG DECON PAD	7/28/2001- 8/8/2001
DECON PAD-3	55-GALLON STEEL CLOSED TOP	DECON WATER FROM DRILL RIG DECON PAD	8/8/2001-8/8/2001
DECON PAD-4	55-GALLON STEEL CLOSED TOP	DECON WATER FROM DRILL RIG DECON PAD	8/8/2001-8/10/2001
DECON PAD-5	55-GALLON STEEL CLOSED TOP	DECON WATER FROM DRILL RIG DECON PAD	8/10/2001-8/12/2001
DECON PAD-6	55-GALLON STEEL CLOSED TOP	DECON WATER FROM DRILL RIG DECON PAD	8/12/2001-8/12/2001
DECON PAD-7	55-GALLON STEEL CLOSED TOP	DECON WATER FROM DRILL RIG DECON PAD	8/12/2001-8/20/2001
SAIC DECON-1	55-GALLON STEEL CLOSED TOP	DECON WATER FROM EQUIPMENT DECON	7/28/2001-8/15/2001
SAIC DECON-2	55-GALLON STEEL CLOSED TOP	WASTE WATER WITH METHANOL FROM EQUIPMENT DECON	8/1/2001-9/21/2001
SAIC DECON-3	55-GALLON STEEL CLOSED TOP	DECON WATER FROM EQUIPMENT DECON	8/15/2001-8/28/2001

CONTAINER NUMBER	CONTAINER TYPE	CONTENTS	GENERATION DATES
SAIC DECON-4	55-GALLON STEEL CLOSED TOP	DECON WATER FROM EQUIPMENT DECON	8/28/2001-9/21/2001

Per Section 7 of the Facility-Wide SAP, indigenous IDW (groundwater), contained in drums segregated by well location are characterized for disposal on the basis of analytical results from correlative environmental samples. Upon receipt of analytical results from the laboratory, they were reviewed to determine if any potentially hazardous waste exist. This review consisted of a comparison of the analytical results against the TCLP criteria presented in Table 7-1, Maximum Concentration of Contaminants for the Toxicity Characteristic (40 CFR 261.24) presented in the Facility-Wide SAP (USACE 2001).

Attachments 1, 2, and 3 present the summary of analytes detected in Load Lines 2, 3, and 4 groundwater samples along with the comparison to TCLP values. All analytical results when compared to TCLP values were less than the regulatory limits. Analytical data was also screened against RVAAP facility background values since all analytical data was less than the TCLP regulated criteria. Each drum had at least one constituent greater than the established background values. The groundwater drums contain detectable levels of organic constituents or at least one inorganic constituent above RVAAP facility-wide background values; therefore, water in theses containers is considered non-hazardous, contaminated IDW and disposal at a permitted solid waste facility or waste water treatment facility is recommended.

Per Section 7 of the Facility-Wide SAP, non-indigenous IDW is characterized for disposal on the basis of composite samples collected from segregated waste stream storage containers. Composite waste samples were collected and submitted for laboratory analysis to characterize each waste stream for disposal. Three liquid composite samples were collected (LL21224, LL21223, and LL221226). Decontamination fluids were consolidated from all three Load Lines. LL21224 was collected from decontamination water collected from the drill rig decontamination pad and includes drums Decon Pad-1 through Decon Pad-7. LL21225 was collected from drums SAIC Decon-1, 3, and 4 and included wash and rinse water from the decontamination of sampling equipment. LL21226 was collected from SAIC Decon-2 and included rinse water with methanol from the decontamination of sampling equipment.

Attachment 4 presents the analytical laboratory data for pH, flashpoint, reactive cyanide and sulfide, and TCLP analysis for samples LL21224, LL21225, and LL21226. All analytical results were below detection limits with the exception of trace levels of PCB-1254 in LL21225 (0.78 ug/L) and LL21226 (1 ug/L). Due to these contaminants being from an unknown source in decontamination fluids, these wastes will be disposed of based on "as found" concentrations per 40 CFR 761. pH values ranged from 7.2 to 8.7 and all flashpoints were greater than 180° F. Reactive cyanide and reactive sulfide were not detected in any sample. Therefore, the waste is considered non-hazardous, contaminated solid waste and disposal at a permitted solid waste or water treatment facility is recommended for all decontamination fluid drums.

Table 2. Summary of Final Waste Classification and Recommended Disposal Options

Container Number	Medium	Waste Criterion	Disposal Recommendation
NON-HAZARDOUS, CONTAMINATED WASTE			
LL2mw261-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2mw262-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2MW263-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2MW264-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2mw264-2	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2mw265-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2mw266-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2mw267-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2MW268-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2MW268-2	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2mw269-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2MW270-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2MW270-2	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2mw59-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2mw60-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw232-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw232-2	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw233-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw234-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw235-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw236-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw237-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw238-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw239-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw240-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw241-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw242-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw243-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw243-2	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw193-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw194-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw195-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw196-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw197-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw198-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw198-2	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw199-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw200-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw200-2	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw200-3	groundwater	Inorganics, organics	Permitted Solid Waste Facility
DECON PAD-1	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility
DECON PAD-2	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility

Container Number	Medium	Waste Criterion	Disposal Recommendation
DECON PAD-3	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility
DECON PAD-4	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility
DECON PAD-5	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility
DECON PAD-6	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility
DECON PAD-7	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility
SAIC DECON-1	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility
SAIC DECON-2	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility
SAIC DECON-3	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility
SAIC DECON-4	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility

Please note that the wastes included in this letter have been characterized under provisions of the Facility-Wide SAP and SAP Addendum No. 1 using environmental analytical data, TCLP analyses, and process knowledge. Unless RVAAP has additional information that would result in the IDW meeting, or containing materials that meet, the definition of a listed hazardous waste as defined in 40 CFR Part 261 Subpart D, it is recommended that the IDW, as presently characterized, be disposed as summarized in Table 2.

Since RVAAP, under RCRA, is the generator of this material, SAIC requests concurrence or direction on the waste classification prior to disposal to ensure that the materials are properly disposed. Following your direction and immediate approval, we will proceed with the appropriate waste disposal.

If you have any questions or require additional information, please do not hesitate to contact me at (330) 405-5804.

Sincerely,

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

Martha Clough

Martha Clough
Project IDW Coordinator

cc: John Jent, USACE
Paul Zorko, USACE
Eileen Mohr, Ohio EPA
Mark Patterson, RVAAP
Kevin Jago, SAIC
Bob Smith, SAIC
Martha Turpin, SAIC
SAIC CRF
Project File

ATTACHMENT 1
Summary of Anlytes Detected in IDW
Load Line 2 Liquid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Background	Proportion >background
LL2MW262-1	N	Inorganics	Arsenic	MG/L	1/ 1	0.029	0.029	LL2mw-262-1146-GW	5	0/ 1	0.0191	1/ 1
LL2MW262-1	N	Inorganics	Barium	MG/L	1/ 1	0.041	0.041	LL2mw-262-1146-GW	100	0/ 1	0.241	0/ 1
LL2MW262-1		Inorganics	Calcium	MG/L	1/ 1	60.5	60.5	LL2mw-262-1146-GW			48.2	1/ 1
LL2MW262-1		Inorganics	Cobalt	MG/L	1/ 1	0.0092	0.0092	LL2mw-262-1146-GW			0	1/ 1
LL2MW262-1		Inorganics	Iron	MG/L	1/ 1	1.2	1.2	LL2mw-262-1146-GW			21.5	0/ 1
LL2MW262-1		Inorganics	Magnesium	MG/L	1/ 1	27.3	27.3	LL2mw-262-1146-GW			13.7	1/ 1
LL2MW262-1		Inorganics	Manganese	MG/L	1/ 1	0.76	0.76	LL2mw-262-1146-GW			1.26	0/ 1
LL2MW262-1		Inorganics	Nickel	MG/L	1/ 1	0.031	0.031	LL2mw-262-1146-GW			0.0853	0/ 1
LL2MW262-1		Inorganics	Potassium	MG/L	1/ 1	2.5	2.5	LL2mw-262-1146-GW			6.06	0/ 1
LL2MW262-1		Inorganics	Sodium	MG/L	1/ 1	7.3	7.3	LL2mw-262-1146-GW			49.7	0/ 1
LL2MW262-1		Explosives	RDX	MG/L	1/ 1	0.00018	0.00018	LL2mw-262-1146-GW			0	1/ 1
LL2MW263-1	N	Inorganics	Arsenic	MG/L	1/ 1	0.02	0.02	LL2mw-263-1147-GW	5	0/ 1	0.0191	1/ 1
LL2MW263-1	N	Inorganics	Barium	MG/L	1/ 1	0.031	0.031	LL2mw-263-1147-GW	100	0/ 1	0.241	0/ 1
LL2MW263-1		Inorganics	Calcium	MG/L	1/ 1	34.8	34.8	LL2mw-263-1147-GW			48.2	0/ 1
LL2MW263-1		Inorganics	Iron	MG/L	1/ 1	2.9	2.9	LL2mw-263-1147-GW			21.5	0/ 1
LL2MW263-1		Inorganics	Magnesium	MG/L	1/ 1	16	16	LL2mw-263-1147-GW			13.7	1/ 1
LL2MW263-1		Inorganics	Manganese	MG/L	1/ 1	0.75	0.75	LL2mw-263-1147-GW			1.26	0/ 1
LL2MW263-1		Inorganics	Potassium	MG/L	1/ 1	1.1	1.1	LL2mw-263-1147-GW			6.06	0/ 1
LL2MW263-1		Inorganics	Sodium	MG/L	1/ 1	6	6	LL2mw-263-1147-GW			49.7	0/ 1
LL2MW264-1	N	Inorganics	Arsenic	MG/L	1/ 1	0.016	0.016	LL2mw-264-1148-GW	5	0/ 1	0.0191	0/ 1
LL2MW264-1	N	Inorganics	Barium	MG/L	1/ 1	0.014	0.014	LL2mw-264-1148-GW	100	0/ 1	0.241	0/ 1
LL2MW264-1		Inorganics	Calcium	MG/L	1/ 1	48.8	48.8	LL2mw-264-1148-GW			48.2	1/ 1
LL2MW264-1		Inorganics	Iron	MG/L	1/ 1	0.53	0.53	LL2mw-264-1148-GW			21.5	0/ 1
LL2MW264-1		Inorganics	Magnesium	MG/L	1/ 1	18.6	18.6	LL2mw-264-1148-GW			13.7	1/ 1
LL2MW264-1		Inorganics	Manganese	MG/L	1/ 1	0.44	0.44	LL2mw-264-1148-GW			1.26	0/ 1
LL2MW264-1		Inorganics	Potassium	MG/L	1/ 1	0.87	0.87	LL2mw-264-1148-GW			6.06	0/ 1
LL2MW264-1		Inorganics	Sodium	MG/L	1/ 1	10	10	LL2mw-264-1148-GW			49.7	0/ 1
LL2MW265-1	N	Inorganics	Arsenic	MG/L	2/ 2	0.097	0.1	LL2mw-265-1149-GW	5	0/ 2	0.0191	1/ 1
LL2MW265-1	N	Inorganics	Barium	MG/L	2/ 2	0.0265	0.027	LL2mw-265-1187-GW	100	0/ 2	0.241	0/ 1
LL2MW265-1		Inorganics	Calcium	MG/L	2/ 2	66.9	67.1	LL2mw-265-1187-GW			48.2	1/ 1
LL2MW265-1		Inorganics	Cobalt	MG/L	2/ 2	0.0715	0.073	LL2mw-265-1149-GW			0	1/ 1
LL2MW265-1		Inorganics	Iron	MG/L	2/ 2	1.7	1.8	LL2mw-265-1149-GW			21.5	0/ 1
LL2MW265-1		Inorganics	Magnesium	MG/L	2/ 2	27.7	27.7	LL2mw-265-1187-GW			13.7	1/ 1
LL2MW265-1		Inorganics	Manganese	MG/L	2/ 2	1.9	1.9	LL2mw-265-1187-GW			1.26	1/ 1
LL2MW265-1		Inorganics	Nickel	MG/L	2/ 2	0.295	0.3	LL2mw-265-1149-GW			0.0853	1/ 1
LL2MW265-1		Inorganics	Potassium	MG/L	2/ 2	1.4	1.4	LL2mw-265-1149-GW			6.06	0/ 1
LL2MW265-1		Inorganics	Sodium	MG/L	2/ 2	7.25	7.3	LL2mw-265-1187-GW			49.7	0/ 1
LL2MW265-1		Pesticides and PCBs	PCB-1242	MG/L	1/ 2	0.00061	0.00072	LL2mw-265-1149-GW			0	1/ 1
LL2MW265-1		Semi-Volatile Organics	Bis(2-ethylhexyl)phthalate	MG/L	1/ 4	0.00828	0.0031	LL2mw-265-1149-GW			0	1/ 1
LL2MW265-1		Volatile Organics	Acetone	MG/L	2/ 2	0.0029	0.003	LL2mw-265-1149-GW			0	1/ 1
LL2MW265-1		Volatile Organics	Carbon disulfide	MG/L	1/ 2	0.00063	0.00026	LL2mw-265-1187-GW			0	1/ 1
LL2MW266-1	N	Inorganics	Barium	MG/L	1/ 1	0.037	0.037	LL2mw-266-1150-GW	100	0/ 1	0.241	0/ 1
LL2MW266-1		Inorganics	Calcium	MG/L	1/ 1	41.7	41.7	LL2mw-266-1150-GW			48.2	0/ 1
LL2MW266-1		Inorganics	Cobalt	MG/L	1/ 1	0.0098	0.0098	LL2mw-266-1150-GW			0	1/ 1
LL2MW266-1		Inorganics	Magnesium	MG/L	1/ 1	19	19	LL2mw-266-1150-GW			13.7	1/ 1
LL2MW266-1		Inorganics	Manganese	MG/L	1/ 1	0.98	0.98	LL2mw-266-1150-GW			1.26	0/ 1
LL2MW266-1		Inorganics	Potassium	MG/L	1/ 1	5.8	5.8	LL2mw-266-1150-GW			6.06	0/ 1
LL2MW266-1		Inorganics	Sodium	MG/L	1/ 1	5.9	5.9	LL2mw-266-1150-GW			49.7	0/ 1
LL2MW266-1	N	Volatile Organics	2-Butanone	MG/L	1/ 1	0.0012	0.0012	LL2mw-266-1150-GW	200	0/ 1	0	1/ 1
LL2MW266-1	N	Volatile Organics	Benzene	MG/L	1/ 1	0.00049	0.00049	LL2mw-266-1150-GW	0.5	0/ 1	0	1/ 1
LL2MW266-1		Volatile Organics	Carbon disulfide	MG/L	1/ 1	0.00031	0.00031	LL2mw-266-1150-GW			0	1/ 1
LL2MW266-1		Volatile Organics	Chloromethane	MG/L	1/ 1	0.00037	0.00037	LL2mw-266-1150-GW			0	1/ 1
LL2MW267-1	N	Inorganics	Barium	MG/L	1/ 1	0.035	0.035	LL2mw-267-1151-GW	100	0/ 1	0.241	0/ 1
LL2MW267-1		Inorganics	Calcium	MG/L	1/ 1	50.2	50.2	LL2mw-267-1151-GW			48.2	1/ 1
LL2MW267-1		Inorganics	Iron	MG/L	1/ 1	1.6	1.6	LL2mw-267-1151-GW			21.5	0/ 1
LL2MW267-1		Inorganics	Magnesium	MG/L	1/ 1	21.5	21.5	LL2mw-267-1151-GW			13.7	1/ 1
LL2MW267-1		Inorganics	Manganese	MG/L	1/ 1	1.5	1.5	LL2mw-267-1151-GW			1.26	1/ 1

ATTACHMENT 1
Summary of Anlytes Detected in IDW
Load Line 2 Liquid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Background	Proportion >background
LL2MW267-1		Inorganics	Potassium	MG/L	1/ 1	1.7	1.7	LL2mw-267-1151-GW			6.06	0/ 1
LL2MW267-1		Inorganics	Sodium	MG/L	1/ 1	11.1	11.1	LL2mw-267-1151-GW			49.7	0/ 1
LL2MW267-1	N	Volatile Organics	Benzene	MG/L	1/ 1	0.00022	0.00022	LL2mw-267-1151-GW	0.5	0/ 1	0	1/ 1
LL2MW268-1	N	Inorganics	Barium	MG/L	1/ 1	0.036	0.036	LL2mw-268-1152-GW	100	0/ 1	0.241	0/ 1
LL2MW268-1		Inorganics	Calcium	MG/L	1/ 1	60.8	60.8	LL2mw-268-1152-GW			48.2	1/ 1
LL2MW268-1		Inorganics	Iron	MG/L	1/ 1	1	1	LL2mw-268-1152-GW			21.5	0/ 1
LL2MW268-1		Inorganics	Magnesium	MG/L	1/ 1	25.1	25.1	LL2mw-268-1152-GW			13.7	1/ 1
LL2MW268-1		Inorganics	Manganese	MG/L	1/ 1	0.29	0.29	LL2mw-268-1152-GW			1.26	0/ 1
LL2MW268-1		Inorganics	Potassium	MG/L	1/ 1	1.8	1.8	LL2mw-268-1152-GW			6.06	0/ 1
LL2MW268-1		Inorganics	Sodium	MG/L	1/ 1	16.4	16.4	LL2mw-268-1152-GW			49.7	0/ 1
LL2MW269-1	N	Inorganics	Barium	MG/L	1/ 1	0.11	0.11	LL2mw-269-1153-GW	100	0/ 1	0.241	0/ 1
LL2MW269-1		Inorganics	Calcium	MG/L	1/ 1	48.8	48.8	LL2mw-269-1153-GW			48.2	1/ 1
LL2MW269-1		Inorganics	Cobalt	MG/L	1/ 1	0.0092	0.0092	LL2mw-269-1153-GW			0	1/ 1
LL2MW269-1		Inorganics	Iron	MG/L	1/ 1	1.4	1.4	LL2mw-269-1153-GW			21.5	0/ 1
LL2MW269-1		Inorganics	Magnesium	MG/L	1/ 1	23	23	LL2mw-269-1153-GW			13.7	1/ 1
LL2MW269-1		Inorganics	Manganese	MG/L	1/ 1	1.5	1.5	LL2mw-269-1153-GW			1.26	1/ 1
LL2MW269-1		Inorganics	Potassium	MG/L	1/ 1	4.5	4.5	LL2mw-269-1153-GW			6.06	0/ 1
LL2MW269-1		Inorganics	Sodium	MG/L	1/ 1	12	12	LL2mw-269-1153-GW			49.7	0/ 1
LL2MW269-1		Volatile Organics	Acetone	MG/L	1/ 1	0.0056	0.0056	LL2mw-269-1153-GW			0	1/ 1
LL2MW269-1		Volatile Organics	Toluene	MG/L	1/ 1	0.0016	0.0016	LL2mw-269-1153-GW			0	1/ 1
LL2MW270-1	N	Inorganics	Barium	MG/L	1/ 1	0.014	0.014	LL2mw-270-1154-GW	100	0/ 1	0.241	0/ 1
LL2MW270-1		Inorganics	Calcium	MG/L	1/ 1	56.1	56.1	LL2mw-270-1154-GW			48.2	1/ 1
LL2MW270-1		Inorganics	Magnesium	MG/L	1/ 1	20.8	20.8	LL2mw-270-1154-GW			13.7	1/ 1
LL2MW270-1		Inorganics	Manganese	MG/L	1/ 1	0.058	0.058	LL2mw-270-1154-GW			1.26	0/ 1
LL2MW270-1		Inorganics	Potassium	MG/L	1/ 1	1.1	1.1	LL2mw-270-1154-GW			6.06	0/ 1
LL2MW59-1		Inorganics	Calcium	MG/L	1/ 1	17.9	17.9	LL2mw-059-1155-GW			48.2	0/ 1
LL2MW59-1		Inorganics	Magnesium	MG/L	1/ 1	7	7	LL2mw-059-1155-GW			13.7	0/ 1
LL2MW59-1		Inorganics	Manganese	MG/L	1/ 1	0.13	0.13	LL2mw-059-1155-GW			1.26	0/ 1
LL2MW59-1		Inorganics	Potassium	MG/L	1/ 1	0.91	0.91	LL2mw-059-1155-GW			6.06	0/ 1
LL2MW59-1		Inorganics	Sodium	MG/L	1/ 1	6.3	6.3	LL2mw-059-1155-GW			49.7	0/ 1
LL2MW59-1		Explosives	1,3,5-Trinitrobenzene	MG/L	1/ 1	0.0048	0.0048	LL2mw-059-1155-GW			0	1/ 1
LL2MW59-1	N	Explosives	2,4-Dinitrotoluene	MG/L	1/ 1	0.00033	0.00033	LL2mw-059-1155-GW	0.13	0/ 1	0	1/ 1
LL2MW59-1		Explosives	2-Amino-4,6-Dinitrotoluene	MG/L	1/ 1	0.0011	0.0011	LL2mw-059-1155-GW			0	1/ 1
LL2MW59-1		Explosives	4-Amino-2,6-Dinitrotoluene	MG/L	1/ 1	0.00087	0.00087	LL2mw-059-1155-GW			0	1/ 1
LL2MW59-1		Explosives	HMX	MG/L	1/ 1	0.00033	0.00033	LL2mw-059-1155-GW			0	1/ 1
LL2MW59-1		Pesticides and PCBs	Heptachlor epoxide	MG/L	1/ 1	0.00034	0.00034	LL2mw-059-1155-GW			0	1/ 1
LL2MW59-1		Pesticides and PCBs	PCB-1242	MG/L	1/ 1	0.00085	0.00085	LL2mw-059-1155-GW			0	1/ 1
LL2MW59-1		Volatile Organics	Acetone	MG/L	1/ 1	0.0032	0.0032	LL2mw-059-1155-GW			0	1/ 1
LL2MW60-1		Inorganics	Aluminum	MG/L	1/ 1	0.1	0.1	LL2mw-060-1156-GW			9.41	0/ 1
LL2MW60-1	N	Inorganics	Barium	MG/L	1/ 1	0.021	0.021	LL2mw-060-1156-GW	100	0/ 1	0.241	0/ 1
LL2MW60-1		Inorganics	Calcium	MG/L	1/ 1	35.6	35.6	LL2mw-060-1156-GW			48.2	0/ 1
LL2MW60-1		Inorganics	Magnesium	MG/L	1/ 1	10.4	10.4	LL2mw-060-1156-GW			13.7	0/ 1
LL2MW60-1		Pesticides and PCBs	Heptachlor epoxide	MG/L	1/ 1	0.00022	0.00022	LL2mw-060-1156-GW			0	1/ 1
LL2MW60-1		Volatile Organics	Acetone	MG/L	1/ 1	0.0032	0.0032	LL2mw-060-1156-GW			0	1/ 1
LL2NW261-1	N	Inorganics	Arsenic	MG/L	1/ 1	0.016	0.016	LL2mw-261-1145-GW	5	0/ 1	0.0191	0/ 1
LL2NW261-1	N	Inorganics	Barium	MG/L	1/ 1	0.026	0.026	LL2mw-261-1145-GW	100	0/ 1	0.241	0/ 1
LL2NW261-1		Inorganics	Calcium	MG/L	1/ 1	58.1	58.1	LL2mw-261-1145-GW			48.2	1/ 1
LL2NW261-1		Inorganics	Iron	MG/L	1/ 1	0.68	0.68	LL2mw-261-1145-GW			21.5	0/ 1
LL2NW261-1		Inorganics	Magnesium	MG/L	1/ 1	20.8	20.8	LL2mw-261-1145-GW			13.7	1/ 1
LL2NW261-1		Inorganics	Manganese	MG/L	1/ 1	0.34	0.34	LL2mw-261-1145-GW			1.26	0/ 1
LL2NW261-1		Inorganics	Potassium	MG/L	1/ 1	1.4	1.4	LL2mw-261-1145-GW			6.06	0/ 1
LL2NW261-1		Inorganics	Sodium	MG/L	1/ 1	8.1	8.1	LL2mw-261-1145-GW			49.7	0/ 1
LL2NW261-1		Volatile Organics	Chloromethane	MG/L	1/ 1	0.00016	0.00016	LL2mw-261-1145-GW			0	1/ 1

ATTACHMENT 2
Summary of Analytes Detected in IDW
Load Line 3 Liquid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Background	Proportion >background
LL3MW232-1	N	Inorganics	Barium	MG/L	1/ 1	0.0333	0.0333	LL3mw-232-1101-GW	100	0/ 1	0.241	0/ 1
LL3MW232-1	N	Inorganics	Cadmium	MG/L	1/ 1	0.00035	0.00035	LL3mw-232-1101-GW	1	0/ 1	0	1/ 1
LL3MW232-1		Inorganics	Calcium	MG/L	1/ 1	61.5	61.5	LL3mw-232-1101-GW			48.2	1/ 1
LL3MW232-1		Inorganics	Cobalt	MG/L	1/ 1	0.0121	0.0121	LL3mw-232-1101-GW			0	1/ 1
LL3MW232-1		Inorganics	Iron	MG/L	1/ 1	0.194	0.194	LL3mw-232-1101-GW			21.5	0/ 1
LL3MW232-1		Inorganics	Magnesium	MG/L	1/ 1	37.9	37.9	LL3mw-232-1101-GW			13.7	1/ 1
LL3MW232-1		Inorganics	Manganese	MG/L	1/ 1	1.01	1.01	LL3mw-232-1101-GW			1.26	0/ 1
LL3MW232-1		Inorganics	Nickel	MG/L	1/ 1	0.0136	0.0136	LL3mw-232-1101-GW			0.0853	0/ 1
LL3MW232-1		Inorganics	Potassium	MG/L	1/ 1	6.86	6.86	LL3mw-232-1101-GW			6.06	1/ 1
LL3MW232-1		Inorganics	Sodium	MG/L	1/ 1	9.78	9.78	LL3mw-232-1101-GW			49.7	0/ 1
LL3MW232-1		Volatile Organics	Acetone	MG/L	1/ 1	0.0076	0.0076	LL3mw-232-1101-GW			0	1/ 1
LL3MW234-1	N	Inorganics	Barium	MG/L	1/ 1	0.0119	0.0119	LL3mw-234-1103-GW	100	0/ 1	0.241	0/ 1
LL3MW234-1		Inorganics	Calcium	MG/L	1/ 1	28.8	28.8	LL3mw-234-1103-GW			48.2	0/ 1
LL3MW234-1		Inorganics	Cobalt	MG/L	1/ 1	0.0031	0.0031	LL3mw-234-1103-GW			0	1/ 1
LL3MW234-1		Inorganics	Iron	MG/L	1/ 1	0.297	0.297	LL3mw-234-1103-GW			21.5	0/ 1
LL3MW234-1		Inorganics	Magnesium	MG/L	1/ 1	13.4	13.4	LL3mw-234-1103-GW			13.7	0/ 1
LL3MW234-1		Inorganics	Manganese	MG/L	1/ 1	1.19	1.19	LL3mw-234-1103-GW			1.26	0/ 1
LL3MW234-1		Inorganics	Nickel	MG/L	1/ 1	0.0151	0.0151	LL3mw-234-1103-GW			0.0853	0/ 1
LL3MW234-1		Inorganics	Potassium	MG/L	1/ 1	1.99	1.99	LL3mw-234-1103-GW			6.06	0/ 1
LL3MW234-1		Inorganics	Sodium	MG/L	1/ 1	7.68	7.68	LL3mw-234-1103-GW			49.7	0/ 1
LL3MW234-1		Explosives	2-Amino-4,6-Dinitrotoluene	MG/L	1/ 1	0.00012	0.00012	LL3mw-234-1103-GW			0	1/ 1
LL3MW234-1		Explosives	4-Amino-2,6-Dinitrotoluene	MG/L	1/ 1	0.00023	0.00023	LL3mw-234-1103-GW			0	1/ 1
LL3MW234-1		Explosives	RDX	MG/L	1/ 1	0.00079	0.00079	LL3mw-234-1103-GW			0	1/ 1
LL3MW234-1		Volatile Organics	Acetone	MG/L	1/ 1	0.0052	0.0052	LL3mw-234-1103-GW			0	1/ 1
LL3MW234-1	N	Volatile Organics	Carbon tetrachloride	MG/L	1/ 1	0.00025	0.00025	LL3mw-234-1103-GW	0.5	0/ 1	0	1/ 1
LL3MW234-1	N	Volatile Organics	Chloroform	MG/L	1/ 1	0.0002	0.0002	LL3mw-234-1103-GW	6	0/ 1	0	1/ 1
LL3MW236-1		Inorganics	Aluminum	MG/L	1/ 1	0.079	0.079	LL3mw-236-1105-GW			9.41	0/ 1
LL3MW236-1	N	Inorganics	Barium	MG/L	1/ 1	0.015	0.015	LL3mw-236-1105-GW	100	0/ 1	0.241	0/ 1
LL3MW236-1		Inorganics	Calcium	MG/L	1/ 1	25.4	25.4	LL3mw-236-1105-GW			48.2	0/ 1
LL3MW236-1		Inorganics	Cobalt	MG/L	1/ 1	0.0068	0.0068	LL3mw-236-1105-GW			0	1/ 1
LL3MW236-1		Inorganics	Magnesium	MG/L	1/ 1	15	15	LL3mw-236-1105-GW			13.7	1/ 1
LL3MW236-1		Inorganics	Manganese	MG/L	1/ 1	1.1	1.1	LL3mw-236-1105-GW			1.26	0/ 1
LL3MW236-1	N	Inorganics	Mercury	MG/L	1/ 1	0.00008	0.00008	LL3mw-236-1105-GW	0.2	0/ 1	0	1/ 1
LL3MW236-1		Inorganics	Nickel	MG/L	1/ 1	0.03	0.03	LL3mw-236-1105-GW			0.0853	0/ 1
LL3MW236-1		Inorganics	Potassium	MG/L	1/ 1	1.9	1.9	LL3mw-236-1105-GW			6.06	0/ 1
LL3MW236-1		Inorganics	Sodium	MG/L	1/ 1	5.6	5.6	LL3mw-236-1105-GW			49.7	0/ 1
LL3MW236-1		Volatile Organics	Acetone	MG/L	1/ 1	0.0037	0.0037	LL3mw-236-1105-GW			0	1/ 1
LL3MW236-1		Volatile Organics	Carbon disulfide	MG/L	1/ 1	0.0014	0.0014	LL3mw-236-1105-GW			0	1/ 1
LL3MW237-1		Inorganics	Aluminum	MG/L	1/ 1	0.082	0.082	LL3mw-237-1106-GW			9.41	0/ 1
LL3MW237-1		Inorganics	Antimony	MG/L	1/ 1	0.0034	0.0034	LL3mw-237-1106-GW			0	1/ 1
LL3MW237-1	N	Inorganics	Barium	MG/L	1/ 1	0.0088	0.0088	LL3mw-237-1106-GW	100	0/ 1	0.241	0/ 1
LL3MW237-1		Inorganics	Calcium	MG/L	1/ 1	33.3	33.3	LL3mw-237-1106-GW			48.2	0/ 1
LL3MW237-1		Inorganics	Cobalt	MG/L	1/ 1	0.013	0.013	LL3mw-237-1106-GW			0	1/ 1
LL3MW237-1		Inorganics	Iron	MG/L	1/ 1	0.12	0.12	LL3mw-237-1106-GW			21.5	0/ 1
LL3MW237-1		Inorganics	Magnesium	MG/L	1/ 1	16.6	16.6	LL3mw-237-1106-GW			13.7	1/ 1
LL3MW237-1		Inorganics	Manganese	MG/L	1/ 1	1.9	1.9	LL3mw-237-1106-GW			1.26	1/ 1

ATTACHMENT 2
Summary of Analytes Detected in IDW
Load Line 3 Liquid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Background	Proportion >background
LL3MW237-1		Inorganics	Nickel	MG/L	1/ 1	0.051	0.051	LL3mw-237-1106-GW			0.0853	0/ 1
LL3MW237-1		Inorganics	Potassium	MG/L	1/ 1	2.3	2.3	LL3mw-237-1106-GW			6.06	0/ 1
LL3MW237-1		Inorganics	Sodium	MG/L	1/ 1	9.2	9.2	LL3mw-237-1106-GW			49.7	0/ 1
LL3MW237-1		Inorganics	Zinc	MG/L	1/ 1	0.013	0.013	LL3mw-237-1106-GW			0.193	0/ 1
LL3MW237-1		Volatile Organics	Acetone	MG/L	1/ 1	0.0021	0.0021	LL3mw-237-1106-GW			0	1/ 1
LL3MW238-1		Inorganics	Aluminum	MG/L	1/ 1	0.087	0.087	LL3mw-238-1107-GW			9.41	0/ 1
LL3MW238-1	N	Inorganics	Barium	MG/L	1/ 1	0.014	0.014	LL3mw-238-1107-GW	100	0/ 1	0.241	0/ 1
LL3MW238-1		Inorganics	Calcium	MG/L	1/ 1	32.8	32.8	LL3mw-238-1107-GW			48.2	0/ 1
LL3MW238-1		Inorganics	Magnesium	MG/L	1/ 1	4.6	4.6	LL3mw-238-1107-GW			13.7	0/ 1
LL3MW238-1		Inorganics	Manganese	MG/L	1/ 1	0.017	0.017	LL3mw-238-1107-GW			1.26	0/ 1
LL3MW238-1		Inorganics	Nickel	MG/L	1/ 1	0.0027	0.0027	LL3mw-238-1107-GW			0.0853	0/ 1
LL3MW238-1		Inorganics	Potassium	MG/L	1/ 1	2	2	LL3mw-238-1107-GW			6.06	0/ 1
LL3MW238-1		Inorganics	Sodium	MG/L	1/ 1	0.99	0.99	LL3mw-238-1107-GW			49.7	0/ 1
LL3MW238-1		Inorganics	Zinc	MG/L	1/ 1	0.013	0.013	LL3mw-238-1107-GW			0.193	0/ 1
LL3MW238-1		Explosives	1,3,5-Trinitrobenzene	MG/L	1/ 1	0.05	0.05	LL3mw-238-1107-GW			0	1/ 1
LL3MW238-1		Explosives	2,4,6-Trinitrotoluene	MG/L	1/ 1	0.082	0.082	LL3mw-238-1107-GW			0	1/ 1
LL3MW238-1		Explosives	2-Amino-4,6-Dinitrotoluene	MG/L	1/ 1	0.032	0.032	LL3mw-238-1107-GW			0	1/ 1
LL3MW238-1		Explosives	4-Amino-2,6-Dinitrotoluene	MG/L	1/ 1	0.054	0.054	LL3mw-238-1107-GW			0	1/ 1
LL3MW238-1		Explosives	HMX	MG/L	1/ 1	0.002	0.002	LL3mw-238-1107-GW			0	1/ 1
LL3MW238-1		Explosives	RDX	MG/L	1/ 1	0.0077	0.0077	LL3mw-238-1107-GW			0	1/ 1
LL3MW238-1		Pesticides and PCBs	beta-BHC	MG/L	1/ 1	0.00015	0.00015	LL3mw-238-1107-GW			0	1/ 1
LL3MW238-1		Volatile Organics	Acetone	MG/L	1/ 1	0.0022	0.0022	LL3mw-238-1107-GW			0	1/ 1
LL3MW239-1		Inorganics	Aluminum	MG/L	1/ 1	0.067	0.067	LL3mw-239-1108-GW			9.41	0/ 1
LL3MW239-1	N	Inorganics	Barium	MG/L	1/ 1	0.019	0.019	LL3mw-239-1108-GW	100	0/ 1	0.241	0/ 1
LL3MW239-1	N	Inorganics	Cadmium	MG/L	1/ 1	0.00041	0.00041	LL3mw-239-1108-GW	1	0/ 1	0	1/ 1
LL3MW239-1		Inorganics	Calcium	MG/L	1/ 1	7.4	7.4	LL3mw-239-1108-GW			48.2	0/ 1
LL3MW239-1		Inorganics	Cobalt	MG/L	1/ 1	0.0072	0.0072	LL3mw-239-1108-GW			0	1/ 1
LL3MW239-1		Inorganics	Iron	MG/L	1/ 1	0.48	0.48	LL3mw-239-1108-GW			21.5	0/ 1
LL3MW239-1		Inorganics	Magnesium	MG/L	1/ 1	4.2	4.2	LL3mw-239-1108-GW			13.7	0/ 1
LL3MW239-1		Inorganics	Manganese	MG/L	1/ 1	0.68	0.68	LL3mw-239-1108-GW			1.26	0/ 1
LL3MW239-1		Inorganics	Nickel	MG/L	1/ 1	0.024	0.024	LL3mw-239-1108-GW			0.0853	0/ 1
LL3MW239-1		Inorganics	Potassium	MG/L	1/ 1	1.8	1.8	LL3mw-239-1108-GW			6.06	0/ 1
LL3MW239-1		Inorganics	Sodium	MG/L	1/ 1	29.3	29.3	LL3mw-239-1108-GW			49.7	0/ 1
LL3MW239-1		Explosives	RDX	MG/L	1/ 1	0.00047	0.00047	LL3mw-239-1108-GW			0	1/ 1
LL3MW239-1		Pesticides and PCBs	Heptachlor epoxide	MG/L	1/ 1	0.000075	0.000075	LL3mw-239-1108-GW			0	1/ 1
LL3MW239-1		Volatile Organics	Acetone	MG/L	1/ 1	0.0035	0.0035	LL3mw-239-1108-GW			0	1/ 1
LL3MW239-1	N	Volatile Organics	Chloroform	MG/L	1/ 1	0.0012	0.0012	LL3mw-239-1108-GW	6	0/ 1	0	1/ 1
LL3MW239-1		Volatile Organics	Chloromethane	MG/L	1/ 1	0.00019	0.00019	LL3mw-239-1108-GW			0	1/ 1
LL3MW240-1		Inorganics	Aluminum	MG/L	1/ 1	0.083	0.083	LL3mw-240-1109-GW			9.41	0/ 1
LL3MW240-1	N	Inorganics	Barium	MG/L	1/ 1	0.0095	0.0095	LL3mw-240-1109-GW	100	0/ 1	0.241	0/ 1
LL3MW240-1		Inorganics	Calcium	MG/L	1/ 1	22.9	22.9	LL3mw-240-1109-GW			48.2	0/ 1
LL3MW240-1		Inorganics	Magnesium	MG/L	1/ 1	8.2	8.2	LL3mw-240-1109-GW			13.7	0/ 1
LL3MW240-1		Inorganics	Manganese	MG/L	1/ 1	0.019	0.019	LL3mw-240-1109-GW			1.26	0/ 1
LL3MW240-1		Inorganics	Nickel	MG/L	1/ 1	0.0034	0.0034	LL3mw-240-1109-GW			0.0853	0/ 1
LL3MW240-1		Inorganics	Potassium	MG/L	1/ 1	0.9	0.9	LL3mw-240-1109-GW			6.06	0/ 1
LL3MW240-1		Inorganics	Sodium	MG/L	1/ 1	4.5	4.5	LL3mw-240-1109-GW			49.7	0/ 1

ATTACHMENT 2
Summary of Analytes Detected in IDW
Load Line 3 Liquid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Background	Proportion >background
LL3MW240-1		Volatile Organics	Acetone	MG/L	1/ 1	0.0025	0.0025	LL3mw-240-1109-GW			0	1/ 1
LL3MW240-1	N	Volatile Organics	Carbon tetrachloride	MG/L	1/ 1	0.00015	0.00015	LL3mw-240-1109-GW	0.5	0/ 1	0	1/ 1
LL3MW240-1	N	Volatile Organics	Tetrachloroethene	MG/L	1/ 1	0.00049	0.00049	LL3mw-240-1109-GW	0.7	0/ 1	0	1/ 1
LL3MW241-1		Inorganics	Aluminum	MG/L	1/ 1	0.082	0.082	LL3mw-241-1110-GW			9.41	0/ 1
LL3MW241-1	N	Inorganics	Barium	MG/L	1/ 1	0.011	0.011	LL3mw-241-1110-GW	100	0/ 1	0.241	0/ 1
LL3MW241-1		Inorganics	Calcium	MG/L	1/ 1	19.2	19.2	LL3mw-241-1110-GW			48.2	0/ 1
LL3MW241-1		Inorganics	Cobalt	MG/L	1/ 1	0.0058	0.0058	LL3mw-241-1110-GW			0	1/ 1
LL3MW241-1		Inorganics	Magnesium	MG/L	1/ 1	11.6	11.6	LL3mw-241-1110-GW			13.7	0/ 1
LL3MW241-1		Inorganics	Manganese	MG/L	1/ 1	2.2	2.2	LL3mw-241-1110-GW			1.26	1/ 1
LL3MW241-1		Inorganics	Nickel	MG/L	1/ 1	0.023	0.023	LL3mw-241-1110-GW			0.0853	0/ 1
LL3MW241-1		Inorganics	Potassium	MG/L	1/ 1	1.8	1.8	LL3mw-241-1110-GW			6.06	0/ 1
LL3MW241-1		Inorganics	Sodium	MG/L	1/ 1	8.9	8.9	LL3mw-241-1110-GW			49.7	0/ 1
LL3MW241-1		Inorganics	Zinc	MG/L	1/ 1	0.013	0.013	LL3mw-241-1110-GW			0.193	0/ 1
LL3MW241-1		Explosives	1,3,5-Trinitrobenzene	MG/L	1/ 1	0.0019	0.0019	LL3mw-241-1110-GW			0	1/ 1
LL3MW241-1		Explosives	1,3-Dinitrobenzene	MG/L	1/ 1	0.00012	0.00012	LL3mw-241-1110-GW			0	1/ 1
LL3MW241-1		Explosives	2,4,6-Trinitrotoluene	MG/L	1/ 1	0.00092	0.00092	LL3mw-241-1110-GW			0	1/ 1
LL3MW241-1		Explosives	2-Amino-4,6-Dinitrotoluene	MG/L	1/ 1	0.0019	0.0019	LL3mw-241-1110-GW			0	1/ 1
LL3MW241-1		Explosives	4-Amino-2,6-Dinitrotoluene	MG/L	1/ 1	0.0012	0.0012	LL3mw-241-1110-GW			0	1/ 1
LL3MW241-1		Semi-Volatile Organics	Bis(2-ethylhexyl)phthalate	MG/L	1/ 1	0.0047	0.0047	LL3mw-241-1110-GW			0	1/ 1
LL3MW241-1		Volatile Organics	Acetone	MG/L	1/ 1	0.012	0.012	LL3mw-241-1110-GW			0	1/ 1
LL3MW241-1		Volatile Organics	Chloromethane	MG/L	1/ 1	0.00023	0.00023	LL3mw-241-1110-GW			0	1/ 1
LL3MW242-1		Inorganics	Aluminum	MG/L	1/ 1	0.15	0.15	LL3mw-242-1111-GW			9.41	0/ 1
LL3MW242-1	N	Inorganics	Barium	MG/L	1/ 1	0.0094	0.0094	LL3mw-242-1111-GW	100	0/ 1	0.241	0/ 1
LL3MW242-1	N	Inorganics	Cadmium	MG/L	1/ 1	0.0003	0.0003	LL3mw-242-1111-GW	1	0/ 1	0	1/ 1
LL3MW242-1		Inorganics	Calcium	MG/L	1/ 1	25.7	25.7	LL3mw-242-1111-GW			48.2	0/ 1
LL3MW242-1		Inorganics	Cobalt	MG/L	1/ 1	0.0013	0.0013	LL3mw-242-1111-GW			0	1/ 1
LL3MW242-1		Inorganics	Magnesium	MG/L	1/ 1	9.5	9.5	LL3mw-242-1111-GW			13.7	0/ 1
LL3MW242-1		Inorganics	Manganese	MG/L	1/ 1	0.59	0.59	LL3mw-242-1111-GW			1.26	0/ 1
LL3MW242-1		Inorganics	Nickel	MG/L	1/ 1	0.017	0.017	LL3mw-242-1111-GW			0.0853	0/ 1
LL3MW242-1		Inorganics	Potassium	MG/L	1/ 1	1.4	1.4	LL3mw-242-1111-GW			6.06	0/ 1
LL3MW242-1		Inorganics	Sodium	MG/L	1/ 1	16.2	16.2	LL3mw-242-1111-GW			49.7	0/ 1
LL3MW242-1		Volatile Organics	Acetone	MG/L	1/ 1	0.007	0.007	LL3mw-242-1111-GW			0	1/ 1
LL3MW242-1		Volatile Organics	Chloromethane	MG/L	1/ 1	0.00015	0.00015	LL3mw-242-1111-GW			0	1/ 1
LL3MW243-1	N	Inorganics	Barium	MG/L	2/ 2	0.0226	0.0227	LL3mw-243-1138-GW	100	0/ 2	0.241	0/ 1
LL3MW243-1	N	Inorganics	Cadmium	MG/L	1/ 2	0.0027	0.0004	LL3mw-243-1112-GW	1	0/ 2	0	1/ 1
LL3MW243-1		Inorganics	Calcium	MG/L	2/ 2	17.8	17.8	LL3mw-243-1138-GW			48.2	0/ 1
LL3MW243-1		Inorganics	Magnesium	MG/L	2/ 2	7.51	7.51	LL3mw-243-1138-GW			13.7	0/ 1
LL3MW243-1		Inorganics	Manganese	MG/L	2/ 2	0.0334	0.0334	LL3mw-243-1138-GW			1.26	0/ 1
LL3MW243-1		Inorganics	Nickel	MG/L	2/ 2	0.00375	0.0042	LL3mw-243-1112-GW			0.0853	0/ 1
LL3MW243-1		Inorganics	Potassium	MG/L	2/ 2	1.4	1.4	LL3mw-243-1138-GW			6.06	0/ 1
LL3MW243-1		Inorganics	Sodium	MG/L	2/ 2	4.48	4.52	LL3mw-243-1138-GW			49.7	0/ 1
LL3MW243-1		Volatile Organics	Acetone	MG/L	2/ 2	0.0057	0.006	LL3mw-243-1138-GW			0	1/ 1

ATTACHMENT 3
Summary of Analytes Detected in IDW
Load Line 4 Liquid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Background	Proportion >background
LL4MW193-1	N	Inorganics	Barium	MG/L	1/ 1	0.022	0.022	LL4mw-193-1006-GW	100	0/ 1	0.327	0/ 1
LL4MW193-1		Inorganics	Calcium	MG/L	1/ 1	137	137	LL4mw-193-1006-GW			194	0/ 1
LL4MW193-1		Inorganics	Cobalt	MG/L	1/ 1	0.0017	0.0017	LL4mw-193-1006-GW			0.0463	0/ 1
LL4MW193-1		Inorganics	Iron	MG/L	1/ 1	0.31	0.31	LL4mw-193-1006-GW			195	0/ 1
LL4MW193-1		Inorganics	Magnesium	MG/L	1/ 1	36.1	36.1	LL4mw-193-1006-GW			58.4	0/ 1
LL4MW193-1		Inorganics	Manganese	MG/L	1/ 1	0.54	0.54	LL4mw-193-1006-GW			2.86	0/ 1
LL4MW193-1		Inorganics	Potassium	MG/L	1/ 1	0.93	0.93	LL4mw-193-1006-GW			7.48	0/ 1
LL4MW193-1		Inorganics	Sodium	MG/L	1/ 1	5.1	5.1	LL4mw-193-1006-GW			44.7	0/ 1
LL4MW193-1		Volatile Organics	Acetone	MG/L	1/ 1	0.0057	0.0057	LL4mw-193-1006-GW			0	1/ 1
LL4MW193-1		Volatile Organics	Chloromethane	MG/L	1/ 1	0.00013	0.00013	LL4mw-193-1006-GW			0	1/ 1
LL4MW194-1	N	Inorganics	Barium	MG/L	1/ 1	0.04	0.04	LL4mw-194-1108-GW	100	0/ 1	0.327	0/ 1
LL4MW194-1		Inorganics	Calcium	MG/L	1/ 1	245	245	LL4mw-194-1108-GW			194	0/ 1
LL4MW194-1		Inorganics	Cobalt	MG/L	1/ 1	0.0038	0.0038	LL4mw-194-1108-GW			0.0463	0/ 1
LL4MW194-1		Inorganics	Iron	MG/L	1/ 1	12.1	12.1	LL4mw-194-1108-GW			195	0/ 1
LL4MW194-1		Inorganics	Magnesium	MG/L	1/ 1	68.1	68.1	LL4mw-194-1108-GW			58.4	1/ 1
LL4MW194-1		Inorganics	Manganese	MG/L	1/ 1	2.7	2.7	LL4mw-194-1108-GW			2.86	0/ 1
LL4MW194-1		Inorganics	Nickel	MG/L	1/ 1	0.0035	0.0035	LL4mw-194-1108-GW			0.117	0/ 1
LL4MW194-1		Inorganics	Potassium	MG/L	1/ 1	1.5	1.5	LL4mw-194-1108-GW			7.48	0/ 1
LL4MW194-1		Inorganics	Sodium	MG/L	1/ 1	16.1	16.1	LL4mw-194-1108-GW			44.7	0/ 1
LL4MW194-1		Semi-Volatile Organics	Bis(2-ethylhexyl)phthalate	MG/L	1/ 2	0.0072	0.0044	LL4mw-194-1108-GW			0	1/ 1
LL4MW194-1		Volatile Organics	Acetone	MG/L	1/ 1	0.0072	0.0072	LL4mw-194-1108-GW			0	1/ 1
LL4MW195-1		Inorganics	Antimony	MG/L	1/ 1	0.0028	0.0028	LL4mw-195-1110-GW			0.0043	0/ 1
LL4MW195-1	N	Inorganics	Barium	MG/L	1/ 1	0.047	0.047	LL4mw-195-1110-GW	100	0/ 1	0.327	0/ 1
LL4MW195-1		Inorganics	Calcium	MG/L	1/ 1	81.6	81.6	LL4mw-195-1110-GW			194	0/ 1
LL4MW195-1		Inorganics	Cobalt	MG/L	1/ 1	0.0018	0.0018	LL4mw-195-1110-GW			0.0463	0/ 1
LL4MW195-1		Inorganics	Magnesium	MG/L	1/ 1	22.1	22.1	LL4mw-195-1110-GW			58.4	0/ 1
LL4MW195-1		Inorganics	Manganese	MG/L	1/ 1	0.23	0.23	LL4mw-195-1110-GW			2.86	0/ 1
LL4MW195-1		Inorganics	Nickel	MG/L	1/ 1	0.0028	0.0028	LL4mw-195-1110-GW			0.117	0/ 1
LL4MW195-1		Inorganics	Potassium	MG/L	1/ 1	0.98	0.98	LL4mw-195-1110-GW			7.48	0/ 1
LL4MW195-1		Inorganics	Sodium	MG/L	1/ 1	2.3	2.3	LL4mw-195-1110-GW			44.7	0/ 1
LL4MW195-1		Volatile Organics	Acetone	MG/L	1/ 1	0.0053	0.0053	LL4mw-195-1110-GW			0	1/ 1
LL4MW196-1	N	Inorganics	Barium	MG/L	1/ 1	0.042	0.042	LL4mw-196-1112-GW	100	0/ 1	0.327	0/ 1
LL4MW196-1	N	Inorganics	Cadmium	MG/L	1/ 1	0.00029	0.00029	LL4mw-196-1112-GW	1	0/ 1	0	1/ 1
LL4MW196-1		Inorganics	Calcium	MG/L	1/ 1	120	120	LL4mw-196-1112-GW			194	0/ 1
LL4MW196-1		Inorganics	Cobalt	MG/L	1/ 1	0.0025	0.0025	LL4mw-196-1112-GW			0.0463	0/ 1
LL4MW196-1		Inorganics	Magnesium	MG/L	1/ 1	21.5	21.5	LL4mw-196-1112-GW			58.4	0/ 1
LL4MW196-1		Inorganics	Manganese	MG/L	1/ 1	0.89	0.89	LL4mw-196-1112-GW			2.86	0/ 1
LL4MW196-1		Inorganics	Nickel	MG/L	1/ 1	0.0041	0.0041	LL4mw-196-1112-GW			0.117	0/ 1
LL4MW196-1		Inorganics	Potassium	MG/L	1/ 1	2.1	2.1	LL4mw-196-1112-GW			7.48	0/ 1
LL4MW196-1		Inorganics	Sodium	MG/L	1/ 1	2.7	2.7	LL4mw-196-1112-GW			44.7	0/ 1
LL4MW196-1		Volatile Organics	Acetone	MG/L	1/ 1	0.0078	0.0078	LL4mw-196-1112-GW			0	1/ 1
LL4MW197-1		Inorganics	Antimony	MG/L	1/ 1	0.008	0.008	LL4mw-197-1114-GW			0.0043	1/ 1
LL4MW197-1	N	Inorganics	Barium	MG/L	1/ 1	0.017	0.017	LL4mw-197-1114-GW	100	0/ 1	0.327	0/ 1
LL4MW197-1	N	Inorganics	Cadmium	MG/L	1/ 1	0.00051	0.00051	LL4mw-197-1114-GW	1	0/ 1	0	1/ 1
LL4MW197-1		Inorganics	Calcium	MG/L	1/ 1	31.8	31.8	LL4mw-197-1114-GW			194	0/ 1
LL4MW197-1		Inorganics	Cobalt	MG/L	1/ 1	0.0046	0.0046	LL4mw-197-1114-GW			0.0463	0/ 1
LL4MW197-1		Inorganics	Iron	MG/L	1/ 1	0.33	0.33	LL4mw-197-1114-GW			195	0/ 1

ATTACHMENT 3
Summary of Analytes Detected in IDW
Load Line 4 Liquid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Background	Proportion >background
LL4MW197-1		Inorganics	Magnesium	MG/L	1/ 1	13.8	13.8	LL4mw-197-1114-GW			58.4	0/ 1
LL4MW197-1		Inorganics	Manganese	MG/L	1/ 1	1.9	1.9	LL4mw-197-1114-GW			2.86	0/ 1
LL4MW197-1		Inorganics	Nickel	MG/L	1/ 1	0.016	0.016	LL4mw-197-1114-GW			0.117	0/ 1
LL4MW197-1		Inorganics	Potassium	MG/L	1/ 1	1.4	1.4	LL4mw-197-1114-GW			7.48	0/ 1
LL4MW197-1		Inorganics	Sodium	MG/L	1/ 1	4	4	LL4mw-197-1114-GW			44.7	0/ 1
LL4MW197-1		Inorganics	Zinc	MG/L	1/ 1	0.016	0.016	LL4mw-197-1114-GW			0.888	0/ 1
LL4MW197-1		Volatile Organics	Acetone	MG/L	1/ 1	0.012	0.012	LL4mw-197-1114-GW			0	1/ 1
LL4MW198-1		Inorganics	Antimony	MG/L	1/ 1	0.0024	0.0024	LL4mw-198-1116-GW			0.0043	0/ 1
LL4MW198-1	N	Inorganics	Arsenic	MG/L	1/ 1	0.013	0.013	LL4mw-198-1116-GW	5	0/ 1	0.215	0/ 1
LL4MW198-1	N	Inorganics	Barium	MG/L	1/ 1	0.11	0.11	LL4mw-198-1116-GW	100	0/ 1	0.327	0/ 1
LL4MW198-1	N	Inorganics	Cadmium	MG/L	1/ 1	0.00032	0.00032	LL4mw-198-1116-GW	1	0/ 1	0	1/ 1
LL4MW198-1		Inorganics	Calcium	MG/L	1/ 1	80.5	80.5	LL4mw-198-1116-GW			194	0/ 1
LL4MW198-1		Inorganics	Cobalt	MG/L	1/ 1	0.0017	0.0017	LL4mw-198-1116-GW			0.0463	0/ 1
LL4MW198-1		Inorganics	Iron	MG/L	1/ 1	1.7	1.7	LL4mw-198-1116-GW			195	0/ 1
LL4MW198-1		Inorganics	Magnesium	MG/L	1/ 1	20.3	20.3	LL4mw-198-1116-GW			58.4	0/ 1
LL4MW198-1		Inorganics	Manganese	MG/L	1/ 1	0.83	0.83	LL4mw-198-1116-GW			2.86	0/ 1
LL4MW198-1		Inorganics	Potassium	MG/L	1/ 1	2.6	2.6	LL4mw-198-1116-GW			7.48	0/ 1
LL4MW198-1		Inorganics	Sodium	MG/L	1/ 1	10	10	LL4mw-198-1116-GW			44.7	0/ 1
LL4MW198-1		Volatile Organics	Acetone	MG/L	1/ 1	0.0088	0.0088	LL4mw-198-1116-GW			0	1/ 1
LL4MW198-1		Volatile Organics	Toluene	MG/L	1/ 1	0.00019	0.00019	LL4mw-198-1116-GW			0	1/ 1
LL4MW199-1	N	Inorganics	Arsenic	MG/L	1/ 1	0.0065	0.0065	LL4mw-199-1118-GW	5	0/ 1	0.215	0/ 1
LL4MW199-1	N	Inorganics	Barium	MG/L	1/ 1	0.044	0.044	LL4mw-199-1118-GW	100	0/ 1	0.327	0/ 1
LL4MW199-1		Inorganics	Calcium	MG/L	1/ 1	116	116	LL4mw-199-1118-GW			194	0/ 1
LL4MW199-1		Inorganics	Iron	MG/L	1/ 1	0.34	0.34	LL4mw-199-1118-GW			195	0/ 1
LL4MW199-1		Inorganics	Magnesium	MG/L	1/ 1	34	34	LL4mw-199-1118-GW			58.4	0/ 1
LL4MW199-1		Inorganics	Manganese	MG/L	1/ 1	0.35	0.35	LL4mw-199-1118-GW			2.86	0/ 1
LL4MW199-1		Inorganics	Potassium	MG/L	1/ 1	1.3	1.3	LL4mw-199-1118-GW			7.48	0/ 1
LL4MW199-1		Inorganics	Sodium	MG/L	1/ 1	11.9	11.9	LL4mw-199-1118-GW			44.7	0/ 1
LL4MW199-1		Volatile Organics	Acetone	MG/L	1/ 1	0.0058	0.0058	LL4mw-199-1118-GW			0	1/ 1
LL4MW200-1,2,3		Cyanide	Cyanide	MG/L	1/ 2	0.01	0.01	LL4mw-200-1152-GW			0	1/ 2
LL4MW200-1,2,3	N	Inorganics	Barium	MG/L	2/ 2	0.0445	0.063	LL4mw-200-1120-GW	100	0/ 2	0.327	0/ 2
LL4MW200-1,2,3	N	Inorganics	Cadmium	MG/L	1/ 2	0.00266	0.00031	LL4mw-200-1152-GW	1	0/ 2	0	1/ 2
LL4MW200-1,2,3		Inorganics	Calcium	MG/L	2/ 2	135	155	LL4mw-200-1152-GW			194	0/ 2
LL4MW200-1,2,3		Inorganics	Cobalt	MG/L	2/ 2	0.0027	0.0034	LL4mw-200-1120-GW			0.0463	0/ 2
LL4MW200-1,2,3		Inorganics	Iron	MG/L	1/ 2	0.355	0.41	LL4mw-200-1152-GW			195	0/ 2
LL4MW200-1,2,3		Inorganics	Magnesium	MG/L	2/ 2	37.5	40.2	LL4mw-200-1152-GW			58.4	0/ 2
LL4MW200-1,2,3		Inorganics	Manganese	MG/L	2/ 2	0.5	0.61	LL4mw-200-1152-GW			2.86	0/ 2
LL4MW200-1,2,3		Inorganics	Nickel	MG/L	1/ 2	0.0149	0.0048	LL4mw-200-1152-GW			0.117	0/ 2
LL4MW200-1,2,3		Inorganics	Potassium	MG/L	2/ 2	1.3	1.6	LL4mw-200-1120-GW			7.48	0/ 2
LL4MW200-1,2,3		Inorganics	Sodium	MG/L	2/ 2	8.15	10.5	LL4mw-200-1120-GW			44.7	0/ 2
LL4MW200-1,2,3		Volatile Organics	Acetone	MG/L	2/ 2	0.00495	0.0052	LL4mw-200-1152-GW			0	2/ 2
LL4MW200-1,2,3		Volatile Organics	Carbon disulfide	MG/L	1/ 2	0.0006	0.0002	LL4mw-200-1152-GW			0	1/ 2
LL4MW200-1,2,3		Volatile Organics	Chloromethane	MG/L	1/ 2	0.00074	0.00048	LL4mw-200-1120-GW			0	1/ 2

Media		Regulatory Level (UG/L)	Waste Water	Waste Water	Waste Water
Location			Driller Decon Pad 1-7	SAIC Decon 1, 3, and 4	SAIC Decon 2
Station			IDW	IDW	IDW
Sample ID			LL21224	LL21225	LL21226
Date			09/21/2001	09/21/2001	09/21/2001
Analyte	Units				
Cyanide, reactive	MG/KG		200 UJ	200 UJ	200 UJ
Ignitability (Flashpoint)	F		180 >	180 >	180 >
Sulfide, reactive	MG/KG		200 UJ	200 UJ	200 UJ
pH	STD UN		8.7 J	7.2 J	7.4 J
PCB-1016	UG/L		0.5 U	0.5 U	0.5 UJ
PCB-1221	UG/L		0.5 U	0.5 U	0.5 UJ
PCB-1232	UG/L		0.5 U	0.5 U	0.5 UJ
PCB-1242	UG/L		0.5 U	0.5 U	0.5 UJ
PCB-1248	UG/L		0.5 U	0.5 U	0.5 UJ
PCB-1254	UG/L		0.5 U	0.78 =	1 J
PCB-1260	UG/L		0.5 U	0.5 U	0.5 UJ
2,4-D	UG/L	10000	500 U	500 U	500 U
Silvex	UG/L	1000	100 UJ	100 UJ	100 UJ
Arsenic	UG/L	5000	500 U	500 U	500 U
Barium	UG/L	100000	10000 U	10000 U	10000 U
Cadmium	UG/L	1000	100 U	100 U	100 U
Chromium	UG/L	5000	500 U	500 U	500 U
Lead	UG/L	5000	500 U	500 U	500 U
Mercury	UG/L	200	2 U	2 U	2 U
Selenium	UG/L	1000	250 U	250 U	250 U
Silver	UG/L	5000	500 U	500 U	500 U
Chlordane	UG/L	30	5 U	5 U	5 U
Endrin	UG/L	20	0.5 UJ	0.5 UJ	0.5 UJ
Heptachlor	UG/L	8	0.5 U	0.5 U	0.5 U
Heptachlor epoxide	UG/L	8	0.5 U	0.5 U	0.5 U
Lindane	UG/L	400	0.5 U	0.5 U	0.5 U
Methoxychlor	UG/L	10000	1 UJ	1 UJ	1 UJ
Toxaphene	UG/L	500	20 U	20 U	20 U
1,4-Dichlorobenzene	UG/L	7500	50 U	50 U	50 U
2,4,5-Trichlorophenol	UG/L	400000	50 U	50 U	50 U
2,4,6-Trichlorophenol	UG/L	2000	50 U	50 U	50 U
2,4-Dinitrotoluene	UG/L	130	50 U	50 U	50 U
2-Methylphenol	UG/L	200000	50 U	50 U	50 U
Hexachlorobenzene	UG/L	130	50 U	50 U	50 U
Hexachlorobutadiene	UG/L	500	50 U	50 U	50 U
Hexachloroethane	UG/L	3000	50 U	50 U	50 U
Nitrobenzene	UG/L	2000	50 U	50 U	50 U
Pentachlorophenol	UG/L	100000	100 U	100 U	100 U
Pyridine	UG/L	5000	100 U	100 U	100 U
m+p Methylphenol	UG/L	200000	100 U	100 U	100 U
1,1-Dichloroethene	UG/L	700	70 U	70 U	70 U
1,2-Dichloroethane	UG/L	500	25 U	25 U	25 U
2-Butanone	UG/L	200000	50 U	50 U	50 U
Benzene	UG/L	500	25 U	25 U	25 U
Carbon tetrachloride	UG/L	500	25 U	25 U	25 U
Chlorobenzene	UG/L	100000	25 U	25 U	25 U
Chloroform	UG/L	6000	25 U	25 U	25 U
Tetrachloroethene	UG/L	700	70 U	70 U	70 U
Trichloroethene	UG/L	500	50 U	50 U	50 U
Vinyl chloride	UG/L	200	50 U	50 U	50 U

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Science Applications International Corporation

January 29, 2002

Mr. Glen Beckham
U.S. Army Corps of Engineers, Louisville District
ATTN: CELRL-PM-M
600 Martin Luther King, Jr. Place
Louisville, Kentucky 40202-0059

SUBJECT: Contract No. F44650-99-0007, ECAS 186, Phase II Remedial Investigations (RIs) for Load Lines 2, 3, and 4 at the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio

RE: Deliverable – FINAL Investigation-Derived Waste (IDW) Characterization and Disposal Report for Soils

Dear Mr. Beckham:

Investigative activities conducted during the RIs of Load Lines 2, 3, and 4 (July 2001 through October 2001) at RVAAP resulted in the generation of IDW consisting of soil, groundwater, decontamination fluids, and field laboratory reagents. The purpose of this letter report is to characterize and classify for disposal the IDW consisting of soil cuttings generated from hand auger samples contained in 55 gallon drums. Previous letters document the characterization and disposal recommendations for the listed hazardous IDW, well cuttings, and liquid IDW generated in the field investigation.

This report includes a summary of soil IDW generated and its origin (Table 1) and classification of the IDW and recommendations for disposal (Table 2). This document follows guidance established by the Facility-Wide Sampling and Analysis Plan (SAP) (USACE 2001), the Sampling and Analysis Plan Addendum No. 1 for the Phase II RI of Load Lines 2, 3, and 4 (USACE 2001), and the Ohio EPA (November 1997) regarding IDW disposition at RVAAP.

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Table 1. Summary of Load Lines 2, 3, and 4 Phase II RI IDW

CONTAINER NUMBER	CONTAINER TYPE AND SIZE	CONTENTS	GENERATION DATE(S)
LL2-2	55-GALLON STEEL OPEN TOP DRUM	LL2 HAND AUGER SOIL CUTTINGS	7/24/2001-7/25/2001
LL2-3	55-GALLON STEEL OPEN TOP DRUM	LL2 HAND AUGER SOIL CUTTINGS	7/25/2001-7/26/2001
LL2-4	55-GALLON STEEL OPEN TOP DRUM	LL2 HAND AUGER SOIL CUTTINGS	7/26/2001-7/27/2001
LL2-5	55-GALLON STEEL OPEN TOP DRUM	LL2 HAND AUGER SOIL CUTTINGS	7/27/2001-7/28/2001
LL2-6	55-GALLON STEEL OPEN TOP DRUM	LL2 HAND AUGER SOIL CUTTINGS	7/28/2001-7/30/2001
LL2-7	55-GALLON STEEL OPEN TOP DRUM	LL2 HAND AUGER SOIL CUTTINGS	7/30/2001-8/13/2001
LL2-8	55-GALLON STEEL OPEN TOP DRUM	LL2 HAND AUGER SOIL CUTTINGS	8/13/2001-8/28/2001
LL3-2	55-GALLON STEEL OPEN TOP DRUM	LL3 HAND AUGER SOIL CUTTINGS	7/31/2001-8/6/2001
LL3-3	55-GALLON STEEL OPEN TOP DRUM	LL3 HAND AUGER SOIL CUTTINGS	8/6/2001-8/8/2001
LL3-4	55-GALLON STEEL OPEN TOP DRUM	LL3 HAND AUGER SOIL CUTTINGS	8/8/2001-8/10/2001
LL3-5	55-GALLON STEEL OPEN TOP DRUM	LL3 HAND AUGER SOIL CUTTINGS	8/10/2001-8/10/2001
LL3-6	55-GALLON STEEL OPEN TOP DRUM	LL3 HAND AUGER SOIL CUTTINGS	8/11/2001-8/11/2001
LL3-7	55-GALLON STEEL OPEN TOP DRUM	LL3 HAND AUGER SOIL CUTTINGS	8/13/2001-8/28/2001
LL4-2	55-GALLON STEEL OPEN TOP DRUM	LL4 HAND AUGER SOIL CUTTINGS	8/12/2001-8/21/2001
LL4-3	55-GALLON STEEL OPEN TOP DRUM	LL4 HAND AUGER SOIL CUTTINGS	8/21/2001-8/23/2001
LL4-4	55-GALLON STEEL OPEN TOP DRUM	LL4 HAND AUGER SOIL CUTTINGS	8/23/2001-9/20/2001

Per Section 7 of the Facility-Wide SAP, the analytical results from environmental samples collected during the Phase II field investigation were used, where possible, to characterize IDW. Analytical results used to characterize waste containers are included as Attachment 1.

For the characterization of wastes as hazardous or non-hazardous, the Resource Conservation and Recovery Act (RCRA) regulatory limits, presented in Table 7-1, Maximum Concentration of Contaminants for the Toxicity Characteristic (40 CFR 261.24) in the Facility-Wide SAP (USACE 2001) were used for comparison. Results from total analysis (in mg/kg) for analytes having corresponding TCLP criteria were divided by 20 to estimate the extractable

concentration (in mg/L) assuming all of the chemical were leached (due to the 20-fold dilution factor inherent in the TCLP method). These estimated concentrations were compared to the TCLP criteria. If the total analysis result for a given analyte was found to exceed 20 times the regulatory limit, it is conservatively considered to be RCRA-hazardous waste.

Initial characterization of the soil IDW was made using the environmental sample results and the 20-fold TCLP dilution factor for soils as described above. This initial conservative characterization resulted in each of the soil IDW drums having at least one sample that was greater than the regulatory criteria. The decision was made, with Ohio EPA and Army concurrence (Attachment 2), to do confirmation characterization for the soil IDW by composite sampling for direct TCLP analysis. One composite sample was collected from the containers for each load line using the solid IDW composite sampling procedure presented in Section 7.4.1 of the Facility-Wide SAP and was submitted for laboratory analysis. Only those analytes that were greater than the regulatory criteria as determined in the initial characterization were analyzed using TCLP extraction methods. In addition, pH and ignitability analysis were also performed.

Attachment 3 presents the analytical laboratory data for TCLP analysis for Load Line 2 (sample ID LL21227), Load Line 3 (sample ID LL31171), and Load Line 4 (sample ID LL41184) soil IDW containers. All TCLP analytical results were below detection limits, pH ranges were within acceptable regulatory levels, and all flash points were > 180 degrees F. Historical data for Load Lines 2, 3, and 4 and investigations at other areas of concern at RVAAP have shown this type of IDW not to exhibit the hazardous waste characteristics for D003 (reactivity) listings. Therefore, the waste is considered non-hazardous, contaminated solid waste and disposal at a permitted solid waste facility is recommended for all soil drums.

Table 2. Summary of Final Waste Classification and Recommended Disposal Options

NON-HAZARDOUS, CONTAMINATED WASTE			
Container Number	**Medium**	**Waste Criterion**	**Disposal Recommendation**
LL2-2	soils	Inorganics, organics	Permitted Solid Waste Facility
LL2-3	soils	Inorganics, organics	Permitted Solid Waste Facility
LL2-4	Soils	Inorganics, organics	Permitted Solid Waste Facility
LL2-5	Soils	Inorganics, organics	Permitted Solid Waste Facility
LL2-6	Soils	Inorganics, organics	Permitted Solid Waste Facility
LL2-7	Soils	Inorganics, organics	Permitted Solid Waste Facility
LL2-8	Soils	Inorganics, organics	Permitted Solid Waste Facility
LL3-2	Soils	Inorganics, organics	Permitted Solid Waste Facility
LL3-3	Soils	Inorganics, organics	Permitted Solid Waste Facility
LL3-4	Soils	Inorganics, organics	Permitted Solid Waste Facility
LL3-5	Soils	Inorganics, organics	Permitted Solid Waste Facility
LL3-6	Soils	Inorganics, organics	Permitted Solid Waste Facility
LL3-7	Soils	Inorganics, organics	Permitted Solid Waste Facility
LL4-2	Soils	Inorganics, organics	Permitted Solid Waste Facility
LL4-3	Soils	Inorganics, organics	Permitted Solid Waste Facility
LL4-4	soils	Inorganics, organics	Permitted Solid Waste Facility

Please note that this soil has been characterized under provisions of the Facility-Wide SAP and SAP Addendum No. 1 using comparisons of direct analysis to TCLP criteria, TCLP analyses, and process knowledge. Unless RVAAP has additional information that would result in the IDW meeting, or containing materials that meet, the definition of a listed hazardous waste as defined in 40 CFR Part 261 Subpart D, it is recommended that the IDW, as presently characterized, be disposed as non-hazardous, contaminated solid waste.

Since RVAAP, under RCRA, is the generator of this material, SAIC requests concurrence or direction on the waste classification prior to disposal to ensure that the materials are properly disposed. Following your direction and immediate approval, we will proceed with the appropriate waste disposal.

If you have any questions or require additional information, please do not hesitate to contact me at (330) 405-5804.

Sincerely,

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

Martha Clough

Martha Clough
Project IDW Coordinator

cc: John Jent, USACE
Paul Zorko, USACE
Eileen Mohr, Ohio EPA
Mark Patterson, RVAAP
Kevin Jago, SAIC
Bob Smith, SAIC
Martha Turpin, SAIC
SAIC CRF
Project File

Attachment 1
Summary of Analytes Detected in IDW
Load Line 2 Solid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Mean Adj. for TCLP (mg/L)	Max Detect Adj. for TCLP
LL2-2		Inorganics	Aluminum	MG/KG	28/ 28	8800	25500	LL2ss-104-0790-SO				
LL2-2		Inorganics	Antimony	MG/KG	5/ 27	1.73	17.3	LL2ss-122-0844-SO				
LL2-2	N	Inorganics	Arsenic	MG/KG	28/ 28	12.1	49.1	LL2ss-071-0703-SO	5	0/ 28	0.607	2.46
LL2-2	N	Inorganics	Barium	MG/KG	28/ 28	89.6	901	LL2ss-104-0790-SO	100	0/ 28	4.48	45.1
LL2-2		Inorganics	Beryllium	MG/KG	18/ 28	0.773	4.2	LL2ss-104-0790-SO				
LL2-2	N	Inorganics	Cadmium	MG/KG	9/ 28	1.13	16.9	LL2ss-104-0790-SO	1	0/ 28	0.0563	0.845
LL2-2		Inorganics	Calcium	MG/KG	28/ 28	14200	112000	LL2ss-104-0790-SO				
LL2-2	N	Inorganics	Chromium	MG/KG	28/ 28	13.9	68.1	LL2ss-104-0790-SO	5	0/ 28	0.693	3.41
LL2-2		Inorganics	Cobalt	MG/KG	28/ 28	6.28	15.1	LL2ss-123-0847-SO				
LL2-2		Inorganics	Copper	MG/KG	28/ 28	21.3	81.4	LL2ss-104-0790-SO				
LL2-2		Inorganics	Iron	MG/KG	28/ 28	17400	41400	LL2ss-104-0790-SO				
LL2-2	Y	Inorganics	Lead	MG/KG	28/ 28	88.2	820	LL2ss-120-0838-SO	5	5/ 28	4.41	41
LL2-2		Inorganics	Magnesium	MG/KG	28/ 28	3420	20900	LL2ss-104-0790-SO				
LL2-2		Inorganics	Manganese	MG/KG	28/ 28	658	3070	LL2ss-104-0790-SO				
LL2-2	N	Inorganics	Mercury	MG/KG	24/ 28	0.0536	0.25	LL2ss-171-0969-SO	0.2	0/ 28	0.00268	0.0125
LL2-2		Inorganics	Nickel	MG/KG	28/ 28	13.9	25.3	LL2ss-172-0972-SO				
LL2-2		Inorganics	Potassium	MG/KG	28/ 28	685	1640	LL2ss-1176-0829-SO				
LL2-2	N	Inorganics	Selenium	MG/KG	19/ 28	1.12	1.3	LL2ss-072-0706-SO	1	0/ 28	0.0562	0.065
LL2-2	N	Inorganics	Silver	MG/KG	7/ 28	2.17	18.3	LL2ss-106-0796-SO	5	0/ 28	0.108	0.915
LL2-2		Inorganics	Sodium	MG/KG	7/ 28	473	536	LL2ss-071-0703-SO				
LL2-2		Inorganics	Thallium	MG/KG	22/ 28	0.43	0.65	LL2ss-070-0702-SO				
LL2-2		Inorganics	Vanadium	MG/KG	28/ 28	12	25.3	LL2ss-180-0992-SO				
LL2-2		Inorganics	Zinc	MG/KG	28/ 28	105	695	LL2ss-104-0790-SO				
LL2-2		Explosives	2,4,6-Trinitrotoluene	MG/KG	7/ 10	0.449	1.9	LL2ss-122-0844-SO				
LL2-2		Explosives	2-Amino-4,6-Dinitrotoluene	MG/KG	3/ 10	0.262	0.5	LL2ss-118-0832-SO				
LL2-2		Explosives	4-Amino-2,6-Dinitrotoluene	MG/KG	3/ 10	0.286	0.53	LL2ss-118-0832-SO				
LL2-2		Explosives	HMX	MG/KG	2/ 10	0.532	0.67	LL2ss-118-0832-SO				
LL2-2		Explosives	RDX	MG/KG	2/ 10	0.458	0.3	LL2ss-107-0799-SO				
LL2-2		Pesticides and PCBs	4,4'-DDE	MG/KG	1/ 3	0.0188	0.031	LL2ss-115-0823-SO				
LL2-2		Pesticides and PCBs	PCB-1254	MG/KG	14/ 28	0.528	9.5	LL2ss-104-0790-SO				
LL2-2		Semi-Volatile Organics	2-Methylnaphthalene	MG/KG	2/ 8	0.34	0.21	LL2ss-071-0703-SO				
LL2-2		Semi-Volatile Organics	Acenaphthene	MG/KG	2/ 8	0.454	1.1	LL2ss-071-0703-SO				
LL2-2		Semi-Volatile Organics	Acenaphthylene	MG/KG	1/ 8	0.358	0.18	LL2ss-071-0703-SO				
LL2-2		Semi-Volatile Organics	Anthracene	MG/KG	3/ 8	0.423	0.73	LL2ss-169-0963-SO				
LL2-2		Semi-Volatile Organics	Benz(a)anthracene	MG/KG	5/ 8	0.539	1.7	LL2ss-169-0963-SO				
LL2-2		Semi-Volatile Organics	Benzo(a)pyrene	MG/KG	5/ 8	0.54	1.8	LL2ss-169-0963-SO				
LL2-2		Semi-Volatile Organics	Benzo(b)fluoranthene	MG/KG	6/ 8	0.577	2	LL2ss-169-0963-SO				
LL2-2		Semi-Volatile Organics	Benzo(ghi)perylene	MG/KG	5/ 8	0.359	0.91	LL2ss-169-0963-SO				
LL2-2		Semi-Volatile Organics	Benzo(k)fluoranthene	MG/KG	5/ 8	0.394	1.1	LL2ss-169-0963-SO				
LL2-2		Semi-Volatile Organics	Benzoic acid	MG/KG	1/ 8	1.64	0.24	LL2ss-071-0703-SO				
LL2-2		Semi-Volatile Organics	Carbazole	MG/KG	3/ 8	0.349	0.48	LL2ss-169-0963-SO				
LL2-2		Semi-Volatile Organics	Chrysene	MG/KG	6/ 8	0.544	1.8	LL2ss-169-0963-SO				
LL2-2		Semi-Volatile Organics	Dibenz(a,h)anthracene	MG/KG	3/ 8	0.292	0.28	LL2ss-064-0684-SO				
LL2-2		Semi-Volatile Organics	Dibenzofuran	MG/KG	3/ 8	0.391	0.77	LL2ss-071-0703-SO				
LL2-2		Semi-Volatile Organics	Fluoranthene	MG/KG	6/ 8	1.37	4.2	LL2ss-071-0703-SO				
LL2-2		Semi-Volatile Organics	Fluorene	MG/KG	2/ 8	0.539	1.4	LL2ss-071-0703-SO				
LL2-2		Semi-Volatile Organics	Indeno(1,2,3-cd)pyrene	MG/KG	5/ 8	0.358	0.95	LL2ss-169-0963-SO				
LL2-2		Semi-Volatile Organics	Naphthalene	MG/KG	2/ 8	0.353	0.35	LL2ss-071-0703-SO				
LL2-2		Semi-Volatile Organics	Phenanthrene	MG/KG	5/ 8	1.32	4.6	LL2ss-071-0703-SO				
LL2-2		Semi-Volatile Organics	Pyrene	MG/KG	6/ 8	1.17	3.4	LL2ss-169-0963-SO				
LL2-3		Inorganics	Aluminum	MG/KG	32/ 32	10100	24400	LL2ss-101-0781-SO				

Attachment 1
Summary of Analytes Detected in IDW
Load Line 2 Solid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Mean Adj. for TCLP (mg/L)	Max Detect Adj. for TCLP
LL2-3		Inorganics	Antimony	MG/KG	3/ 25	3.46	59.5	LL2ss-100-0778-SO				
LL2-3	N	Inorganics	Arsenic	MG/KG	32/ 32	12.7	74.4	LL2ss-067-1182-SO	5	0/ 32	0.637	3.72
LL2-3	N	Inorganics	Barium	MG/KG	32/ 32	97	438	LL2ss-170-0966-SO	100	0/ 32	4.85	21.9
LL2-3		Inorganics	Beryllium	MG/KG	19/ 32	0.827	2.9	LL2ss-078-0720-SO				
LL2-3	N	Inorganics	Cadmium	MG/KG	17/ 32	1.02	6.1	LL2ss-100-0778-SO	1	0/ 32	0.0512	0.305
LL2-3		Inorganics	Calcium	MG/KG	32/ 32	15800	97100	LL2ss-078-0720-SO				
LL2-3	Y	Inorganics	Chromium	MG/KG	32/ 32	19.4	222	LL2ss-100-0778-SO	5	1/ 32	0.97	11.1
LL2-3		Inorganics	Cobalt	MG/KG	32/ 32	6.4	15	LL2ss-100-0778-SO				
LL2-3		Inorganics	Copper	MG/KG	32/ 32	27.8	140	LL2ss-100-0778-SO				
LL2-3		Inorganics	Iron	MG/KG	32/ 32	18000	59600	LL2ss-100-0778-SO				
LL2-3	Y	Inorganics	Lead	MG/KG	32/ 32	89.9	1220	LL2ss-100-0778-SO	5	4/ 32	4.5	61
LL2-3		Inorganics	Magnesium	MG/KG	32/ 32	3620	15200	LL2ss-078-1171-SO				
LL2-3		Inorganics	Manganese	MG/KG	32/ 32	823	7460	LL2ss-101-0781-SO				
LL2-3	N	Inorganics	Mercury	MG/KG	27/ 32	0.0444	0.11	LL2ss-084-0738-SO	0.2	0/ 32	0.00222	0.0055
LL2-3		Inorganics	Nickel	MG/KG	32/ 32	13.9	51.9	LL2ss-100-0778-SO				
LL2-3		Inorganics	Potassium	MG/KG	31/ 32	859	1960	LL2ss-078-0720-SO				
LL2-3	N	Inorganics	Selenium	MG/KG	19/ 32	1.91	1.2	LL2ss-101-0781-SO	1	0/ 32	0.0956	0.06
LL2-3	N	Inorganics	Silver	MG/KG	4/ 32	0.597	2	LL2ss-100-0778-SO	5	0/ 32	0.0299	0.1
LL2-3		Inorganics	Sodium	MG/KG	5/ 32	483	240	LL2ss-066-0690-SO				
LL2-3		Inorganics	Thallium	MG/KG	27/ 32	0.538	0.99	LL2ss-100-0778-SO				
LL2-3		Inorganics	Vanadium	MG/KG	32/ 32	13.2	21	LL2ss-100-0778-SO				
LL2-3		Inorganics	Zinc	MG/KG	32/ 32	121	680	LL2ss-100-0778-SO				
LL2-3		Explosives	1,3,5-Trinitrobenzene	MG/KG	4/ 9	1.56	6.1	LL2ss-086-0740-SO				
LL2-3		Explosives	1,3-Dinitrobenzene	MG/KG	1/ 9	0.234	0.11	LL2ss-086-0740-SO				
LL2-3		Explosives	2,4,6-Trinitrotoluene	MG/KG	7/ 9	2690	17000	LL2ss-086-0740-SO				
LL2-3	Y	Explosives	2,4-Dinitrotoluene	MG/KG	4/ 9	1.57	5	LL2ss-086-0740-SO	0.13	3/ 9	0.0786	0.25
LL2-3		Explosives	2-Amino-4,6-Dinitrotoluene	MG/KG	3/ 9	85.2	9.8	LL2ss-086-0740-SO				
LL2-3		Explosives	4-Amino-2,6-Dinitrotoluene	MG/KG	1/ 9	415	0.23	LL2ss-086-0740-SO				
LL2-3		Explosives	Nitrocellulose	MG/KG	1/ 1	93.5	93.5	LL2ss-086-0740-SO				
LL2-3		Explosives	Nitroglycerin	MG/KG	1/ 9	2.57	2.7	LL2ss-086-0740-SO				
LL2-3		Pesticides and PCBs	PCB-1254	MG/KG	11/ 32	0.49	3	LL2ss-100-0778-SO				
LL2-3		Pesticides and PCBs	PCB-1260	MG/KG	7/ 32	0.266	1.2	LL2ss-086-1168-SO				
LL2-3	Y	Semi-Volatile Organics	2,4-Dinitrotoluene	MG/KG	1/ 8	5.09	13	LL2ss-086-0740-SO	0.13	1/ 8	0.254	0.65
LL2-3		Semi-Volatile Organics	2-Methylnaphthalene	MG/KG	1/ 8	5.55	4.5	LL2ss-086-1168-SO				
LL2-3	N	Semi-Volatile Organics	4-Methylphenol	MG/KG	1/ 8	5.8	0.054	LL2ss-086-1168-SO	200	0/ 8	0.29	0.0027
LL2-3		Semi-Volatile Organics	Benz(a)anthracene	MG/KG	2/ 8	5.1	1.1	LL2ss-086-0740-SO				
LL2-3		Semi-Volatile Organics	Benzo(a)pyrene	MG/KG	2/ 8	5.15	1.5	LL2ss-086-0740-SO				
LL2-3		Semi-Volatile Organics	Benzo(b)fluoranthene	MG/KG	3/ 8	5.09	1.3	LL2ss-086-0740-SO				
LL2-3		Semi-Volatile Organics	Benzo(ghi)perylene	MG/KG	2/ 8	5.53	4.6	LL2ss-086-0740-SO				
LL2-3		Semi-Volatile Organics	Benzo(k)fluoranthene	MG/KG	1/ 8	5.81	0.14	LL2ss-086-1168-SO				
LL2-3		Semi-Volatile Organics	Benzoic acid	MG/KG	1/ 8	27.8	0.22	LL2ss-086-0740-SO				
LL2-3		Semi-Volatile Organics	Chrysene	MG/KG	3/ 8	5.12	1.6	LL2ss-086-1168-SO				
LL2-3		Semi-Volatile Organics	Fluoranthene	MG/KG	3/ 8	5.15	1.6	LL2ss-086-1168-SO				
LL2-3		Semi-Volatile Organics	Indeno(1,2,3-cd)pyrene	MG/KG	1/ 8	5.8	0.1	LL2ss-086-1168-SO				
LL2-3		Semi-Volatile Organics	Naphthalene	MG/KG	1/ 8	5.31	2.6	LL2ss-086-0740-SO				
LL2-3		Semi-Volatile Organics	Phenanthrene	MG/KG	2/ 8	5.32	3	LL2ss-086-0740-SO				
LL2-3		Semi-Volatile Organics	Pyrene	MG/KG	3/ 8	5.6	5.3	LL2ss-086-0740-SO				
LL2-3	N	Volatile Organics	2-Butanone	MG/KG	1/ 7	0.0208	0.0084	LL2ss-066-0690-SO	200	0/ 7	0.00104	0.00042
LL2-3		Volatile Organics	Acetone	MG/KG	1/ 7	0.03	0.073	LL2ss-077-0719-SO				
LL2-3		Volatile Organics	Toluene	MG/KG	4/ 7	0.00461	0.0084	LL2ss-086-0740-SO				
LL2-4		General Chemistry	Chromium, hexavalent	MG/KG	1/ 2	41.5	81.9	LLss-188-1016-SO				

Attachment 1
Summary of Analytes Detected in IDW
Load Line 2 Solid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Mean Adj. for TCLP (mg/L)	Max Detect Adj. for TCLP
LL2-4		Cyanide	Cyanide	MG/KG	1/ 7	0.62	0.82	LL2ss-098-1164-SO				
LL2-4		Inorganics	Aluminum	MG/KG	29/ 29	9240	15600	LL2ss-140-0884-SO				
LL2-4		Inorganics	Antimony	MG/KG	4/ 29	7.81	180	LL2ss-097-0769-SO				
LL2-4	N	Inorganics	Arsenic	MG/KG	29/ 29	11.1	30	LLss-188-1016-SO	5	0/ 29	0.555	1.5
LL2-4	N	Inorganics	Barium	MG/KG	29/ 29	90.9	413	LLss-188-1016-SO	100	0/ 29	4.55	20.7
LL2-4		Inorganics	Beryllium	MG/KG	21/ 29	0.712	1.9	LL2ss-140-0884-SO				
LL2-4	N	Inorganics	Cadmium	MG/KG	14/ 29	1.05	6.6	LL2ss-132-0868-SO	1	0/ 29	0.0527	0.33
LL2-4		Inorganics	Calcium	MG/KG	29/ 29	21000	145000	LLss-188-1016-SO				
LL2-4	Y	Inorganics	Chromium	MG/KG	29/ 29	114	1890	LL2ss-175-0966-SO	5	3/ 29	5.7	94.5
LL2-4		Inorganics	Cobalt	MG/KG	29/ 29	8.59	19.5	LLss-188-1016-SO				
LL2-4		Inorganics	Copper	MG/KG	29/ 29	154	3280	LL2ss-175-0966-SO				
LL2-4		Inorganics	Iron	MG/KG	29/ 29	24200	153000	LLss-188-1016-SO				
LL2-4	Y	Inorganics	Lead	MG/KG	29/ 29	332	6930	LLss-188-1016-SO	5	6/ 29	16.6	347
LL2-4		Inorganics	Magnesium	MG/KG	29/ 29	2820	9830	LL2ss-140-0884-SO				
LL2-4		Inorganics	Manganese	MG/KG	29/ 29	614	1640	LL2ss-130-0862-SO				
LL2-4	N	Inorganics	Mercury	MG/KG	26/ 29	0.178	2.4	LLss-188-1016-SO	0.2	0/ 29	0.00891	0.12
LL2-4		Inorganics	Nickel	MG/KG	29/ 29	21.2	97.4	LLss-188-1016-SO				
LL2-4		Inorganics	Potassium	MG/KG	29/ 29	851	1250	LL2ss-094-0760-SO				
LL2-4	N	Inorganics	Selenium	MG/KG	8/ 29	1.97	0.94	LLss-188-1016-SO	1	0/ 29	0.0987	0.047
LL2-4	N	Inorganics	Silver	MG/KG	5/ 29	0.629	3.1	LLss-188-1016-SO	5	0/ 29	0.0314	0.155
LL2-4		Inorganics	Sodium	MG/KG	8/ 29	495	573	LL2so-072-0707-SO				
LL2-4		Inorganics	Thallium	MG/KG	19/ 29	0.448	0.99	LL2ss-129-1165-SO				
LL2-4		Inorganics	Vanadium	MG/KG	29/ 29	13.9	26.8	LLss-188-1016-SO				
LL2-4		Inorganics	Zinc	MG/KG	29/ 29	363	7280	LLss-188-1016-SO				
LL2-4		Explosives	1,3,5-Trinitrobenzene	MG/KG	1/ 20	6.24	0.23	LL2ss-094-0760-SO				
LL2-4		Explosives	1,3-Dinitrobenzene	MG/KG	1/ 20	0.243	0.045	LL2ss-094-0760-SO				
LL2-4		Explosives	2,4,6-Trinitrotoluene	MG/KG	15/ 20	196	3600	LL2ss-094-0760-SO				
LL2-4	Y	Explosives	2,4-Dinitrotoluene	MG/KG	5/ 20	0.412	4	LL2ss-094-0760-SO	0.13	1/ 20	0.0206	0.2
LL2-4		Explosives	2-Amino-4,6-Dinitrotoluene	MG/KG	4/ 20	6.54	3.2	LL2ss-094-0760-SO				
LL2-4		Explosives	4-Amino-2,6-Dinitrotoluene	MG/KG	2/ 20	7.69	1.9	LL2ss-094-0760-SO				
LL2-4		Explosives	Nitrocellulose	MG/KG	4/ 6	712	4190	LL2ss-094-0760-SO				
LL2-4		Explosives	RDX	MG/KG	2/ 20	0.539	1.6	LL2ss-094-0760-SO				
LL2-4		Pesticides and PCBs	4,4'-DDE	MG/KG	3/ 7	0.0283	0.16	LL2ss-175-0966-SO				
LL2-4		Pesticides and PCBs	4,4'-DDT	MG/KG	2/ 7	0.0118	0.024	LL2ss-175-0966-SO				
LL2-4		Pesticides and PCBs	Endrin aldehyde	MG/KG	2/ 7	0.00929	0.0084	LL2ss-175-0966-SO				
LL2-4		Pesticides and PCBs	PCB-1254	MG/KG	21/ 29	0.778	5.2	LL2ss-132-0868-SO				
LL2-4		Pesticides and PCBs	gamma-Chlordane	MG/KG	2/ 7	0.00864	0.0041	LL2ss-175-0966-SO				
LL2-4		Semi-Volatile Organics	2-Methylnaphthalene	MG/KG	3/ 11	0.36	0.4	LL2ss-096-0766-SO				
LL2-4		Semi-Volatile Organics	Acenaphthene	MG/KG	1/ 11	0.505	1.7	LL2ss-175-0966-SO				
LL2-4		Semi-Volatile Organics	Acenaphthylene	MG/KG	1/ 11	0.359	0.093	LL2ss-096-0766-SO				
LL2-4		Semi-Volatile Organics	Anthracene	MG/KG	2/ 11	0.832	5.6	LL2ss-175-0966-SO				
LL2-4		Semi-Volatile Organics	Benz(a)anthracene	MG/KG	2/ 11	1.24	10	LL2ss-175-0966-SO				
LL2-4		Semi-Volatile Organics	Benzo(a)pyrene	MG/KG	2/ 11	1.23	9.9	LL2ss-175-0966-SO				
LL2-4		Semi-Volatile Organics	Benzo(b)fluoranthene	MG/KG	2/ 11	1.33	11	LL2ss-175-0966-SO				
LL2-4		Semi-Volatile Organics	Benzo(ghi)perylene	MG/KG	2/ 11	0.658	3.7	LL2ss-175-0966-SO				
LL2-4		Semi-Volatile Organics	Benzo(k)fluoranthene	MG/KG	1/ 11	0.96	6.7	LL2ss-175-0966-SO				
LL2-4		Semi-Volatile Organics	Carbazole	MG/KG	1/ 11	0.469	1.3	LL2ss-175-0966-SO				
LL2-4		Semi-Volatile Organics	Chrysene	MG/KG	3/ 11	1.3	11	LL2ss-175-0966-SO				
LL2-4		Semi-Volatile Organics	Di-n-butyl phthalate	MG/KG	1/ 11	0.373	0.24	LL2ss-096-0766-SO				
LL2-4		Semi-Volatile Organics	Dibenz(a,h)anthracene	MG/KG	1/ 11	0.469	1.3	LL2ss-175-0966-SO				
LL2-4		Semi-Volatile Organics	Dibenzofuran	MG/KG	2/ 11	0.413	1	LL2ss-175-0966-SO				

Attachment 1
Summary of Analytes Detected in IDW
Load Line 2 Solid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Mean Adj. for TCLP (mg/L)	Max Detect Adj. for TCLP
LL2-4		Semi-Volatile Organics	Fluoranthene	MG/KG	4/ 11	2.48	24	LL2ss-175-0966-SO				
LL2-4		Semi-Volatile Organics	Fluorene	MG/KG	1/ 11	0.551	2.2	LL2ss-175-0966-SO				
LL2-4		Semi-Volatile Organics	Indeno(1,2,3-cd)pyrene	MG/KG	1/ 11	0.815	5.1	LL2ss-175-0966-SO				
LL2-4		Semi-Volatile Organics	Naphthalene	MG/KG	3/ 11	0.349	0.41	LL2ss-096-0766-SO				
LL2-4		Semi-Volatile Organics	Phenanthrene	MG/KG	5/ 11	1.9	18	LL2ss-175-0966-SO				
LL2-4		Semi-Volatile Organics	Pyrene	MG/KG	4/ 11	2.38	23	LL2ss-175-0966-SO				
LL2-4		Volatile Organics	Toluene	MG/KG	3/ 9	0.00657	0.016	LL2ss-129-0859-SO				
LL2-5		Inorganics	Aluminum	MG/KG	44/ 44	8890	22400	LL2ss-166-0956-SO				
LL2-5		Inorganics	Antimony	MG/KG	8/ 44	6.12	192	LL2ss-167-0959-SO				
LL2-5	N	Inorganics	Arsenic	MG/KG	44/ 44	12.8	38.8	LL2ss-167-0959-SO	5	0/ 44	0.639	1.94
LL2-5	N	Inorganics	Barium	MG/KG	44/ 44	94	810	LL2ss-167-0959-SO	100	0/ 44	4.7	40.5
LL2-5		Inorganics	Beryllium	MG/KG	32/ 44	0.699	2.6	LL2ss-166-0956-SO				
LL2-5	Y	Inorganics	Cadmium	MG/KG	24/ 44	3.05	50.2	LL2ss-167-0959-SO	1	2/ 44	0.153	2.51
LL2-5		Inorganics	Calcium	MG/KG	44/ 44	14800	124000	LL2ss-150-0914-SO				
LL2-5	Y	Inorganics	Chromium	MG/KG	44/ 44	30.4	291	LL2ss-167-0959-SO	5	3/ 44	1.52	14.6
LL2-5		Inorganics	Cobalt	MG/KG	44/ 44	10	23.7	LL2ss-167-0959-SO				
LL2-5		Inorganics	Copper	MG/KG	44/ 44	100	1510	LL2ss-178-0986-SO				
LL2-5	Y	Inorganics	Iron	MG/KG	44/ 44	30800	254000	LL2ss-167-0959-SO				
LL2-5		Inorganics	Lead	MG/KG	44/ 44	217	2510	LL2ss-166-0956-SO	5	10/ 44	10.9	126
LL2-5		Inorganics	Magnesium	MG/KG	44/ 44	3410	21500	LL2ss-166-0956-SO				
LL2-5		Inorganics	Manganese	MG/KG	44/ 44	603	2280	LL2ss-167-0959-SO				
LL2-5	N	Inorganics	Mercury	MG/KG	32/ 44	0.122	2	LL2ss-167-0959-SO	0.2	0/ 44	0.00609	0.1
LL2-5		Inorganics	Nickel	MG/KG	44/ 44	32	226	LL2sd-049-1173-SD				
LL2-5		Inorganics	Potassium	MG/KG	44/ 44	943	1800	LL2ss-159-0935-SO				
LL2-5	N	Inorganics	Selenium	MG/KG	6/ 44	2.5	5.2	LL2sd-049-1173-SD	1	0/ 44	0.125	0.26
LL2-5	N	Inorganics	Silver	MG/KG	5/ 44	0.648	1.5	LLsd-183-1001-SD	5	0/ 44	0.0324	0.075
LL2-5		Inorganics	Sodium	MG/KG	8/ 44	523	164	LLsd-183-1001-SD				
LL2-5		Inorganics	Thallium	MG/KG	33/ 44	0.484	1.1	LL2sd-048-1120-SD				
LL2-5		Inorganics	Vanadium	MG/KG	44/ 44	14.5	30.1	LL2ss-166-0956-SO				
LL2-5		Inorganics	Zinc	MG/KG	44/ 44	355	4580	LL2ss-166-0956-SO				
LL2-5		Explosives	1,3,5-Trinitrobenzene	MG/KG	2/ 14	0.431	2.2	LL2ss-158-0932-SO				
LL2-5		Explosives	1,3-Dinitrobenzene	MG/KG	1/ 14	0.402	0.13	LL2ss-158-0932-SO				
LL2-5		Explosives	2,4,6-Trinitrotoluene	MG/KG	10/ 14	46.8	610	LL2ss-158-0932-SO				
LL2-5	N	Explosives	2,4-Dinitrotoluene	MG/KG	2/ 14	0.349	1.4	LL2ss-133-0871-SO	0.13	0/ 14	0.0174	0.07
LL2-5		Explosives	2-Amino-4,6-Dinitrotoluene	MG/KG	5/ 14	1.12	9.4	LL2ss-133-0871-SO				
LL2-5		Explosives	4-Amino-2,6-Dinitrotoluene	MG/KG	3/ 14	1.62	0.66	LL2ss-133-0871-SO				
LL2-5		Explosives	Nitrocellulose	MG/KG	1/ 1	6.8	6.8	LL2sd-049-1123-SD				
LL2-5		Explosives	RDX	MG/KG	1/ 14	0.799	0.19	LL2ss-158-0932-SO				
LL2-5		Pesticides and PCBs	4,4'-DDE	MG/KG	1/ 6	0.337	0.011	LL2ss-133-0871-SO				
LL2-5		Pesticides and PCBs	Dieldrin	MG/KG	1/ 6	0.337	0.013	LL2ss-133-0871-SO				
LL2-5		Pesticides and PCBs	Endrin aldehyde	MG/KG	2/ 6	0.35	0.087	LL2ss-133-0871-SO				
LL2-5	N	Pesticides and PCBs	Heptachlor	MG/KG	1/ 6	0.341	0.036	LL2ss-133-0871-SO	0.008	0/ 6	0.017	0.0018
LL2-5		Pesticides and PCBs	PCB-1254	MG/KG	8/ 38	2.77	59	LL2ss-167-0959-SO				
LL2-5		Pesticides and PCBs	PCB-1260	MG/KG	10/ 38	0.553	2.8	LL2ss-167-0959-SO				
LL2-5		Pesticides and PCBs	beta-BHC	MG/KG	2/ 6	0.336	0.0047	LL2ss-133-0871-SO				
LL2-5		Pesticides and PCBs	gamma-Chlordane	MG/KG	1/ 6	0.349	0.088	LL2ss-133-0871-SO				
LL2-5		Semi-Volatile Organics	2-Methylnaphthalene	MG/KG	1/ 10	1.1	0.18	LL2ss-133-0871-SO				
LL2-5		Semi-Volatile Organics	Acenaphthene	MG/KG	1/ 10	1.1	0.13	LL2ss-133-0871-SO				
LL2-5		Semi-Volatile Organics	Acenaphthylene	MG/KG	1/ 10	1.1	0.17	LL2ss-133-0871-SO				
LL2-5		Semi-Volatile Organics	Anthracene	MG/KG	2/ 10	1.08	0.26	LL2ss-133-0871-SO				
LL2-5		Semi-Volatile Organics	Benz(a)anthracene	MG/KG	3/ 10	1.2	1.5	LL2ss-133-0871-SO				

Attachment 1
Summary of Analytes Detected in IDW
Load Line 2 Solid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Mean Adj. for TCLP (mg/L)	Max Detect Adj. for TCLP
LL2-5		Semi-Volatile Organics	Benzo(a)pyrene	MG/KG	3/ 10	1.24	1.9	LL2ss-133-0871-SO				
LL2-5		Semi-Volatile Organics	Benzo(b)fluoranthene	MG/KG	3/ 10	1.33	2.5	LL2ss-133-0871-SO				
LL2-5		Semi-Volatile Organics	Benzo(ghi)perylene	MG/KG	3/ 10	1.13	0.93	LL2ss-133-0871-SO				
LL2-5		Semi-Volatile Organics	Benzo(k)fluoranthene	MG/KG	3/ 10	1.2	1.5	LL2ss-133-0871-SO				
LL2-5		Semi-Volatile Organics	Benzoic acid	MG/KG	2/ 10	5.14	0.5	LL2ss-133-0871-SO				
LL2-5		Semi-Volatile Organics	Butyl benzyl phthalate	MG/KG	1/ 10	1.1	0.13	LL2ss-133-0871-SO				
LL2-5		Semi-Volatile Organics	Carbazole	MG/KG	1/ 10	1.11	0.27	LL2ss-133-0871-SO				
LL2-5		Semi-Volatile Organics	Chrysene	MG/KG	4/ 10	1.28	2.4	LL2ss-133-0871-SO				
LL2-5		Semi-Volatile Organics	Di-n-butyl phthalate	MG/KG	3/ 10	1.08	0.27	LL2ss-133-0871-SO				
LL2-5		Semi-Volatile Organics	Dibenz(a,h)anthracene	MG/KG	1/ 10	1.11	0.27	LL2ss-133-0871-SO				
LL2-5		Semi-Volatile Organics	Dibenzofuran	MG/KG	1/ 10	1.1	0.15	LL2ss-133-0871-SO				
LL2-5		Semi-Volatile Organics	Fluoranthene	MG/KG	4/ 10	1.47	4.1	LL2ss-133-0871-SO				
LL2-5		Semi-Volatile Organics	Fluorene	MG/KG	1/ 10	1.11	0.22	LL2ss-133-0871-SO				
LL2-5		Semi-Volatile Organics	Indeno(1,2,3-cd)pyrene	MG/KG	3/ 10	1.13	0.89	LL2ss-133-0871-SO				
LL2-5		Semi-Volatile Organics	Naphthalene	MG/KG	2/ 10	1.07	0.19	LL2ss-133-0871-SO				
LL2-5	N	Semi-Volatile Organics	Pentachlorophenol	MG/KG	1/ 10	1.13	0.35	LL2ss-133-0871-SO	100	0/ 10	0.0566	0.0175
LL2-5		Semi-Volatile Organics	Phenanthrene	MG/KG	3/ 10	1.28	2.3	LL2ss-133-0871-SO				
LL2-5		Semi-Volatile Organics	Pyrene	MG/KG	4/ 10	1.47	4.2	LL2ss-133-0871-SO				
LL2-5		Total Organic Carbon	Total Organic Carbon	MG/KG	1/ 1	4700	4700	LL2sd-233-1096-SD				
LL2-5		Volatile Organics	Acetone	MG/KG	2/ 10	0.0211	0.02	LL2ss-166-0956-SO				
LL2-5		Volatile Organics	Toluene	MG/KG	6/ 10	0.0219	0.067	LL2ss-154-0920-SO				
LL2-6		General Chemistry	Chromium, hexavalent	MG/KG	1/ 4	1.18	1.4	LL2sd-235-1100-SD				
LL2-6		Cyanide	Cyanide	MG/KG	1/ 7	0.664	1.3	LL2sd-232-1094-SD				
LL2-6		Inorganics	Aluminum	MG/KG	56/ 56	8500	23100	LL2so-130-0863-SO				
LL2-6		Inorganics	Antimony	MG/KG	23/ 56	449	8910	LL2sd-250-1174-SD				
LL2-6	N	Inorganics	Arsenic	MG/KG	56/ 56	12.4	36.5	LL2sd-248-1117-SD	5	0/ 56	0.621	1.83
LL2-6	Y	Inorganics	Barium	MG/KG	56/ 56	172	2030	LL2sd-250-1121-SD	100	2/ 56	8.6	102
LL2-6		Inorganics	Beryllium	MG/KG	40/ 56	0.656	3.1	LL2so-130-0863-SO				
LL2-6	N	Inorganics	Cadmium	MG/KG	39/ 56	1.68	11.2	LL2sd-250-1121-SD	1	0/ 56	0.0839	0.56
LL2-6		Inorganics	Calcium	MG/KG	56/ 56	11100	124000	LL2so-130-0863-SO				
LL2-6	Y	Inorganics	Chromium	MG/KG	56/ 56	215	4000	LL2sd-248-1117-SD	5	7/ 56	10.7	200
LL2-6		Inorganics	Cobalt	MG/KG	56/ 56	13.1	115	LL2sd-248-1117-SD				
LL2-6		Inorganics	Copper	MG/KG	56/ 56	132	2540	LL2sd-235-1100-SD				
LL2-6		Inorganics	Iron	MG/KG	56/ 56	26700	102000	LL2sd-250-1121-SD				
LL2-6	Y	Inorganics	Lead	MG/KG	56/ 56	1370	24800	LL2sd-248-1117-SD	5	15/ 56	68.6	1240
LL2-6		Inorganics	Magnesium	MG/KG	56/ 56	3360	14200	LL2sd-248-1117-SD				
LL2-6		Inorganics	Manganese	MG/KG	56/ 56	691	4990	LL2sd-232-1094-SD				
LL2-6	Y	Inorganics	Mercury	MG/KG	45/ 53	0.424	7.1	LL2so-130-0863-SO	0.2	2/ 53	0.0212	0.355
LL2-6		Inorganics	Nickel	MG/KG	56/ 56	24	82	LL2sd-235-1100-SD				
LL2-6		Inorganics	Potassium	MG/KG	56/ 56	750	1450	LL2sd-232-1094-SD				
LL2-6	N	Inorganics	Selenium	MG/KG	15/ 56	1.98	4	LL2sd-248-1117-SD	1	0/ 56	0.0989	0.2
LL2-6	N	Inorganics	Silver	MG/KG	5/ 56	0.62	1.5	LL2sd-248-1117-SD	5	0/ 56	0.031	0.075
LL2-6		Inorganics	Sodium	MG/KG	11/ 56	539	314	LL2sd-248-1117-SD				
LL2-6		Inorganics	Thallium	MG/KG	53/ 56	0.379	1.3	LL2sd-232-1094-SD				
LL2-6		Inorganics	Vanadium	MG/KG	56/ 56	14.1	22.6	LL2sd-248-1117-SD				
LL2-6		Inorganics	Zinc	MG/KG	56/ 56	229	1960	LL2sd-250-1174-SD				
LL2-6		Explosives	1,3,5-Trinitrobenzene	MG/KG	9/ 22	0.662	6.7	LL2so-094-0761-SO				
LL2-6		Explosives	1,3-Dinitrobenzene	MG/KG	1/ 22	0.512	0.054	LL2so-086-0741-SO				
LL2-6		Explosives	2,4,6-Trinitrotoluene	MG/KG	16/ 22	110	1600	LL2so-086-0741-SO				
LL2-6	N	Explosives	2,4-Dinitrotoluene	MG/KG	9/ 22	0.4	2.1	LL2so-086-0741-SO	0.13	0/ 22	0.02	0.105
LL2-6		Explosives	2,6-Dinitrotoluene	MG/KG	2/ 22	0.611	0.29	LL2so-086-0741-SO				

Attachment 1
Summary of Analytes Detected in IDW
Load Line 2 Solid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Mean Adj. for TCLP (mg/L)	Max Detect Adj. for TCLP
LL2-6		Explosives	2-Amino-4,6-Dinitrotoluene	MG/KG	11/ 22	1.46	5.5	LL2sd-242-1110-SD				
LL2-6		Explosives	4-Amino-2,6-Dinitrotoluene	MG/KG	3/ 22	5.23	7.8	LL2so-086-0741-SO				
LL2-6		Explosives	HMX	MG/KG	2/ 22	1.35	4.6	LL2so-086-0741-SO				
LL2-6		Explosives	Nitrocellulose	MG/KG	2/ 2	14.6	26.8	LL2sd-232-1094-SD				
LL2-6		Explosives	RDX	MG/KG	6/ 22	2.12	25	LL2ss-162-0944-SO				
LL2-6		Pesticides and PCBs	4,4'-DDE	MG/KG	3/ 6	0.165	0.88	LL2ss-165-0953-SO				
LL2-6		Pesticides and PCBs	4,4'-DDT	MG/KG	1/ 6	0.0741	0.37	LL2ss-165-0953-SO				
LL2-6		Pesticides and PCBs	Dieldrin	MG/KG	3/ 6	0.0624	0.29	LL2ss-165-0953-SO				
LL2-6		Pesticides and PCBs	Endrin aldehyde	MG/KG	3/ 6	0.123	0.65	LL2ss-165-0953-SO				
LL2-6		Pesticides and PCBs	PCB-1254	MG/KG	19/ 36	3.06	31	LL2sd-242-1110-SD				
LL2-6		Pesticides and PCBs	PCB-1260	MG/KG	3/ 36	0.987	0.79	LL2ss-164-0950-SO				
LL2-6		Pesticides and PCBs	beta-BHC	MG/KG	3/ 6	0.0732	0.36	LL2ss-165-0953-SO				
LL2-6		Pesticides and PCBs	gamma-Chlordane	MG/KG	3/ 6	0.0897	0.46	LL2ss-165-0953-SO				
LL2-6		Semi-Volatile Organics	2-Methylnaphthalene	MG/KG	2/ 8	0.315	0.14	LL2so-071-0704-SO				
LL2-6		Semi-Volatile Organics	Acenaphthene	MG/KG	1/ 8	0.346	0.1	LL2so-071-0704-SO				
LL2-6		Semi-Volatile Organics	Acenaphthylene	MG/KG	1/ 8	0.351	0.14	LL2so-071-0704-SO				
LL2-6		Semi-Volatile Organics	Anthracene	MG/KG	1/ 8	0.389	0.44	LL2ss-165-0953-SO				
LL2-6		Semi-Volatile Organics	Benz(a)anthracene	MG/KG	3/ 8	0.469	1.6	LL2ss-165-0953-SO				
LL2-6		Semi-Volatile Organics	Benzo(a)pyrene	MG/KG	4/ 8	0.485	1.9	LL2ss-165-0953-SO				
LL2-6		Semi-Volatile Organics	Benzo(b)fluoranthene	MG/KG	5/ 8	0.531	2.4	LL2ss-165-0953-SO				
LL2-6		Semi-Volatile Organics	Benzo(ghi)perylene	MG/KG	4/ 8	0.327	0.74	LL2ss-165-0953-SO				
LL2-6		Semi-Volatile Organics	Benzo(k)fluoranthene	MG/KG	2/ 8	0.495	1.3	LL2ss-165-0953-SO				
LL2-6		Semi-Volatile Organics	Benzoic acid	MG/KG	2/ 8	1.46	0.33	LL2so-071-0704-SO				
LL2-6		Semi-Volatile Organics	Bis(2-ethylhexyl)phthalate	MG/KG	3/ 8	0.341	0.6	LL2ss-164-1167-SO				
LL2-6		Semi-Volatile Organics	Butyl benzyl phthalate	MG/KG	2/ 8	0.308	0.087	LL2so-071-0704-SO				
LL2-6		Semi-Volatile Organics	Carbazole	MG/KG	1/ 8	0.358	0.19	LL2so-071-0704-SO				
LL2-6		Semi-Volatile Organics	Chrysene	MG/KG	5/ 8	0.43	1.7	LL2ss-165-0953-SO				
LL2-6		Semi-Volatile Organics	Di-n-butyl phthalate	MG/KG	1/ 8	0.358	0.19	LL2so-071-0704-SO				
LL2-6		Semi-Volatile Organics	Dibenz(a,h)anthracene	MG/KG	1/ 8	0.361	0.22	LL2so-071-0704-SO				
LL2-6		Semi-Volatile Organics	Dibenzofuran	MG/KG	1/ 8	0.35	0.13	LL2so-071-0704-SO				
LL2-6		Semi-Volatile Organics	Fluoranthene	MG/KG	5/ 8	0.71	3.6	LL2ss-165-0953-SO				
LL2-6		Semi-Volatile Organics	Fluorene	MG/KG	1/ 8	0.36	0.21	LL2so-071-0704-SO				
LL2-6		Semi-Volatile Organics	Indeno(1,2,3-cd)pyrene	MG/KG	2/ 8	0.403	0.76	LL2ss-165-0953-SO				
LL2-6		Semi-Volatile Organics	Naphthalene	MG/KG	2/ 8	0.313	0.13	LL2so-071-0704-SO				
LL2-6		Semi-Volatile Organics	Phenanthrene	MG/KG	5/ 8	0.458	1.9	LL2ss-165-0953-SO				
LL2-6		Semi-Volatile Organics	Pyrene	MG/KG	5/ 8	0.643	3.2	LL2ss-165-0953-SO				
LL2-6	N	Volatile Organics	2-Butanone	MG/KG	1/ 9	0.329	0.0036	LL2sd-232-1094-SD	200	0/ 9	0.0165	0.00018
LL2-6		Volatile Organics	Acetone	MG/KG	1/ 9	0.331	0.017	LL2sd-232-1094-SD				
LL2-6		Volatile Organics	Toluene	MG/KG	9/ 9	0.416	3.7	LL2sd-232-1094-SD				
LL2-7		Inorganics	Aluminum	MG/KG	26/ 26	10600	16600	LL2ss-206-1046-SO				
LL2-7		Inorganics	Antimony	MG/KG	4/ 26	1.86	14.9	LL2sd-240-1106-SD				
LL2-7	N	Inorganics	Arsenic	MG/KG	26/ 26	12	19.3	LLsd-182-1175-SD	5	0/ 26	0.601	0.965
LL2-7	N	Inorganics	Barium	MG/KG	26/ 26	73.4	122	LL2sd-240-1106-SD	100	0/ 26	3.67	6.1
LL2-7		Inorganics	Beryllium	MG/KG	23/ 26	0.662	1.3	LL2sd-240-1106-SD				
LL2-7	N	Inorganics	Cadmium	MG/KG	18/ 26	0.609	5	LL2sd-240-1106-SD	1	0/ 26	0.0304	0.25
LL2-7		Inorganics	Calcium	MG/KG	26/ 26	1800	11600	LLsd-182-1175-SD				
LL2-7	N	Inorganics	Chromium	MG/KG	26/ 26	17.2	74.5	LL2sd-240-1106-SD	5	0/ 26	0.859	3.73
LL2-7		Inorganics	Cobalt	MG/KG	26/ 26	9.63	27.7	LL2ss-206-1046-SO				
LL2-7		Inorganics	Copper	MG/KG	26/ 26	26.2	271	LL2sd-240-1106-SD				
LL2-7		Inorganics	Iron	MG/KG	26/ 26	21900	37700	LL2sd-239-1104-SD				
LL2-7	Y	Inorganics	Lead	MG/KG	26/ 26	41.9	475	LL2sd-240-1106-SD	5	2/ 26	2.1	23.8

Attachment 1
Summary of Analytes Detected in IDW
Load Line 2 Solid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Mean Adj. for TCLP (mg/L)	Max Detect Adj. for TCLP
LL2-7		Inorganics	Magnesium	MG/KG	26/ 26	1850	3280	LL2ss-202-1042-SO				
LL2-7		Inorganics	Manganese	MG/KG	26/ 26	695	2910	LL2ss-206-1046-SO				
LL2-7	N	Inorganics	Mercury	MG/KG	25/ 26	0.0517	0.2	LL2sd-240-1106-SD	0.2	0/ 26	0.00258	0.01
LL2-7		Inorganics	Nickel	MG/KG	26/ 26	19.1	63.4	LL2sd-239-1104-SD				
LL2-7		Inorganics	Potassium	MG/KG	26/ 26	677	1240	LL2ss-202-1042-SO				
LL2-7	N	Inorganics	Selenium	MG/KG	14/ 26	1.5	2.1	LL2sd-055-1133-SD	1	0/ 26	0.0752	0.105
LL2-7	N	Inorganics	Silver	MG/KG	3/ 26	0.813	4.1	LL2sd-055-1133-SD	5	0/ 26	0.0407	0.205
LL2-7		Inorganics	Thallium	MG/KG	13/ 26	0.427	0.81	LL2sd-239-1104-SD				
LL2-7		Inorganics	Vanadium	MG/KG	26/ 26	19.8	29.1	LL2ss-206-1046-SO				
LL2-7		Inorganics	Zinc	MG/KG	26/ 26	94.5	588	LL2sd-240-1106-SD				
LL2-7		Explosives	1,3,5-Trinitrobenzene	MG/KG	1/ 6	1.33	6.7	LL2so-094-0761-SO				
LL2-7		Explosives	2,4,6-Trinitrotoluene	MG/KG	5/ 6	81.2	450	LL2so-094-0761-SO				
LL2-7	N	Explosives	2,4-Dinitrotoluene	MG/KG	2/ 6	0.518	1.7	LL2so-094-0761-SO	0.13	0/ 6	0.0259	0.085
LL2-7		Explosives	2-Amino-4,6-Dinitrotoluene	MG/KG	3/ 6	1.97	8.9	LL2sd-240-1106-SD				
LL2-7		Explosives	4-Amino-2,6-Dinitrotoluene	MG/KG	3/ 6	6.92	22	LL2sd-240-1106-SD				
LL2-7		Explosives	HMX	MG/KG	1/ 6	4.92	25	LL2sd-240-1106-SD				
LL2-7		Explosives	RDX	MG/KG	1/ 6	2.92	13	LL2sd-240-1106-SD				
LL2-7		Pesticides and PCBs	4,4'-DDD	MG/KG	1/ 4	0.00245	0.0038	LLsd-182-0998-SD				
LL2-7		Pesticides and PCBs	4,4'-DDE	MG/KG	2/ 4	0.00708	0.021	LLsd-182-0998-SD				
LL2-7		Pesticides and PCBs	4,4'-DDT	MG/KG	1/ 4	0.00243	0.0037	LLsd-182-0998-SD				
LL2-7		Pesticides and PCBs	Dieldrin	MG/KG	1/ 4	0.00275	0.0032	LLsd-182-0998-SD				
LL2-7		Pesticides and PCBs	Endrin ketone	MG/KG	1/ 4	0.004	0.01	LLsd-182-0998-SD				
LL2-7		Pesticides and PCBs	PCB-1254	MG/KG	1/ 14	0.425	5.3	LL2sd-240-1106-SD				
LL2-7		Pesticides and PCBs	PCB-1260	MG/KG	1/ 14	0.165	0.64	LL2sd-240-1106-SD				
LL2-7		Pesticides and PCBs	alpha-Chlordane	MG/KG	1/ 4	0.004	0.0083	LL2ss-200-1040-SO				
LL2-7		Pesticides and PCBs	beta-BHC	MG/KG	3/ 4	0.0218	0.079	LLsd-182-0998-SD				
LL2-7		Semi-Volatile Organics	Anthracene	MG/KG	1/ 4	0.32	0.12	LL2sd-055-1133-SD				
LL2-7		Semi-Volatile Organics	Benz(a)anthracene	MG/KG	1/ 4	0.44	0.6	LLsd-182-0998-SD				
LL2-7		Semi-Volatile Organics	Benzo(a)pyrene	MG/KG	1/ 4	0.428	0.55	LLsd-182-0998-SD				
LL2-7		Semi-Volatile Organics	Benzo(b)fluoranthene	MG/KG	2/ 4	0.381	0.71	LLsd-182-0998-SD				
LL2-7		Semi-Volatile Organics	Benzo(ghi)perylene	MG/KG	1/ 4	0.34	0.2	LL2sd-055-1133-SD				
LL2-7		Semi-Volatile Organics	Benzo(k)fluoranthene	MG/KG	1/ 4	0.38	0.36	LL2sd-055-1133-SD				
LL2-7		Semi-Volatile Organics	Benzoic acid	MG/KG	1/ 4	1.44	0.15	LL2sd-055-1133-SD				
LL2-7		Semi-Volatile Organics	Bis(2-ethylhexyl)phthalate	MG/KG	1/ 4	0.32	0.12	LL2sd-055-1133-SD				
LL2-7		Semi-Volatile Organics	Chrysene	MG/KG	2/ 4	0.373	0.69	LLsd-182-0998-SD				
LL2-7		Semi-Volatile Organics	Dibenz(a,h)anthracene	MG/KG	1/ 4	0.311	0.082	LL2sd-055-1133-SD				
LL2-7		Semi-Volatile Organics	Fluoranthene	MG/KG	3/ 4	0.371	0.94	LLsd-182-0998-SD				
LL2-7		Semi-Volatile Organics	Indeno(1,2,3-cd)pyrene	MG/KG	1/ 4	0.345	0.22	LL2sd-055-1133-SD				
LL2-7		Semi-Volatile Organics	Phenanthrene	MG/KG	1/ 4	0.415	0.5	LLsd-182-0998-SD				
LL2-7		Semi-Volatile Organics	Pyrene	MG/KG	2/ 4	0.416	0.84	LLsd-182-0998-SD				
LL2-7		Total Organic Carbon	Total Organic Carbon	MG/KG	1/ 1	2900	2900	LL2sd-055-1133-SD				
LL2-8		Inorganics	Aluminum	MG/KG	14/ 14	9560	13900	LL2ss-244-0840-SO				
LL2-8		Inorganics	Antimony	MG/KG	2/ 14	48.4	664	LL2ss-243-0834-SO				
LL2-8	N	Inorganics	Arsenic	MG/KG	14/ 14	10.5	14.4	LL2ss-253-0842-SO	5	0/ 14	0.525	0.72
LL2-8	N	Inorganics	Barium	MG/KG	14/ 14	72.6	118	LL2ss-243-0834-SO	100	0/ 14	3.63	5.9
LL2-8		Inorganics	Beryllium	MG/KG	13/ 14	0.662	0.99	LL2ss-272-0688-SO				
LL2-8	N	Inorganics	Cadmium	MG/KG	9/ 14	0.487	3.4	LL2ss-243-0834-SO	1	0/ 14	0.0244	0.17
LL2-8		Inorganics	Calcium	MG/KG	13/ 14	3400	17100	LL2ss-272-0688-SO				
LL2-8	Y	Inorganics	Chromium	MG/KG	14/ 14	37.2	341	LL2ss-243-0834-SO	5	1/ 14	1.86	17.1
LL2-8		Inorganics	Cobalt	MG/KG	14/ 14	9.35	24.8	LL2ss-243-0834-SO				
LL2-8		Inorganics	Copper	MG/KG	14/ 14	19.1	56.1	LL2ss-243-0834-SO				

Attachment 1
Summary of Analytes Detected in IDW
Load Line 2 Solid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Mean Adj. for TCLP (mg/L)	Max Detect Adj. for TCLP
LL2-8		Inorganics	Iron	MG/KG	14/ 14	20000	26400	LL2ss-244-0840-SO				
LL2-8	Y	Inorganics	Lead	MG/KG	14/ 14	204	2610	LL2ss-243-0834-SO	5	1/ 14	10.2	131
LL2-8		Inorganics	Magnesium	MG/KG	14/ 14	2240	4030	LL2ss-272-0688-SO				
LL2-8		Inorganics	Manganese	MG/KG	14/ 14	399	937	LL2ss-272-0688-SO				
LL2-8	N	Inorganics	Mercury	MG/KG	8/ 14	0.036	0.094	LL2ss-244-0840-SO	0.2	0/ 14	0.0018	0.0047
LL2-8		Inorganics	Nickel	MG/KG	14/ 14	19.4	34.6	LL2so-120-0839-SO				
LL2-8		Inorganics	Potassium	MG/KG	14/ 14	776	1210	LL2ss-271-0686-SO				
LL2-8		Inorganics	Thallium	MG/KG	9/ 14	0.41	0.76	LL2ss-243-0834-SO				
LL2-8		Inorganics	Vanadium	MG/KG	14/ 14	15.7	24.1	LL2ss-253-0842-SO				
LL2-8		Inorganics	Zinc	MG/KG	14/ 14	81.1	410	LL2ss-243-0834-SO				
LL2-8		Explosives	1,3,5-Trinitrobenzene	MG/KG	1/ 5	0.39	0.95	LL2ss-272-0688-SO				
LL2-8		Explosives	2,4,6-Trinitrotoluene	MG/KG	3/ 5	8.52	27	LL2ss-272-0688-SO				
LL2-8	N	Explosives	2,4-Dinitrotoluene	MG/KG	1/ 5	0.248	0.24	LL2ss-271-0686-SO	0.13	0/ 5	0.0124	0.012
LL2-8		Explosives	2-Amino-4,6-Dinitrotoluene	MG/KG	2/ 5	0.886	3.1	LL2ss-272-0688-SO				
LL2-8		Explosives	4-Amino-2,6-Dinitrotoluene	MG/KG	1/ 5	2.95	0.13	LL2ss-272-0688-SO				
LL2-8		Pesticides and PCBs	PCB-1254	MG/KG	2/ 3	1.6	4.6	LL2ss-243-0834-SO				
LL2-8		Semi-Volatile Organics	Fluoranthene	MG/KG	1/ 1	0.086	0.086	LL2ss-243-0834-SO				
LL2-8		Semi-Volatile Organics	Pyrene	MG/KG	1/ 1	0.11	0.11	LL2ss-243-0834-SO				
LL2-8		Total Organic Carbon	Total Organic Carbon	MG/KG	1/ 1	20000	20000	LL2ss-243-0834-SO				
LL2-8	N	Volatile Organics	2-Butanone	MG/KG	1/ 2	0.151	0.012	LL2ss-243-0834-SO	200	0/ 2	0.00755	0.0006
LL2-8		Volatile Organics	Acetone	MG/KG	1/ 2	0.164	0.038	LL2ss-243-0834-SO				
LL2-8		Volatile Organics	Carbon disulfide	MG/KG	1/ 2	0.0384	0.0047	LL2ss-243-0834-SO				

Attachment 1
Summary of Analytes Detected in IDW
Load Line 3 Solid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Mean Adj. for TCLP (mg/L)	Adj. for TCLP (mg/L)
LL3-2		Inorganics	Aluminum	MG/KG	31/ 31	9170	23400	LL3ss-058-0696-SO				
LL3-2		Inorganics	Antimony	MG/KG	3/ 31	1.24	4	LL3ss-058-0696-SO				
LL3-2	N	Inorganics	Arsenic	MG/KG	31/ 31	11.6	14.8	LL3ss-062-0706-SO	5	0/ 31	0.581	0.74
LL3-2	N	Inorganics	Barium	MG/KG	31/ 31	117	1190	LL3ss-058-0696-SO	100	0/ 31	5.87	59.5
LL3-2		Inorganics	Beryllium	MG/KG	31/ 31	0.696	3.3	LL3ss-058-0696-SO				
LL3-2	Y	Inorganics	Cadmium	MG/KG	31/ 31	1.94	28.7	LL3ss-058-0696-SO	1	1/ 31	0.0971	1.44
LL3-2		Inorganics	Calcium	MG/KG	31/ 31	13600	122000	LL3ss-058-0696-SO				
LL3-2	Y	Inorganics	Chromium	MG/KG	31/ 31	20.8	175	LL3ss-058-0696-SO	5	1/ 31	1.04	8.75
LL3-2		Inorganics	Cobalt	MG/KG	31/ 31	8.91	29.1	LL3ss-117-0851-SO				
LL3-2		Inorganics	Copper	MG/KG	31/ 31	29.8	297	LL3ss-117-0851-SO				
LL3-2		Inorganics	Iron	MG/KG	31/ 31	21600	76900	LL3ss-117-0851-SO				
LL3-2	Y	Inorganics	Lead	MG/KG	31/ 31	121	1590	LL3ss-058-0696-SO	5	5/ 31	6.07	79.5
LL3-2		Inorganics	Magnesium	MG/KG	31/ 31	2910	17300	LL3ss-058-0696-SO				
LL3-2		Inorganics	Manganese	MG/KG	31/ 31	655	2300	LL3ss-058-0696-SO				
LL3-2	N	Inorganics	Mercury	MG/KG	27/ 31	0.0528	0.24	LL3ss-117-0851-SO	0.2	0/ 31	0.00264	0.012
LL3-2		Inorganics	Nickel	MG/KG	31/ 31	18.4	57	LL3ss-117-0851-SO				
LL3-2		Inorganics	Potassium	MG/KG	31/ 31	741	1450	LL3ss-123-0869-SO				
LL3-2	N	Inorganics	Selenium	MG/KG	12/ 31	1.72	2.6	LL3ss-117-0851-SO	1	0/ 31	0.0861	0.13
LL3-2	N	Inorganics	Silver	MG/KG	5/ 31	0.686	4.5	LL3ss-085-0769-SO	5	0/ 31	0.0343	0.225
LL3-2		Inorganics	Sodium	MG/KG	5/ 31	509	620	LL3ss-124-0870-SO				
LL3-2		Inorganics	Thallium	MG/KG	31/ 31	0.359	0.51	LL3ss-125-0871-SO				
LL3-2		Inorganics	Vanadium	MG/KG	31/ 31	14.2	20.7	LL3ss-093-0793-SO				
LL3-2		Inorganics	Zinc	MG/KG	31/ 31	194	2830	LL3ss-058-0696-SO				
LL3-2		Explosives	1,3,5-Trinitrobenzene	MG/KG	3/ 14	2.1	0.7	LL3ss-063-0707-SO				
LL3-2		Explosives	2,4,6-Trinitrotoluene	MG/KG	13/ 14	63.2	650	LL3ss-063-0707-SO				
LL3-2	Y	Explosives	2,4-Dinitrotoluene	MG/KG	11/ 14	1.22	12	LL3ss-063-0707-SO	0.13	1/ 14	0.0612	0.6
LL3-2		Explosives	2,6-Dinitrotoluene	MG/KG	4/ 14	2.05	0.23	LL3ss-063-0707-SO				
LL3-2		Explosives	2-Amino-4,6-Dinitrotoluene	MG/KG	6/ 14	2.69	4.3	LL3ss-063-0707-SO				
LL3-2		Explosives	4-Amino-2,6-Dinitrotoluene	MG/KG	1/ 14	20.3	2.3	LL3ss-063-0707-SO				
LL3-2		Explosives	4-Nitrotoluene	MG/KG	1/ 14	2.13	0.22	LL3ss-063-0707-SO				
LL3-2		Explosives	HMX	MG/KG	1/ 14	4.21	2.4	LL3ss-063-0707-SO				
LL3-2		Explosives	Nitrocellulose	MG/KG	1/ 1	52.9	52.9	LL3ss-063-0707-SO				
LL3-2		Explosives	Nitroguanidine	MG/KG	1/ 1	0.042	0.042	LL3ss-063-0707-SO				
LL3-2		Explosives	RDX	MG/KG	1/ 14	6.46	34	LL3ss-063-0707-SO				
LL3-2		Pesticides and PCBs	4,4'-DDE	MG/KG	2/ 7	0.123	0.55	LL3ss-117-0851-SO				
LL3-2		Pesticides and PCBs	Dieldrin	MG/KG	2/ 7	0.215	1.2	LL3ss-117-0851-SO				
LL3-2		Pesticides and PCBs	Endosulfan sulfate	MG/KG	1/ 7	0.116	0.51	LL3ss-117-0851-SO				
LL3-2		Pesticides and PCBs	Endrin aldehyde	MG/KG	2/ 7	0.119	0.51	LL3ss-117-0851-SO				
LL3-2	Y	Pesticides and PCBs	Heptachlor	MG/KG	2/ 7	0.0702	0.18	LL3ss-057-0693-SO	0.008	1/ 7	0.00351	0.009
LL3-2		Pesticides and PCBs	PCB-1254	MG/KG	20/ 30	6.93	160	LL3ss-058-0696-SO				
LL3-2		Pesticides and PCBs	PCB-1260	MG/KG	1/ 30	1.56	0.09	LL3ss-058-0696-SO				
LL3-2		Pesticides and PCBs	gamma-Chlordane	MG/KG	2/ 7	0.0635	0.14	LL3ss-057-0693-SO				
LL3-2		Semi-Volatile Organics	2-Methylnaphthalene	MG/KG	4/ 15	1.98	2.5	LL3ss-058-0696-SO				
LL3-2		Semi-Volatile Organics	Acenaphthene	MG/KG	8/ 15	1.9	11	LL3ss-058-0696-SO				
LL3-2		Semi-Volatile Organics	Anthracene	MG/KG	9/ 15	4.13	22	LL3ss-058-0696-SO				
LL3-2		Semi-Volatile Organics	Benz(a)anthracene	MG/KG	10/ 15	5.26	29	LL3ss-058-0696-SO				
LL3-2		Semi-Volatile Organics	Benzo(a)pyrene	MG/KG	10/ 15	5.76	32	LL3ss-058-0696-SO				

Attachment 1
Summary of Analytes Detected in IDW
Load Line 3 Solid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Mean Adj. for TCLP (mg/L)	Adj. for TCLP (mg/L)
LL3-2		Semi-Volatile Organics	Benzo(b)fluoranthene	MG/KG	12/ 15	6.56	36	LL3ss-058-0696-SO				
LL3-2		Semi-Volatile Organics	Benzo(ghi)perylene	MG/KG	9/ 15	2.57	12	LL3ss-058-0696-SO				
LL3-2		Semi-Volatile Organics	Benzo(k)fluoranthene	MG/KG	10/ 15	3.26	16	LL3ss-058-0696-SO				
LL3-2		Semi-Volatile Organics	Bis(2-ethylhexyl)phthalate	MG/KG	2/ 15	1.92	1.2	LL3ss-058-0696-SO				
LL3-2		Semi-Volatile Organics	Carbazole	MG/KG	8/ 15	2.37	13	LL3ss-058-0696-SO				
LL3-2		Semi-Volatile Organics	Chrysene	MG/KG	11/ 15	5.31	28	LL3ss-058-0696-SO				
LL3-2		Semi-Volatile Organics	Dibenz(a,h)anthracene	MG/KG	8/ 15	0.969	4.1	LL3ss-058-0696-SO				
LL3-2		Semi-Volatile Organics	Dibenzofuran	MG/KG	7/ 15	1.53	8.8	LL3ss-058-0696-SO				
LL3-2		Semi-Volatile Organics	Fluoranthene	MG/KG	11/ 15	10.8	71	LL3ss-058-0696-SO				
LL3-2		Semi-Volatile Organics	Fluorene	MG/KG	9/ 15	2.16	13	LL3ss-058-0696-SO				
LL3-2		Semi-Volatile Organics	Indeno(1,2,3-cd)pyrene	MG/KG	9/ 15	2.71	12	LL3ss-058-0696-SO				
LL3-2		Semi-Volatile Organics	Naphthalene	MG/KG	7/ 15	0.922	4.7	LL3ss-058-0696-SO				
LL3-2		Semi-Volatile Organics	Phenanthrene	MG/KG	11/ 15	10.3	72	LL3ss-058-0696-SO				
LL3-2		Semi-Volatile Organics	Pyrene	MG/KG	11/ 15	8.78	58	LL3ss-058-0696-SO				
LL3-2		Volatile Organics	Chloromethane	MG/KG	1/ 11	0.0056	0.0051	LL3ss-083-0763-SO				
LL3-2		Volatile Organics	Toluene	MG/KG	6/ 11	0.00376	0.0061	LL3ss-117-0851-SO				
LL3-3		Inorganics	Aluminum	MG/KG	39/ 39	8880	14700	LL3ss-097-1119-SO				
LL3-3		Inorganics	Antimony	MG/KG	7/ 39	1.11	1.6	LL3ss-106-0826-SO				
LL3-3	N	Inorganics	Arsenic	MG/KG	39/ 39	12.1	31.4	LL3ss-099-0805-SO	5	0/ 39	0.605	1.57
LL3-3	N	Inorganics	Barium	MG/KG	39/ 39	91.2	558	LL3ss-128-0878-SO	100	0/ 39	4.56	27.9
LL3-3		Inorganics	Beryllium	MG/KG	39/ 39	0.616	2.2	LL3ss-097-1119-SO				
LL3-3	N	Inorganics	Cadmium	MG/KG	38/ 39	0.873	12.6	LL3ss-092-0790-SO	1	0/ 39	0.0436	0.63
LL3-3		Inorganics	Calcium	MG/KG	39/ 39	6520	59800	LL3ss-097-1119-SO				
LL3-3	N	Inorganics	Chromium	MG/KG	39/ 39	17.1	48.6	LL3ss-092-0790-SO	5	0/ 39	0.853	2.43
LL3-3		Inorganics	Cobalt	MG/KG	39/ 39	8.28	22.1	LL3ss-099-0805-SO				
LL3-3		Inorganics	Copper	MG/KG	39/ 39	20.4	88.9	LL3ss-092-0790-SO				
LL3-3		Inorganics	Iron	MG/KG	39/ 39	20200	33200	LL3ss-092-0790-SO				
LL3-3	Y	Inorganics	Lead	MG/KG	39/ 39	65.1	599	LL3ss-092-0790-SO	5	5/ 39	3.25	30
LL3-3		Inorganics	Magnesium	MG/KG	39/ 39	2760	11200	LL3ss-097-1119-SO				
LL3-3		Inorganics	Manganese	MG/KG	39/ 39	575	2650	LL3ss-097-1119-SO				
LL3-3	N	Inorganics	Mercury	MG/KG	35/ 39	0.0423	0.14	LL3ss-092-0790-SO	0.2	0/ 39	0.00211	0.007
LL3-3		Inorganics	Nickel	MG/KG	39/ 39	18.2	57.2	LL3ss-092-0790-SO				
LL3-3		Inorganics	Potassium	MG/KG	39/ 39	753	1240	LL3ss-119-0857-SO				
LL3-3	N	Inorganics	Selenium	MG/KG	25/ 39	1.17	1.3	LL3so-117-0852-SO	1	0/ 39	0.0587	0.065
LL3-3	N	Inorganics	Silver	MG/KG	1/ 39	0.584	0.95	LL3ss-092-0790-SO	5	0/ 39	0.0292	0.0475
LL3-3		Inorganics	Sodium	MG/KG	3/ 39	551	399	LL3ss-156-0960-SO				
LL3-3		Inorganics	Thallium	MG/KG	39/ 39	0.314	0.53	LL3ss-092-0790-SO				
LL3-3		Inorganics	Vanadium	MG/KG	39/ 39	14.8	24.4	LL3ss-156-0960-SO				
LL3-3		Inorganics	Zinc	MG/KG	39/ 39	108	1070	LL3ss-092-0790-SO				
LL3-3		Explosives	1,3,5-Trinitrobenzene	MG/KG	4/ 18	0.534	2.9	LL3so-058-0697-SO				
LL3-3		Explosives	2,4,6-Trinitrotoluene	MG/KG	10/ 18	29.8	240	LL3so-063-0708-SO				
LL3-3	N	Explosives	2,4-Dinitrotoluene	MG/KG	3/ 18	0.313	0.86	LL3so-058-0697-SO	0.13	0/ 18	0.0157	0.043
LL3-3		Explosives	2-Amino-4,6-Dinitrotoluene	MG/KG	9/ 18	0.945	7.7	LL3ss-099-0805-SO				
LL3-3		Explosives	4-Amino-2,6-Dinitrotoluene	MG/KG	5/ 18	9.29	0.56	LL3ss-099-0805-SO				
LL3-3		Explosives	Nitrocellulose	MG/KG	4/ 4	1.34	1.8	LL3ss-097-1119-SO				
LL3-3		Explosives	Nitroguanidine	MG/KG	2/ 4	0.173	0.13	LL3ss-099-0805-SO				
LL3-3		Pesticides and PCBs	4,4'-DDE	MG/KG	1/ 3	0.0259	0.07	LL3ss-105-0823-SO				

Attachment 1
Summary of Analytes Detected in IDW
Load Line 3 Solid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Mean Adj. for TCLP (mg/L)	Adj. for TCLP (mg/L)
LL3-3		Pesticides and PCBs	PCB-1254	MG/KG	20/ 35	6.82	100	LL3ss-106-0826-SO				
LL3-3		Pesticides and PCBs	PCB-1260	MG/KG	4/ 35	0.837	1.4	LL3ss-106-0826-SO				
LL3-3		Pesticides and PCBs	alpha-Chlordane	MG/KG	1/ 3	0.0107	0.0083	LL3ss-105-0823-SO				
LL3-3		Pesticides and PCBs	beta-BHC	MG/KG	1/ 3	0.0132	0.016	LL3ss-105-0823-SO				
LL3-3		Semi-Volatile Organics	2-Methylnaphthalene	MG/KG	1/ 9	0.746	0.067	LL3ss-099-0805-SO				
LL3-3		Semi-Volatile Organics	Benz(a)anthracene	MG/KG	1/ 9	0.76	0.19	LL3ss-099-0805-SO				
LL3-3		Semi-Volatile Organics	Benzo(a)pyrene	MG/KG	1/ 9	0.754	0.14	LL3ss-099-0805-SO				
LL3-3		Semi-Volatile Organics	Benzo(b)fluoranthene	MG/KG	1/ 9	0.762	0.21	LL3ss-099-0805-SO				
LL3-3		Semi-Volatile Organics	Benzo(ghi)perylene	MG/KG	1/ 9	0.748	0.08	LL3ss-099-0805-SO				
LL3-3		Semi-Volatile Organics	Benzo(k)fluoranthene	MG/KG	1/ 9	0.748	0.086	LL3ss-099-0805-SO				
LL3-3		Semi-Volatile Organics	Benzoic acid	MG/KG	1/ 9	3.57	0.19	LL3ss-099-0805-SO				
LL3-3		Semi-Volatile Organics	Chrysene	MG/KG	1/ 9	0.767	0.25	LL3ss-099-0805-SO				
LL3-3		Semi-Volatile Organics	Fluoranthene	MG/KG	1/ 9	0.769	0.27	LL3ss-099-0805-SO				
LL3-3		Semi-Volatile Organics	Phenanthrene	MG/KG	1/ 9	0.752	0.12	LL3ss-099-0805-SO				
LL3-3		Semi-Volatile Organics	Pyrene	MG/KG	1/ 9	0.774	0.32	LL3ss-099-0805-SO				
LL3-3	N	Volatile Organics	2-Butanone	MG/KG	1/ 10	0.0238	0.013	LL3ss-070-0724-SO	200	0/ 10	0.00119	0.00065
LL3-3		Volatile Organics	Acetone	MG/KG	2/ 10	0.0677	0.28	LL3ss-070-0724-SO				
LL3-3		Volatile Organics	Toluene	MG/KG	3/ 10	0.00485	0.002	LL3ss-070-0724-SO				
LL3-4		Cyanide	Cyanide	MG/KG	1/ 3	0.58	0.68	LL3ss-144-0924-SO				
LL3-4		Inorganics	Aluminum	MG/KG	34/ 34	9420	23100	LL3ss-111-0833-SO				
LL3-4		Inorganics	Antimony	MG/KG	16/ 34	7.56	164	LL3ss-102-0814-SO				
LL3-4	N	Inorganics	Arsenic	MG/KG	34/ 34	11	34	LL3ss-102-0814-SO	5	0/ 34	0.548	1.7
LL3-4	N	Inorganics	Barium	MG/KG	34/ 34	153	1330	LL3ss-103-0817-SO	100	0/ 34	7.65	66.5
LL3-4		Inorganics	Beryllium	MG/KG	33/ 34	1.02	3.3	LL3ss-155-0957-SO				
LL3-4	N	Inorganics	Cadmium	MG/KG	34/ 34	2.23	12.8	LL3ss-155-1125-SO	1	0/ 34	0.111	0.64
LL3-4		Inorganics	Calcium	MG/KG	34/ 34	34500	152000	LL3ss-142-0918-SO				
LL3-4	Y	Inorganics	Chromium	MG/KG	34/ 34	30.2	320	LL3ss-102-0814-SO	5	1/ 34	1.51	16
LL3-4		Inorganics	Cobalt	MG/KG	34/ 34	7.22	25.8	LL3ss-102-0814-SO				
LL3-4		Inorganics	Copper	MG/KG	34/ 34	68.2	445	LL3ss-155-1125-SO				
LL3-4		Inorganics	Iron	MG/KG	34/ 34	25300	178000	LL3ss-102-0814-SO				
LL3-4	Y	Inorganics	Lead	MG/KG	34/ 34	178	1350	LL3ss-102-0814-SO	5	14/ 34	8.88	67.5
LL3-4		Inorganics	Magnesium	MG/KG	34/ 34	3870	15800	LL3ss-111-0833-SO				
LL3-4		Inorganics	Manganese	MG/KG	34/ 34	897	2890	LL3ss-111-0833-SO				
LL3-4	N	Inorganics	Mercury	MG/KG	33/ 34	0.0709	0.23	LL3ss-074-1124-SO	0.2	0/ 34	0.00354	0.0115
LL3-4		Inorganics	Nickel	MG/KG	34/ 34	17.2	77.1	LL3ss-102-0814-SO				
LL3-4		Inorganics	Potassium	MG/KG	34/ 34	764	1560	LL3ss-155-1125-SO				
LL3-4	N	Inorganics	Selenium	MG/KG	16/ 34	2.41	5.5	LL3ss-155-0957-SO	1	0/ 34	0.12	0.275
LL3-4	N	Inorganics	Silver	MG/KG	4/ 34	1.07	8.7	LL3ss-149-0939-SO	5	0/ 34	0.0534	0.435
LL3-4		Inorganics	Sodium	MG/KG	13/ 34	714	526	LL3ss-155-1125-SO				
LL3-4		Inorganics	Thallium	MG/KG	34/ 34	0.344	1.5	LL3ss-155-0957-SO				
LL3-4		Inorganics	Vanadium	MG/KG	34/ 34	13.1	26.4	LL3ss-175-1001-SO				
LL3-4		Inorganics	Zinc	MG/KG	34/ 34	195	992	LL3ss-155-1125-SO				
LL3-4		Explosives	1,3,5-Trinitrobenzene	MG/KG	1/ 18	0.246	0.18	LL3so-102-0815-SO				
LL3-4		Explosives	2,4,6-Trinitrotoluene	MG/KG	8/ 18	0.44	2.1	LL3ss-111-0833-SO				
LL3-4	N	Explosives	2,4-Dinitrotoluene	MG/KG	2/ 18	0.23	0.083	LL3ss-103-0817-SO	0.13	0/ 18	0.0115	0.00415
LL3-4		Explosives	2-Amino-4,6-Dinitrotoluene	MG/KG	7/ 18	0.298	1	LL3ss-111-0833-SO				
LL3-4		Explosives	4-Amino-2,6-Dinitrotoluene	MG/KG	7/ 18	0.359	1.3	LL3ss-111-0833-SO				

Attachment 1
Summary of Analytes Detected in IDW
Load Line 3 Solid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Mean Adj. for TCLP (mg/L)	Adj. for TCLP (mg/L)
LL3-4		Explosives	HMX	MG/KG	1/ 18	0.578	1.9	LL3ss-136-0902-SO				
LL3-4		Explosives	Nitrocellulose	MG/KG	10/ 10	6.71	27.9	LL3ss-142-0918-SO				
LL3-4		Explosives	Nitroguanidine	MG/KG	4/ 10	0.186	0.14	LL3ss-076-0742-SO				
LL3-4		Explosives	RDX	MG/KG	1/ 18	2.19	31	LL3ss-136-0902-SO				
LL3-4		Pesticides and PCBs	4,4'-DDE	MG/KG	1/ 3	0.0157	0.011	LL3ss-142-1120-SO				
LL3-4		Pesticides and PCBs	4,4'-DDT	MG/KG	2/ 3	0.0176	0.022	LL3ss-142-0918-SO				
LL3-4		Pesticides and PCBs	Endrin aldehyde	MG/KG	1/ 3	0.0153	0.01	LL3ss-142-1120-SO				
LL3-4		Pesticides and PCBs	PCB-1254	MG/KG	23/ 33	36.6	1100	LL3ss-102-0814-SO				
LL3-4		Pesticides and PCBs	PCB-1260	MG/KG	3/ 33	2.94	0.23	LL3ss-102-0814-SO				
LL3-4		Semi-Volatile Organics	Anthracene	MG/KG	1/ 8	0.34	0.086	LL3ss-103-0817-SO				
LL3-4		Semi-Volatile Organics	Benz(a)anthracene	MG/KG	7/ 8	0.265	0.54	LL3ss-136-0902-SO				
LL3-4		Semi-Volatile Organics	Benzo(a)pyrene	MG/KG	6/ 8	0.338	0.61	LL3ss-142-0918-SO				
LL3-4		Semi-Volatile Organics	Benzo(b)fluoranthene	MG/KG	7/ 8	0.441	0.96	LL3ss-142-0918-SO				
LL3-4		Semi-Volatile Organics	Benzo(ghi)perylene	MG/KG	6/ 8	0.226	0.32	LL3ss-103-0817-SO				
LL3-4		Semi-Volatile Organics	Benzo(k)fluoranthene	MG/KG	6/ 8	0.237	0.39	LL3ss-142-0918-SO				
LL3-4		Semi-Volatile Organics	Benzoic acid	MG/KG	1/ 8	1.61	0.21	LL3ss-074-1124-SO				
LL3-4		Semi-Volatile Organics	Bis(2-ethylhexyl)phthalate	MG/KG	1/ 8	0.341	0.1	LL3ss-136-0902-SO				
LL3-4		Semi-Volatile Organics	Chrysene	MG/KG	7/ 8	0.287	0.51	LL3ss-136-0902-SO				
LL3-4		Semi-Volatile Organics	Di-n-butyl phthalate	MG/KG	1/ 8	0.363	0.27	LL3ss-103-0817-SO				
LL3-4		Semi-Volatile Organics	Dibenz(a,h)anthracene	MG/KG	2/ 8	0.304	0.083	LL3ss-103-0817-SO				
LL3-4		Semi-Volatile Organics	Fluoranthene	MG/KG	7/ 8	0.45	0.78	LL3ss-142-0918-SO				
LL3-4		Semi-Volatile Organics	Fluorene	MG/KG	2/ 8	0.301	0.074	LL3ss-136-0902-SO				
LL3-4		Semi-Volatile Organics	Indeno(1,2,3-cd)pyrene	MG/KG	5/ 8	0.263	0.32	LL3ss-103-0817-SO				
LL3-4		Semi-Volatile Organics	Phenanthrene	MG/KG	6/ 8	0.241	0.3	LL3ss-103-0817-SO				
LL3-4		Semi-Volatile Organics	Pyrene	MG/KG	7/ 8	0.461	0.89	LL3ss-142-0918-SO				
LL3-4		Volatile Organics	Toluene	MG/KG	1/ 8	0.00515	0.0014	LL3ss-074-1124-SO				
LL3-5		Cyanide	Cyanide	MG/KG	1/ 5	0.936	2.4	LL3ss-055-0687-SO				
LL3-5		Inorganics	Aluminum	MG/KG	29/ 29	11200	23800	LL3ss-077-0745-SO				
LL3-5		Inorganics	Antimony	MG/KG	9/ 29	37.1	825	LL3ss-185-1011-SO				
LL3-5	N	Inorganics	Arsenic	MG/KG	29/ 29	11	22.8	LL3ss-077-1131-SO	5	0/ 29	0.548	1.14
LL3-5	Y	Inorganics	Barium	MG/KG	29/ 29	202	2340	LL3ss-077-1131-SO	100	1/ 29	10.1	117
LL3-5		Inorganics	Beryllium	MG/KG	29/ 29	0.835	3.4	LL3ss-077-0745-SO				
LL3-5	Y	Inorganics	Cadmium	MG/KG	25/ 29	6.44	76.6	LL3ss-055-0687-SO	1	3/ 29	0.322	3.83
LL3-5		Inorganics	Calcium	MG/KG	29/ 29	12500	132000	LL3ss-077-0745-SO				
LL3-5	Y	Inorganics	Chromium	MG/KG	29/ 29	58.9	1050	LL3ss-077-1131-SO	5	3/ 29	2.94	52.5
LL3-5		Inorganics	Cobalt	MG/KG	29/ 29	8.22	20.8	LL3ss-077-1131-SO				
LL3-5		Inorganics	Copper	MG/KG	29/ 29	24.9	236	LL3ss-077-1131-SO				
LL3-5		Inorganics	Iron	MG/KG	29/ 29	20900	44500	LL3ss-077-1131-SO				
LL3-5	Y	Inorganics	Lead	MG/KG	29/ 29	481	8950	LL3ss-077-1131-SO	5	4/ 29	24	448
LL3-5		Inorganics	Magnesium	MG/KG	29/ 29	2940	11600	LL3ss-077-0745-SO				
LL3-5		Inorganics	Manganese	MG/KG	29/ 29	980	3260	LL3ss-077-0745-SO				
LL3-5	N	Inorganics	Mercury	MG/KG	29/ 29	0.0922	0.87	LL3ss-077-1131-SO	0.2	0/ 29	0.00461	0.0435
LL3-5		Inorganics	Nickel	MG/KG	29/ 29	14.6	36.4	LL3ss-077-1131-SO				
LL3-5		Inorganics	Potassium	MG/KG	29/ 29	634	1060	LL3ss-168-0994-SO				
LL3-5	N	Inorganics	Selenium	MG/KG	10/ 29	1.68	0.64	LL3ss-173-0999-SO	1	0/ 29	0.0841	0.032
LL3-5	N	Inorganics	Silver	MG/KG	3/ 29	1.54	27.7	LL3ss-077-0745-SO	5	0/ 29	0.0772	1.39
LL3-5		Inorganics	Sodium	MG/KG	6/ 29	504	439	LL3ss-173-1132-SO				

Attachment 1
Summary of Analytes Detected in IDW
Load Line 3 Solid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Mean Adj. for TCLP (mg/L)	Adj. for TCLP (mg/L)
LL3-5		Inorganics	Thallium	MG/KG	29/ 29	0.322	0.46	LL3ss-135-0899-SO				
LL3-5		Inorganics	Vanadium	MG/KG	29/ 29	18.3	28.6	LL3ss-182-1008-SO				
LL3-5		Inorganics	Zinc	MG/KG	29/ 29	278	3700	LL3ss-077-1131-SO				
LL3-5		Explosives	1,3,5-Trinitrobenzene	MG/KG	2/ 7	0.507	2.2	LL3ss-077-0745-SO				
LL3-5		Explosives	2,4,6-Trinitrotoluene	MG/KG	5/ 7	118	820	LL3ss-077-0745-SO				
LL3-5	N	Explosives	2,4-Dinitrotoluene	MG/KG	1/ 7	0.414	1.4	LL3ss-077-0745-SO	0.13	0/ 7	0.0207	0.07
LL3-5		Explosives	2-Amino-4,6-Dinitrotoluene	MG/KG	4/ 7	2.04	2.1	LL3ss-077-0745-SO				
LL3-5		Explosives	4-Amino-2,6-Dinitrotoluene	MG/KG	4/ 7	29.3	3.4	LL3ss-077-0745-SO				
LL3-5		Explosives	HMX	MG/KG	1/ 7	1.54	3.3	LL3ss-077-0745-SO				
LL3-5		Explosives	Nitrocellulose	MG/KG	1/ 1	60.7	60.7	LL3ss-055-0687-SO				
LL3-5		Explosives	Nitroguanidine	MG/KG	1/ 1	5.1	5.1	LL3ss-055-0687-SO				
LL3-5		Explosives	RDX	MG/KG	1/ 7	4.21	22	LL3ss-055-0687-SO				
LL3-5		Pesticides and PCBs	4,4'-DDE	MG/KG	2/ 7	0.465	3.2	LL3ss-055-0687-SO				
LL3-5		Pesticides and PCBs	Dieldrin	MG/KG	3/ 7	0.0396	0.039	LL3ss-055-0687-SO				
LL3-5		Pesticides and PCBs	Endrin aldehyde	MG/KG	2/ 7	0.249	1.7	LL3ss-055-0687-SO				
LL3-5		Pesticides and PCBs	Endrin ketone	MG/KG	1/ 7	0.0327	0.014	LL3ss-055-0687-SO				
LL3-5	Y	Pesticides and PCBs	Heptachlor	MG/KG	1/ 7	0.0312	0.18	LL3ss-055-0687-SO	0.008	1/ 7	0.00156	0.009
LL3-5	N	Pesticides and PCBs	Methoxychlor	MG/KG	1/ 7	0.072	0.43	LL3ss-055-0687-SO	10	0/ 7	0.0036	0.0215
LL3-5		Pesticides and PCBs	PCB-1254	MG/KG	8/ 18	17.3	110	LL3ss-055-0687-SO				
LL3-5		Pesticides and PCBs	gamma-Chlordane	MG/KG	2/ 7	0.107	0.71	LL3ss-055-0687-SO				
LL3-5	N	Semi-Volatile Organics	2,4-Dinitrotoluene	MG/KG	1/ 8	0.336	0.059	LL3ss-185-1011-SO	0.13	0/ 8	0.0168	0.00295
LL3-5		Semi-Volatile Organics	Benz(a)anthracene	MG/KG	2/ 8	0.32	0.23	LL3ss-185-1011-SO				
LL3-5		Semi-Volatile Organics	Benzo(a)pyrene	MG/KG	2/ 8	0.326	0.27	LL3ss-185-1011-SO				
LL3-5		Semi-Volatile Organics	Benzo(b)fluoranthene	MG/KG	3/ 8	0.365	0.84	LL3ss-055-0687-SO				
LL3-5		Semi-Volatile Organics	Benzo(ghi)perylene	MG/KG	1/ 8	0.354	0.2	LL3ss-185-1011-SO				
LL3-5		Semi-Volatile Organics	Benzo(k)fluoranthene	MG/KG	1/ 8	0.355	0.21	LL3ss-185-1011-SO				
LL3-5		Semi-Volatile Organics	Bis(2-ethylhexyl)phthalate	MG/KG	1/ 8	0.343	0.11	LL3ss-185-1011-SO				
LL3-5		Semi-Volatile Organics	Chrysene	MG/KG	3/ 8	0.318	0.52	LL3ss-055-0687-SO				
LL3-5		Semi-Volatile Organics	Di-n-butyl phthalate	MG/KG	1/ 8	0.368	0.31	LL3ss-185-1011-SO				
LL3-5		Semi-Volatile Organics	Dibenz(a,h)anthracene	MG/KG	1/ 8	0.337	0.066	LL3ss-185-1011-SO				
LL3-5		Semi-Volatile Organics	Fluoranthene	MG/KG	3/ 8	0.308	0.41	LL3ss-055-0687-SO				
LL3-5		Semi-Volatile Organics	Indeno(1,2,3-cd)pyrene	MG/KG	1/ 8	0.353	0.19	LL3ss-185-1011-SO				
LL3-5		Semi-Volatile Organics	Phenanthrene	MG/KG	1/ 8	0.346	0.14	LL3ss-185-1011-SO				
LL3-5		Semi-Volatile Organics	Pyrene	MG/KG	3/ 8	0.309	0.41	LL3ss-055-0687-SO				
LL3-5	N	Volatile Organics	Benzene	MG/KG	1/ 9	0.00523	0.0019	LL3ss-132-0890-SO	0.5	0/ 9	0.000262	0.000095
LL3-5		Volatile Organics	Toluene	MG/KG	3/ 9	0.00537	0.0094	LL3ss-055-0687-SO				
LL3-6		Cyanide	Cyanide	MG/KG	1/ 2	0.625	0.69	LL3fs-096-0742-FS				
LL3-6		Inorganics	Aluminum	MG/KG	36/ 36	10400	19000	LL3so-111-0834-SO				
LL3-6		Inorganics	Antimony	MG/KG	12/ 36	8.34	65.7	LL3ss-189-1136-SO				
LL3-6	N	Inorganics	Arsenic	MG/KG	36/ 36	14	57	LL3fs-096-0742-FS	5	0/ 36	0.698	2.85
LL3-6	N	Inorganics	Barium	MG/KG	36/ 36	151	2000	LL3fs-096-0742-FS	100	0/ 36	7.53	100
LL3-6		Inorganics	Beryllium	MG/KG	36/ 36	0.848	2.6	LL3so-111-0834-SO				
LL3-6	Y	Inorganics	Cadmium	MG/KG	34/ 36	2.23	61.1	LL3fs-096-0742-FS	1	1/ 36	0.112	3.06
LL3-6		Inorganics	Calcium	MG/KG	36/ 36	14600	141000	LL3so-111-1137-SO				
LL3-6	Y	Inorganics	Chromium	MG/KG	36/ 36	25.8	201	LL3fs-096-0742-FS	5	3/ 36	1.29	10.1
LL3-6		Inorganics	Cobalt	MG/KG	36/ 36	9	32	LL3fs-096-0742-FS				
LL3-6		Inorganics	Copper	MG/KG	36/ 36	26.6	345	LL3fs-096-0742-FS				

Attachment 1
Summary of Analytes Detected in IDW
Load Line 3 Solid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Mean Adj. for TCLP (mg/L)	Adj. for TCLP (mg/L)
LL3-6		Inorganics	Iron	MG/KG	36/ 36	29900	329000	LL3fs-096-0742-FS				
LL3-6	Y	Inorganics	Lead	MG/KG	36/ 36	316	6890	LL3fs-096-0742-FS	5	6/ 36	15.8	345
LL3-6		Inorganics	Magnesium	MG/KG	36/ 36	3160	11500	LL3so-111-0834-SO				
LL3-6		Inorganics	Manganese	MG/KG	36/ 36	885	2670	LL3fs-096-0742-FS				
LL3-6	N	Inorganics	Mercury	MG/KG	27/ 36	0.0918	0.67	LL3so-111-0834-SO	0.2	0/ 36	0.00459	0.0335
LL3-6		Inorganics	Nickel	MG/KG	36/ 36	20.3	91.1	LL3fs-096-0742-FS				
LL3-6		Inorganics	Potassium	MG/KG	36/ 36	988	9260	LL3fs-096-0742-FS				
LL3-6	N	Inorganics	Selenium	MG/KG	8/ 36	1.96	2.5	LL3fs-096-0742-FS	1	0/ 36	0.0979	0.125
LL3-6	N	Inorganics	Silver	MG/KG	3/ 36	0.592	1.4	LL3fs-096-0742-FS	5	0/ 36	0.0296	0.07
LL3-6		Inorganics	Sodium	MG/KG	7/ 36	589	3050	LL3fs-096-0742-FS				
LL3-6		Inorganics	Thallium	MG/KG	36/ 36	0.336	0.46	LL3ss-188-1014-SO				
LL3-6		Inorganics	Vanadium	MG/KG	36/ 36	17.6	37.6	LL3fs-096-0742-FS				
LL3-6		Inorganics	Zinc	MG/KG	36/ 36	135	1470	LL3fs-096-0742-FS				
LL3-6		Explosives	1,3,5-Trinitrobenzene	MG/KG	5/ 10	0.465	0.97	LL3ss-101-0811-SO				
LL3-6		Explosives	2,4,6-Trinitrotoluene	MG/KG	8/ 10	53.3	500	LL3so-056-0691-SO				
LL3-6		Explosives	2-Amino-4,6-Dinitrotoluene	MG/KG	7/ 10	1.06	1.6	LL3so-056-0691-SO				
LL3-6		Explosives	4-Amino-2,6-Dinitrotoluene	MG/KG	5/ 10	11.2	1.2	LL3so-056-0691-SO				
LL3-6	N	Explosives	Nitrobenzene	MG/KG	1/ 10	0.465	0.15	LL3so-056-0691-SO	2	0/ 10	0.0233	0.0075
LL3-6		Explosives	Nitrocellulose	MG/KG	2/ 2	4.5	7.3	LL3ss-101-0811-SO				
LL3-6		Explosives	Nitroguanidine	MG/KG	1/ 2	0.147	0.043	LL3ss-101-0811-SO				
LL3-6		Explosives	RDX	MG/KG	1/ 10	0.924	0.24	LL3so-056-0691-SO				
LL3-6		Pesticides and PCBs	4,4'-DDE	MG/KG	1/ 2	3.9	7.7	LL3fs-096-0742-FS				
LL3-6		Pesticides and PCBs	Dieldrin	MG/KG	1/ 2	4.3	8.5	LL3fs-096-0742-FS				
LL3-6	Y	Pesticides and PCBs	Endrin	MG/KG	1/ 2	0.518	0.94	LL3fs-096-0742-FS	0.02	1/ 2	0.0259	0.047
LL3-6		Pesticides and PCBs	Endrin aldehyde	MG/KG	1/ 2	4.3	8.5	LL3fs-096-0742-FS				
LL3-6		Pesticides and PCBs	PCB-1254	MG/KG	5/ 12	72.1	830	LL3fs-096-0742-FS				
LL3-6		Pesticides and PCBs	PCB-1260	MG/KG	4/ 12	6.1	0.87	LL3fs-096-0742-FS				
LL3-6		Pesticides and PCBs	alpha-Chlordane	MG/KG	1/ 2	0.358	0.62	LL3fs-096-0742-FS				
LL3-6		Pesticides and PCBs	gamma-Chlordane	MG/KG	1/ 2	2.55	5	LL3fs-096-0742-FS				
LL3-6		Semi-Volatile Organics	Benz(a)anthracene	MG/KG	1/ 4	0.32	0.13	LL3ss-139-0911-SO				
LL3-6		Semi-Volatile Organics	Benzo(a)pyrene	MG/KG	1/ 4	0.318	0.12	LL3ss-140-0914-SO				
LL3-6		Semi-Volatile Organics	Benzo(b)fluoranthene	MG/KG	1/ 4	0.358	0.28	LL3ss-140-0914-SO				
LL3-6		Semi-Volatile Organics	Benzo(ghi)perylene	MG/KG	1/ 4	0.303	0.063	LL3ss-140-0914-SO				
LL3-6		Semi-Volatile Organics	Benzo(k)fluoranthene	MG/KG	1/ 4	0.308	0.083	LL3ss-140-0914-SO				
LL3-6		Semi-Volatile Organics	Benzoic acid	MG/KG	1/ 4	1.48	0.3	LL3ss-139-0911-SO				
LL3-6		Semi-Volatile Organics	Bis(2-ethylhexyl)phthalate	MG/KG	1/ 4	0.51	0.89	LL3fs-096-0742-FS				
LL3-6		Semi-Volatile Organics	Chrysene	MG/KG	1/ 4	0.358	0.28	LL3ss-140-0914-SO				
LL3-6		Semi-Volatile Organics	Fluoranthene	MG/KG	1/ 4	0.385	0.39	LL3fs-096-0742-FS				
LL3-6		Semi-Volatile Organics	Phenanthrene	MG/KG	1/ 4	0.335	0.19	LL3ss-140-0914-SO				
LL3-6		Semi-Volatile Organics	Pyrene	MG/KG	2/ 4	0.295	0.34	LL3ss-139-0911-SO				
LL3-6	N	Volatile Organics	2-Butanone	MG/KG	1/ 4	0.0182	0.0069	LL3ss-139-0911-SO	200	0/ 4	0.000911	0.000345
LL3-6		Volatile Organics	Acetone	MG/KG	4/ 4	0.0266	0.066	LL3ss-140-0914-SO				
LL3-6		Volatile Organics	Toluene	MG/KG	1/ 4	0.00448	0.0011	LL3ss-140-0914-SO				
LL3-7		General Chemistry	Chromium, hexavalent	MG/KG	1/ 2	1.1	1.1	LL3ss-153-0951-SO				
LL3-7		Inorganics	Aluminum	MG/KG	27/ 27	11100	35200	LL3ss-160-0972-SO				
LL3-7		Inorganics	Antimony	MG/KG	2/ 27	8.43	166	LL3ss-077-1131-SO				
LL3-7	N	Inorganics	Arsenic	MG/KG	26/ 27	13.6	30.2	LL3sd-227-1093-SD	5	0/ 27	0.682	1.51

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Attachment 1
Summary of Analytes Detected in IDW
Load Line 3 Solid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Mean Adj. for TCLP (mg/L)	Adj. for TCLP (mg/L)
LL3-7	Y	Inorganics	Barium	MG/KG	27/ 27	205	2340	LL3ss-077-1131-SO	100	1/ 27	10.3	117
LL3-7		Inorganics	Beryllium	MG/KG	27/ 27	1.13	4.6	LL3ss-160-0972-SO				
LL3-7	Y	Inorganics	Cadmium	MG/KG	25/ 27	4.82	58.2	LL3ss-077-1131-SO	1	3/ 27	0.241	2.91
LL3-7		Inorganics	Calcium	MG/KG	27/ 27	25100	197000	LL3ss-160-0972-SO				
LL3-7	Y	Inorganics	Chromium	MG/KG	27/ 27	62.3	1050	LL3ss-077-1131-SO	5	2/ 27	3.12	52.5
LL3-7		Inorganics	Cobalt	MG/KG	27/ 27	9.66	20.8	LL3ss-077-1131-SO				
LL3-7		Inorganics	Copper	MG/KG	27/ 27	30.8	236	LL3ss-077-1131-SO				
LL3-7		Inorganics	Iron	MG/KG	27/ 27	22900	44500	LL3ss-077-1131-SO				
LL3-7	Y	Inorganics	Lead	MG/KG	27/ 27	439	8950	LL3ss-077-1131-SO	5	3/ 27	21.9	448
LL3-7		Inorganics	Magnesium	MG/KG	27/ 27	4620	27200	LL3ss-160-0972-SO				
LL3-7		Inorganics	Manganese	MG/KG	27/ 27	1270	3500	LL3ss-160-0972-SO				
LL3-7	N	Inorganics	Mercury	MG/KG	24/ 27	0.09	0.87	LL3ss-077-1131-SO	0.2	0/ 27	0.0045	0.0435
LL3-7		Inorganics	Nickel	MG/KG	26/ 27	20.2	48	LL3so-119-0858-SO				
LL3-7		Inorganics	Potassium	MG/KG	27/ 27	784	1220	LL3ss-160-0972-SO				
LL3-7	N	Inorganics	Selenium	MG/KG	14/ 27	1.46	1.1	LL3ss-160-0972-SO	1	0/ 27	0.0732	0.055
LL3-7	N	Inorganics	Silver	MG/KG	4/ 27	1.63	27.7	LL3ss-077-0745-SO	5	0/ 27	0.0817	1.39
LL3-7		Inorganics	Sodium	MG/KG	6/ 27	507	478	LL3sd-227-1093-SD				
LL3-7		Inorganics	Thallium	MG/KG	26/ 27	0.406	0.74	LL3sd-227-1093-SD				
LL3-7		Inorganics	Vanadium	MG/KG	27/ 27	16.5	43.9	LL3ss-153-1134-SO				
LL3-7		Inorganics	Zinc	MG/KG	26/ 27	279	3700	LL3ss-077-1131-SO				
LL3-7		Explosives	1,3,5-Trinitrobenzene	MG/KG	13/ 15	3.12	13	LL3ss-157-0963-SO				
LL3-7		Explosives	1,3-Dinitrobenzene	MG/KG	3/ 15	2.38	4.7	LL3ss-157-0963-SO				
LL3-7		Explosives	2,4,6-Trinitrotoluene	MG/KG	14/ 15	781	4200	LL3ss-157-0963-SO				
LL3-7	Y	Explosives	2,4-Dinitrotoluene	MG/KG	8/ 15	1.9	5.6	LL3sd-231-1099-SD	0.13	2/ 15	0.0949	0.28
LL3-7		Explosives	2-Amino-4,6-Dinitrotoluene	MG/KG	9/ 15	6.17	7.9	LL3ss-157-0963-SO				
LL3-7		Explosives	4-Amino-2,6-Dinitrotoluene	MG/KG	4/ 15	93.6	6.9	LL3ss-157-0963-SO				
LL3-7		Explosives	HMX	MG/KG	2/ 15	6.3	4.6	LL3sd-230-1098-SD				
LL3-7	N	Explosives	Nitrobenzene	MG/KG	1/ 15	2.83	0.65	LL3ss-157-0963-SO	2	0/ 15	0.141	0.0325
LL3-7		Explosives	Nitrocellulose	MG/KG	2/ 2	1.46	2.3	LL3ss-153-0951-SO				
LL3-7		Explosives	Nitroguanidine	MG/KG	1/ 2	0.148	0.045	LL3ss-153-0951-SO				
LL3-7		Explosives	RDX	MG/KG	4/ 15	8.42	38	LL3so-055-0688-SO				
LL3-7		Explosives	Tetryl	MG/KG	1/ 15	7.6	3	LL3sd-231-1099-SD				
LL3-7		Pesticides and PCBs	PCB-1254	MG/KG	11/ 13	15.8	91	LL3ss-077-0745-SO				
LL3-7		Semi-Volatile Organics	Anthracene	MG/KG	1/ 2	0.26	0.15	LL3ss-153-0951-SO				
LL3-7		Semi-Volatile Organics	Benz(a)anthracene	MG/KG	1/ 2	0.53	0.69	LL3ss-152-0948-SO				
LL3-7		Semi-Volatile Organics	Benzo(a)pyrene	MG/KG	1/ 2	0.535	0.7	LL3ss-152-0948-SO				
LL3-7		Semi-Volatile Organics	Benzo(b)fluoranthene	MG/KG	2/ 2	0.536	0.98	LL3ss-152-0948-SO				
LL3-7		Semi-Volatile Organics	Benzo(ghi)perylene	MG/KG	1/ 2	0.365	0.36	LL3ss-153-0951-SO				
LL3-7		Semi-Volatile Organics	Benzo(k)fluoranthene	MG/KG	1/ 2	0.36	0.35	LL3ss-153-0951-SO				
LL3-7		Semi-Volatile Organics	Bis(2-ethylhexyl)phthalate	MG/KG	1/ 2	0.221	0.062	LL3ss-152-0948-SO				
LL3-7		Semi-Volatile Organics	Chrysene	MG/KG	2/ 2	0.415	0.76	LL3ss-152-0948-SO				
LL3-7		Semi-Volatile Organics	Dibenz(a,h)anthracene	MG/KG	1/ 2	0.234	0.097	LL3ss-153-0951-SO				
LL3-7		Semi-Volatile Organics	Fluoranthene	MG/KG	2/ 2	0.648	1.2	LL3ss-152-0948-SO				
LL3-7		Semi-Volatile Organics	Indeno(1,2,3-cd)pyrene	MG/KG	1/ 2	0.36	0.35	LL3ss-153-0951-SO				
LL3-7		Semi-Volatile Organics	Phenanthrene	MG/KG	2/ 2	0.282	0.5	LL3ss-152-0948-SO				
LL3-7		Semi-Volatile Organics	Pyrene	MG/KG	2/ 2	0.646	1.2	LL3ss-152-0948-SO				
LL3-7		Volatile Organics	Toluene	MG/KG	1/ 2	0.00835	0.011	LL3ss-153-0951-SO				

Attachment 1
Summary of Analytes Detected in IDW
Load Line 4 Solid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Mean Adj. for TCLP (mg/L)	Max Detect Adj. for TCLP (mg/L)
LL4-2		Inorganics	Aluminum	MG/KG	40/ 40	7940	14700	LL4ss-126-0836-SO				
LL4-2	N	Inorganics	Arsenic	MG/KG	40/ 40	10.2	27.3	LL4ss-131-0849-SO	5	0/ 40	0.512	1.37
LL4-2	N	Inorganics	Barium	MG/KG	40/ 40	75.2	600	LL4sd-186-0991-SD	100	0/ 40	3.76	30
LL4-2		Inorganics	Beryllium	MG/KG	40/ 40	0.512	1.6	LL4ss-127-0839-SO				
LL4-2	N	Inorganics	Cadmium	MG/KG	36/ 40	1.32	6.7	LL4sd-186-0991-SD	1	0/ 40	0.0659	0.335
LL4-2		Inorganics	Calcium	MG/KG	40/ 40	16700	161000	LL4ss-092-0750-SO				
LL4-2	Y	Inorganics	Chromium	MG/KG	39/ 40	16.9	158	LL4ss-131-0849-SO	5	1/ 40	0.843	7.9
LL4-2		Inorganics	Cobalt	MG/KG	40/ 40	7.6	18	LL4ss-145-1137-SO				
LL4-2		Inorganics	Copper	MG/KG	40/ 40	41	512	LL4ss-131-0849-SO				
LL4-2		Inorganics	Iron	MG/KG	40/ 40	24700	155000	LL4sd-186-0991-SD				
LL4-2	Y	Inorganics	Lead	MG/KG	40/ 40	234	5790	LL4ss-118-0822-SO	5	10/ 40	11.7	290
LL4-2		Inorganics	Magnesium	MG/KG	40/ 40	3060	8840	LL4ss-131-0849-SO				
LL4-2		Inorganics	Manganese	MG/KG	40/ 40	1220	30500	LL4sd-186-0991-SD				
LL4-2	Y	Inorganics	Mercury	MG/KG	35/ 40	0.273	7.4	LL4ss-133-0855-SO	0.2	1/ 40	0.0136	0.37
LL4-2		Inorganics	Nickel	MG/KG	40/ 40	16.6	47.8	LL4ss-131-0849-SO				
LL4-2		Inorganics	Potassium	MG/KG	40/ 40	678	1180	LL4ss-131-0849-SO				
LL4-2	N	Inorganics	Selenium	MG/KG	3/ 40	4.41	1.1	LL4sd-186-0991-SD	1	0/ 40	0.221	0.055
LL4-2		Inorganics	Sodium	MG/KG	6/ 40	568	260	LL4sd-186-0991-SD				
LL4-2		Inorganics	Thallium	MG/KG	40/ 40	0.607	2.3	LL4sd-186-0991-SD				
LL4-2		Inorganics	Vanadium	MG/KG	40/ 40	13.9	40.5	LL4ss-131-0849-SO				
LL4-2		Inorganics	Zinc	MG/KG	40/ 40	206	3680	LL4ss-110-0798-SO				
LL4-2		Explosives	Nitrocellulose	MG/KG	3/ 3	2.1	3.8	LL4ss-127-0839-SO				
LL4-2		Pesticides and PCBs	4,4'-DDE	MG/KG	1/ 7	0.0147	0.049	LL4ss-117-0819-SO				
LL4-2		Pesticides and PCBs	Dieldrin	MG/KG	1/ 7	0.0113	0.025	LL4ss-130-0846-SO				
LL4-2		Pesticides and PCBs	Endrin aldehyde	MG/KG	1/ 7	0.0153	0.053	LL4ss-117-0819-SO				
LL4-2	N	Pesticides and PCBs	Heptachlor	MG/KG	1/ 7	0.0087	0.0071	LL4ss-130-0846-SO	0.008	0/ 7	0.000435	0.000355
LL4-2	N	Pesticides and PCBs	Methoxychlor	MG/KG	1/ 7	0.0174	0.018	LL4ss-130-0846-SO	10	0/ 7	0.000869	0.0009
LL4-2		Pesticides and PCBs	PCB-1016	MG/KG	1/ 38	0.198	0.1	LL4ss-133-0855-SO				
LL4-2		Pesticides and PCBs	PCB-1254	MG/KG	6/ 38	1.47	48	LL4ss-133-0855-SO				
LL4-2		Pesticides and PCBs	PCB-1260	MG/KG	5/ 38	0.457	5.7	LL4ss-127-0839-SO				
LL4-2		Pesticides and PCBs	gamma-Chlordane	MG/KG	1/ 7	0.0101	0.017	LL4ss-130-0846-SO				
LL4-2		Semi-Volatile Organics	2-Methylnaphthalene	MG/KG	1/ 9	0.433	0.27	LL4sd-048-0957-SD				
LL4-2		Semi-Volatile Organics	Anthracene	MG/KG	1/ 9	0.412	0.075	LL4sd-048-0957-SD				
LL4-2		Semi-Volatile Organics	Benz(a)anthracene	MG/KG	1/ 9	0.462	0.53	LL4sd-048-0957-SD				
LL4-2		Semi-Volatile Organics	Benzo(a)pyrene	MG/KG	1/ 9	0.459	0.5	LL4sd-048-0957-SD				
LL4-2		Semi-Volatile Organics	Benzo(b)fluoranthene	MG/KG	1/ 9	0.478	0.67	LL4ss-141-0875-SO				
LL4-2		Semi-Volatile Organics	Benzo(ghi)perylene	MG/KG	1/ 9	0.438	0.31	LL4sd-048-0957-SD				
LL4-2		Semi-Volatile Organics	Benzo(k)fluoranthene	MG/KG	1/ 9	0.436	0.29	LL4sd-048-0957-SD				
LL4-2		Semi-Volatile Organics	Bis(2-ethylhexyl)phthalate	MG/KG	2/ 9	0.374	0.14	LL4sd-048-0957-SD				
LL4-2		Semi-Volatile Organics	Carbazole	MG/KG	1/ 9	0.411	0.065	LL4sd-048-0957-SD				
LL4-2		Semi-Volatile Organics	Chrysene	MG/KG	1/ 9	0.472	0.62	LL4ss-141-0875-SO				
LL4-2		Semi-Volatile Organics	Dibenz(a,h)anthracene	MG/KG	1/ 9	0.413	0.085	LL4sd-048-0957-SD				
LL4-2		Semi-Volatile Organics	Dibenzofuran	MG/KG	1/ 9	0.411	0.069	LL4sd-048-0957-SD				
LL4-2		Semi-Volatile Organics	Fluoranthene	MG/KG	4/ 9	0.406	0.93	LL4ss-141-0875-SO				
LL4-2		Semi-Volatile Organics	Indeno(1,2,3-cd)pyrene	MG/KG	1/ 9	0.437	0.3	LL4sd-048-0957-SD				

Attachment 1
Summary of Analytes Detected in IDW
Load Line 4 Solid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Mean Adj. for TCLP (mg/L)	Max Detect Adj. for TCLP (mg/L)
LL4-2		Semi-Volatile Organics	Naphthalene	MG/KG	1/ 9	0.423	0.18	LL4sd-048-0957-SD				
LL4-2		Semi-Volatile Organics	Phenanthrene	MG/KG	3/ 9	0.389	0.47	LL4sd-048-0957-SD				
LL4-2		Semi-Volatile Organics	Pyrene	MG/KG	3/ 9	0.43	0.87	LL4ss-141-0875-SO				
LL4-2		Total Organic Carbon	Total Organic Carbon	MG/KG	1/ 1	19000	19000	LL4sd-048-0957-SD				
LL4-2	N	Volatile Organics	2-Butanone	MG/KG	1/ 8	0.024	0.011	LL4ss-110-0798-SO	200	0/ 8	0.0012	0.00055
LL4-2		Volatile Organics	Acetone	MG/KG	3/ 8	0.023	0.039	LL4sd-048-0957-SD				
LL4-2	N	Volatile Organics	Benzene	MG/KG	1/ 8	0.00635	0.0026	LL4sd-048-0957-SD	0.5	0/ 8	0.000318	0.00013
LL4-2		Volatile Organics	Dimethylbenzene	MG/KG	1/ 8	0.0064	0.003	LL4sd-048-0957-SD				
LL4-2		Volatile Organics	Toluene	MG/KG	3/ 8	0.0055	0.0056	LL4ss-110-0798-SO				
LL4-3		Inorganics	Aluminum	MG/KG	41/ 41	11600	38800	LL4ss-081-0717-SO				
LL4-3		Inorganics	Antimony	MG/KG	3/ 41	1.29	1.5	LL4ss-081-0717-SO				
LL4-3	N	Inorganics	Arsenic	MG/KG	41/ 41	7.99	16.2	LL4ss-113-0807-SO	5	0/ 41	0.399	0.81
LL4-3	N	Inorganics	Barium	MG/KG	41/ 41	119	752	LL4ss-081-0717-SO	100	0/ 41	5.94	37.6
LL4-3		Inorganics	Beryllium	MG/KG	41/ 41	1.04	5.9	LL4ss-081-0717-SO				
LL4-3	N	Inorganics	Cadmium	MG/KG	29/ 41	1.21	13.2	LL4ss-071-0689-SO	1	0/ 41	0.0604	0.66
LL4-3		Inorganics	Calcium	MG/KG	41/ 41	26000	180000	LL4ss-080-0714-SO				
LL4-3	Y	Inorganics	Chromium	MG/KG	41/ 41	17.4	120	LL4ss-070-0686-SO	5	1/ 41	0.869	6
LL4-3		Inorganics	Cobalt	MG/KG	41/ 41	7.46	78.3	LL4ss-112-0804-SO				
LL4-3		Inorganics	Copper	MG/KG	41/ 41	17.7	55.8	LL4ss-095-0759-SO				
LL4-3		Inorganics	Iron	MG/KG	41/ 41	17300	38000	LL4ss-094-0756-SO				
LL4-3	Y	Inorganics	Lead	MG/KG	41/ 41	125	1340	LL4ss-070-0686-SO	5	9/ 41	6.24	67
LL4-3		Inorganics	Magnesium	MG/KG	41/ 41	5030	30700	LL4ss-082-0720-SO				
LL4-3		Inorganics	Manganese	MG/KG	41/ 41	983	7320	LL4ss-081-0717-SO				
LL4-3	N	Inorganics	Mercury	MG/KG	38/ 41	0.058	0.36	LL4ss-075-0701-SO	0.2	0/ 41	0.0029	0.018
LL4-3		Inorganics	Nickel	MG/KG	41/ 41	13.4	25.6	LL4ss-095-0759-SO				
LL4-3		Inorganics	Potassium	MG/KG	41/ 41	816	2300	LL4ss-080-0714-SO				
LL4-3	N	Inorganics	Selenium	MG/KG	20/ 41	1.87	1.9	LL4ss-081-0717-SO	1	0/ 41	0.0936	0.095
LL4-3		Inorganics	Sodium	MG/KG	12/ 41	514	831	LL4ss-081-0717-SO				
LL4-3		Inorganics	Thallium	MG/KG	41/ 41	0.433	0.9	LL4ss-073-0695-SO				
LL4-3		Inorganics	Vanadium	MG/KG	41/ 41	13	24.2	LL4ss-103-0781-SO				
LL4-3		Inorganics	Zinc	MG/KG	41/ 41	130	843	LL4ss-100-0772-SO				
LL4-3		Explosives	2,4,6-Trinitrotoluene	MG/KG	1/ 19	0.242	0.096	LL4ss-097-0765-SO				
LL4-3		Explosives	Nitrocellulose	MG/KG	4/ 4	7.33	18.8	LL4ss-088-0738-SO				
LL4-3		Pesticides and PCBs	4,4'-DDD	MG/KG	1/ 8	0.0205	0.1	LL4ss-071-0689-SO				
LL4-3		Pesticides and PCBs	4,4'-DDE	MG/KG	1/ 8	0.0164	0.038	LL4ss-071-0689-SO				
LL4-3		Pesticides and PCBs	4,4'-DDT	MG/KG	1/ 8	0.0442	0.29	LL4ss-071-0689-SO				
LL4-3		Pesticides and PCBs	Dieldrin	MG/KG	2/ 8	0.0173	0.07	LL4ss-071-0689-SO				
LL4-3		Pesticides and PCBs	Endrin aldehyde	MG/KG	2/ 8	0.119	0.84	LL4ss-071-0689-SO				
LL4-3	Y	Pesticides and PCBs	Heptachlor	MG/KG	1/ 8	0.0917	0.67	LL4ss-071-0689-SO	0.008	1/ 8	0.00459	0.0335
LL4-3		Pesticides and PCBs	Heptachlor epoxide	MG/KG	1/ 8	0.0145	0.052	LL4ss-071-0689-SO				
LL4-3	N	Pesticides and PCBs	Methoxychlor	MG/KG	2/ 8	0.0424	0.21	LL4ss-071-0689-SO	10	0/ 8	0.00212	0.0105
LL4-3		Pesticides and PCBs	PCB-1254	MG/KG	4/ 35	0.323	2.1	LL4ss-071-0689-SO				
LL4-3		Pesticides and PCBs	PCB-1260	MG/KG	12/ 35	1.31	28	LL4ss-071-0689-SO				
LL4-3		Pesticides and PCBs	alpha-Chlordane	MG/KG	1/ 8	0.0134	0.014	LL4ss-071-0689-SO				
LL4-3		Pesticides and PCBs	gamma-Chlordane	MG/KG	2/ 8	0.0185	0.083	LL4ss-071-0689-SO				

Attachment 1
Summary of Analytes Detected in IDW
Load Line 4 Solid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Mean Adj. for TCLP (mg/L)	Max Detect Adj. for TCLP (mg/L)
LL4-3		Semi-Volatile Organics	Benz(a)anthracene	MG/KG	8/ 12	0.216	0.26	LL4ss-073-0695-SO				
LL4-3		Semi-Volatile Organics	Benzo(a)pyrene	MG/KG	8/ 12	0.292	0.77	LL4ss-113-0807-SO				
LL4-3		Semi-Volatile Organics	Benzo(b)fluoranthene	MG/KG	9/ 12	0.382	1.3	LL4ss-113-0807-SO				
LL4-3		Semi-Volatile Organics	Benzo(ghi)perylene	MG/KG	9/ 12	0.36	2	LL4ss-113-0807-SO				
LL4-3		Semi-Volatile Organics	Benzo(k)fluoranthene	MG/KG	8/ 12	0.27	0.68	LL4ss-113-0807-SO				
LL4-3		Semi-Volatile Organics	Bis(2-ethylhexyl)phthalate	MG/KG	8/ 12	0.241	0.31	LL4ss-093-0753-SO				
LL4-3		Semi-Volatile Organics	Chrysene	MG/KG	9/ 12	0.286	0.84	LL4ss-113-0807-SO				
LL4-3		Semi-Volatile Organics	Dibenz(a,h)anthracene	MG/KG	2/ 12	0.357	0.38	LL4ss-073-0695-SO				
LL4-3		Semi-Volatile Organics	Fluoranthene	MG/KG	10/ 12	0.23	0.29	LL4ss-073-0695-SO				
LL4-3		Semi-Volatile Organics	Indeno(1,2,3-cd)pyrene	MG/KG	7/ 12	0.351	1.4	LL4ss-113-0807-SO				
LL4-3		Semi-Volatile Organics	Naphthalene	MG/KG	1/ 12	0.355	0.058	LL4ss-073-0695-SO				
LL4-3		Semi-Volatile Organics	Phenanthrene	MG/KG	2/ 12	0.361	0.32	LL4ss-073-0695-SO				
LL4-3		Semi-Volatile Organics	Pyrene	MG/KG	8/ 12	0.254	0.34	LL4ss-073-0695-SO				
LL4-3		Volatile Organics	Toluene	MG/KG	3/ 13	0.00476	0.0016	LL4ss-073-0695-SO				
LL4-4		General Chemistry	Chromium, hexavalent	MG/KG	1/ 2	1.55	1.9	LL4ss-142-0878-SO				
LL4-4		Inorganics	Aluminum	MG/KG	32/ 32	10000	15800	LL4ss-091-0747-SO				
LL4-4		Inorganics	Antimony	MG/KG	2/ 32	1.45	2.2	LL4sd-144-0884-SD				
LL4-4	N	Inorganics	Arsenic	MG/KG	31/ 32	9.2	16.2	LL4ss-113-0807-SO	5	0/ 32	0.46	0.81
LL4-4	N	Inorganics	Barium	MG/KG	32/ 32	65.7	141	LL4ss-075-0701-SO	100	0/ 32	3.28	7.05
LL4-4		Inorganics	Beryllium	MG/KG	32/ 32	0.633	1.4	LL4ss-098-0768-SO				
LL4-4	N	Inorganics	Cadmium	MG/KG	23/ 32	0.574	2.6	LL4sd-144-0884-SD	1	0/ 32	0.0287	0.13
LL4-4		Inorganics	Calcium	MG/KG	32/ 32	14300	150000	LL4ss-089-0741-SO				
LL4-4	Y	Inorganics	Chromium	MG/KG	32/ 32	18.6	120	LL4ss-070-0686-SO	5	1/ 32	0.93	6
LL4-4		Inorganics	Cobalt	MG/KG	32/ 32	7.46	14.8	LL4ss-156-0908-SO				
LL4-4		Inorganics	Copper	MG/KG	32/ 32	23.4	274	LL4sd-144-0884-SD				
LL4-4		Inorganics	Iron	MG/KG	32/ 32	18000	26000	LL4sd-144-0884-SD				
LL4-4	Y	Inorganics	Lead	MG/KG	32/ 32	122	1340	LL4ss-070-0686-SO	5	8/ 32	6.11	67
LL4-4		Inorganics	Magnesium	MG/KG	32/ 32	2640	7210	LL4ss-098-0768-SO				
LL4-4		Inorganics	Manganese	MG/KG	32/ 32	465	1240	LL4ss-089-0741-SO				
LL4-4	N	Inorganics	Mercury	MG/KG	29/ 32	0.0569	0.36	LL4ss-075-0701-SO	0.2	0/ 32	0.00285	0.018
LL4-4		Inorganics	Nickel	MG/KG	32/ 32	16.4	39.1	LL4sd-144-0884-SD				
LL4-4		Inorganics	Potassium	MG/KG	32/ 32	702	1520	LL4sd-144-0884-SD				
LL4-4	N	Inorganics	Selenium	MG/KG	14/ 32	1.7	3.3	LL4sd-144-0884-SD	1	0/ 32	0.0848	0.165
LL4-4		Inorganics	Sodium	MG/KG	3/ 32	660	307	LL4sd-144-0884-SD				
LL4-4		Inorganics	Thallium	MG/KG	32/ 32	0.458	1.1	LL4sd-144-0884-SD				
LL4-4		Inorganics	Vanadium	MG/KG	32/ 32	15.2	27.4	LL4ss-091-0747-SO				
LL4-4		Inorganics	Zinc	MG/KG	32/ 32	112	719	LL4sd-144-0884-SD				
LL4-4		Explosives	HMX	MG/KG	1/ 16	0.694	3.6	LL4ss-142-0878-SO				
LL4-4		Explosives	Nitrocellulose	MG/KG	3/ 3	1.47	2.9	LL4ss-084-0726-SO				
LL4-4		Explosives	RDX	MG/KG	1/ 16	1.66	19	LL4ss-142-0878-SO				
LL4-4		Pesticides and PCBs	Endrin ketone	MG/KG	1/ 5	0.005	0.011	LL4ss-158-0910-SO				
LL4-4		Pesticides and PCBs	PCB-1254	MG/KG	1/ 23	0.128	0.27	LL4ss-075-0701-SO				
LL4-4		Pesticides and PCBs	PCB-1260	MG/KG	3/ 23	0.35	4.5	LL4ss-075-0701-SO				
LL4-4		Semi-Volatile Organics	Anthracene	MG/KG	2/ 11	0.342	0.16	LL4ss-157-0909-SO				
LL4-4		Semi-Volatile Organics	Benz(a)anthracene	MG/KG	5/ 11	0.435	1	LL4ss-158-0910-SO				

Attachment 1
Summary of Analytes Detected in IDW
Load Line 4 Solid Samples

Drum ID	Max > TCLP	Analysis Type	Chemical	Units	Proportion Detected	Mean	Max Detect	ID of Max Concentration	TCLP Criteria (mg/L)	Proportion >TCLP	Mean Adj. for TCLP (mg/L)	Max Detect Adj. for TCLP (mg/L)
LL4-4		Semi-Volatile Organics	Benzo(a)pyrene	MG/KG	5/ 11	0.651	1.9	LL4ss-158-0910-SO				
LL4-4		Semi-Volatile Organics	Benzo(b)fluoranthene	MG/KG	5/ 11	1.34	5.4	LL4ss-158-0910-SO				
LL4-4		Semi-Volatile Organics	Benzo(ghi)perylene	MG/KG	5/ 11	0.947	3	LL4ss-158-0910-SO				
LL4-4		Semi-Volatile Organics	Benzo(k)fluoranthene	MG/KG	5/ 11	0.564	1.7	LL4ss-158-0910-SO				
LL4-4		Semi-Volatile Organics	Bis(2-ethylhexyl)phthalate	MG/KG	5/ 11	0.301	0.31	LL4ss-158-0910-SO				
LL4-4		Semi-Volatile Organics	Chrysene	MG/KG	5/ 11	0.845	3	LL4ss-158-0910-SO				
LL4-4		Semi-Volatile Organics	Dibenz(a,h)anthracene	MG/KG	3/ 11	0.448	0.75	LL4ss-158-0910-SO				
LL4-4		Semi-Volatile Organics	Fluoranthene	MG/KG	6/ 11	0.391	0.87	LL4ss-158-0910-SO				
LL4-4		Semi-Volatile Organics	Indeno(1,2,3-cd)pyrene	MG/KG	5/ 11	0.854	2.8	LL4ss-158-0910-SO				
LL4-4		Semi-Volatile Organics	Naphthalene	MG/KG	1/ 11	0.364	0.058	LL4ss-158-0910-SO				
LL4-4		Semi-Volatile Organics	Phenanthrene	MG/KG	1/ 11	0.388	0.32	LL4ss-158-0910-SO				
LL4-4		Semi-Volatile Organics	Pyrene	MG/KG	5/ 11	0.5	1.3	LL4ss-158-0910-SO				
LL4-4		Volatile Organics	Toluene	MG/KG	2/ 11	0.00487	0.00066	LL4ss-157-0909-SO				

ATTACHMENT 2

-----Original Message-----
From: Eileen Mohr [mailto:eileen.mohr@epa.state.oh.us]
Sent: Wednesday, December 05, 2001 11:24 AM
To: john.p.jent@lrl02.usace.army.mil; pattersonm@osc.army.mil; William.k.Jago@saic.com
Subject: Fwd: More Investigation Derived Waste (IDW) Questions

Mark, John, Kevin;

Attached is an email I sent to Greag after our conversation this AM.

I spoke with Greg and here are the answers to the two questions that are in the attached email:

1. Yes. Base the testing on the knowledge of the wastestream.

2. A composite from the 8 drums can be taken.

Hope this helps.
Eileen

Eileen T. Mohr
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Division of Emergency and Remedial Response
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330-487-0769 (FAX)
email: Eileen.Mohr@epa.state.oh.us

-----Original Message-----
From: Eileen Mohr [mailto:eileen.mohr@epa.state.oh.us]
Sent: Wednesday, December 05, 2001 10:29 AM
To: Greg Orr
Subject: More Investigation Derived Waste (IDW) Questions

Hi Greg!

Another two quick questions for you regarding IDW. But first here are the details of where the questions are coming from:

There are 8 drums of IDW from the Load Line 2 investigation (soil left over from various hand auger borings throughout the load line) that based upon the environmental samples may be hazardous for various constituents (mainly Pb, Cr and also maybe heptachlor epoxide). Each drum may contain residual sol from several hand auger borings.

Here are the questions:

1. Instead of running a full TCLP on all the drums, my understanding is that they can taylor the TCLP based upon the environmental samples. So... if it looks like metals are a problem they can just run TCLP for metals and not the full suite, if it is a volatile they run the corresponding suite, etc. Is this correct?

2. Now... the question comes in on the sampling. Do they need to run an individual TCLP sample on each drum, or can a composite from the 8 drums be run? (The soils are all from the same load line and are the same type of material.)

Thanks for your help Greg!!

Eileen

Eileen T. Mohr
Project Coordinator
Division of Emergency and Remedial Response
2110 East Aurora Road
Twinsburg, OH 44087
330-963-1221
330-487-0769 (FAX)
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SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

SAIC

Lot #: A1L130105 LOAD LINE 2.3.4 PHASE II RI Date Reported: 1/04/02

PARAMETER		RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Client Sample ID: LL21227						
Sample #: 001 Date Sampled: 12/11/01 16:05 Date Received: 12/12/01 Matrix: SOLID						
Trace Inductively Coupled Plasma (ICP) Metals TCLP						Reviewed
Silver	TCLP	ND	0.50	mg/L	SW846 6010B	
Arsenic	TCLP	ND	0.50	mg/L	SW846 6010B	
Barium	TCLP	ND	10.0	mg/L	SW846 6010B	
Cadmium	TCLP	ND	0.10	mg/L	SW846 6010B	
Chromium	TCLP	ND	0.50	mg/L	SW846 6010B	
Lead	TCLP	ND L	0.50	mg/L	SW846 6010B	
Selenium	TCLP	ND	0.25	mg/L	SW846 6010B	
Mercury in Liquid Waste (Manual Cold-Vapor) TCLP						Reviewed
Mercury	TCLP	ND	0.0020	mg/L	SW846 7470A	

L Serial dilution of a digestate in the analytical batch indicates that physical and chemical interferences are present.

Semivolatile Organic Compounds by GC/MS TCLP					Reviewed
o-Cresol	ND	0.050	mg/L	SW846 8270C	
m-Cresol & p-Cresol	ND	0.10	mg/L	SW846 8270C	
1,4-Dichlorobenzene	ND	0.050	mg/L	SW846 8270C	
2,4-Dinitrotoluene	ND	0.050	mg/L	SW846 8270C	
Hexachlorobenzene	ND	0.050	mg/L	SW846 8270C	
Hexachlorobutadiene	ND	0.050	mg/L	SW846 8270C	
Hexachloroethane	ND	0.050	mg/L	SW846 8270C	
Nitrobenzene	ND	0.050	mg/L	SW846 8270C	
Pentachlorophenol	ND	0.10	mg/L	SW846 8270C	
Pyridine	ND	0.10	mg/L	SW846 8270C	
2,4,5-Trichloro-phenol	ND	0.050	mg/L	SW846 8270C	
2,4,6-Trichloro-phenol	ND	0.050	mg/L	SW846 8270C	
Inorganic Analysis					Reviewed
Corrosivity	7.0		**No Units**	**SW846 9045A**	
Pensky-Martens Method for Determining Ignitability	>180		**deg F**	**SW846 1010**	

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PRELIMINARY DATA SUMMARY

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SAIC

Lot #: A1L130105 LOAD LINE 2.3.4 PHASE II RI Date Reported: 1/04/02

PARAMETER		RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Client Sample ID: LL31171						
Sample #: 002 Date Sampled: 12/11/01 14:30 Date Received: 12/12/01 Matrix: SOLID						
Trace Inductively Coupled Plasma (ICP) Metals TCLP						Reviewed
Silver	TCLP	ND	0.50	mg/L	SW846 6010B	
Arsenic	TCLP	ND	0.50	mg/L	SW846 6010B	
Barium	TCLP	ND	10.0	mg/L	SW846 6010B	
Cadmium	TCLP	ND	0.10	mg/L	SW846 6010B	
Chromium	TCLP	ND	0.50	mg/L	SW846 6010B	
Lead	TCLP	ND	0.50	mg/L	SW846 6010B	
Selenium	TCLP	ND	0.25	mg/L	SW846 6010B	
Mercury in Liquid Waste (Manual Cold-Vapor) TCLP						Reviewed
Mercury	TCLP	ND	0.0020	mg/L	SW846 7470A	
Organochlorine Pesticides TCLP						Reviewed
Chlordane (technical)		ND	0.0050	mg/L	SW846 8081A	
Endrin		ND	0.00050	mg/L	SW846 8081A	
Heptachlor		ND	0.00050	mg/L	SW846 8081A	
Heptachlor epoxide		ND	0.00050	mg/L	SW846 8081A	
Lindane		ND	0.00050	mg/L	SW846 8081A	
Methoxychlor		ND	0.0010	mg/L	SW846 8081A	
Toxaphene		ND	0.020	mg/L	SW846 8081A	
Semivolatile Organic Compounds by GC/MS TCLP						Reviewed
o-Cresol		ND	0.050	mg/L	SW846 8270C	
m-Cresol & p-Cresol		ND	0.10	mg/L	SW846 8270C	
1,4-Dichlorobenzene		ND	0.050	mg/L	SW846 8270C	
2,4-Dinitrotoluene		ND	0.050	mg/L	SW846 8270C	
Hexachlorobenzene		ND	0.050	mg/L	SW846 8270C	
Hexachlorobutadiene		ND	0.050	mg/L	SW846 8270C	
Hexachloroethane		ND	0.050	mg/L	SW846 8270C	
Nitrobenzene		ND	0.050	mg/L	SW846 8270C	
Pentachlorophenol		ND	0.10	mg/L	SW846 8270C	
Pyridine		ND	0.10	mg/L	SW846 8270C	
2,4,5-Trichloro-phenol		ND	0.050	mg/L	SW846 8270C	
2,4,6-Trichloro-phenol		ND	0.050	mg/L	SW846 8270C	

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SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A1L130105 LOAD LINE 2.3.4 PHASE II RI Date Reported: 1/04/02

PARAMETER		RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Client Sample ID: LL31171						
Sample #: 002 Date Sampled: 12/11/01 14:30 Date Received: 12/12/01 Matrix: SOLID						
Inorganic Analysis						Reviewed
Corrosivity		7.6		**No Units**	**SW846 9045A**	
Pensky-Martens Method for Determining Ignitability		>180		**deg F**	**SW846 1010**	
Client Sample ID: LL41184						
Sample #: 003 Date Sampled: 12/11/01 15:05 Date Received: 12/12/01 Matrix: SOLID						
Trace Inductively Coupled Plasma (ICP) Metals TCLP						Reviewed
Silver	TCLP	ND	0.50	mg/L	SW846 6010B	
Arsenic	TCLP	ND	0.50	mg/L	SW846 6010B	
Barium	TCLP	ND	10.0	mg/L	SW846 6010B	
Cadmium	TCLP	ND	0.10	mg/L	SW846 6010B	
Chromium	TCLP	ND	0.50	mg/L	SW846 6010B	
Lead	TCLP	ND	0.50	mg/L	SW846 6010B	
Selenium	TCLP	ND	0.25	mg/L	SW846 6010B	
Mercury in Liquid Waste (Manual Cold-Vapor) TCLP						Reviewed
Mercury	TCLP	ND	0.0020	mg/L	SW846 7470A	
Organochlorine Pesticides TCLP						Reviewed
Chlordane (technical)		ND	0.0050	mg/L	SW846 8081A	
Endrin		ND	0.00050	mg/L	SW846 8081A	
Heptachlor		ND	0.00050	mg/L	SW846 8081A	
Heptachlor epoxide		ND	0.00050	mg/L	SW846 8081A	
Lindane		ND	0.00050	mg/L	SW846 8081A	
Methoxychlor		ND	0.0010	mg/L	SW846 8081A	
Toxaphene		ND	0.020	mg/L	SW846 8081A	
Inorganic Analysis						Reviewed
Corrosivity		7.5		**No Units**	**SW846 9045A**	
Pensky-Martens Method for Determining Ignitability		>180		**deg F**	**SW846 1010**	

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1/22.2002/30.004

January 29, 2002

Mr. Glen Beckham
U.S. Army Corps of Engineers, Louisville District
ATTN: CELRL-PM-M
600 Martin Luther King, Jr. Place
Louisville, Kentucky 40202-0059

SUBJECT: Contract No. F44650-99-0007, ECAS 186, Phase II Remedial Investigations (RIs) for Load Lines 2, 3, and 4 at the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio

RE: Correction to – FINAL Investigation-Derived Waste (IDW) Characterization and Disposal Report for Development and Purge Water and Decontamination Fluids

Dear Mr. Beckham:

In the January 15, 2002, Final Investigation-Derived Waste (IDW) Characterization and Disposal Report for Development and Purge Water and Decontamination Fluids, containers for purge and development water from wells LL3mw233-1 and LL3mw235-1 were inadvertently added to Table 1 (Summary of IDW Generated and its Origin) and Table 2 (Classification of the IDW and Recommendations for Disposal). Due to low water levels, these wells were not sampled in October 2001 due to inadequate volume of water for the required groundwater sample containers. Therefore, additional purge and development water is continuing to be placed in these containers and they are not ready for disposition. LL3mw235 was sampled on January 22, 2002 and analytical data are pending. Sampling of LL3mw233 will be attempted in February 2002. These drums will be characterized and classified in a separate letter report when evaluation of characterization data are completed.

Corrected versions of Table 1 and Table 2 are provided for your reference below. All other disposal recommendations remain the same as in the January 15, 2002 letter report.

8866 Commons Blvd., Suite 201, Twinsburg, OH 44087 (330) 405-9810 • Fax: (330) 405-9811

Table 1. Summary of Load Lines 2, 3, and 4 Phase II RI IDW

CONTAINER NUMBER	CONTAINER TYPE	CONTENTS	GENERATION DATES
LL2mw59-1	55-GALLON STEEL CLOSED TOP	PURGE WATER	9/20/2001
LL2mw60-1	55-GALLON STEEL CLOSED TOP	PURGE WATER	9/19/2001
LL2mw261-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/25/2001-9/10/2001
LL2mw262-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/23/2001-9/7/2001
LL2mw263-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/24/2001-9/7/2001
LL2mw264-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/24/2001
LL2mw264-2	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/24/2001-9/10/2001
LL2mw265-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/25/2001-9/19/2001
LL2mw266-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/25/2001-9/10/2001
LL2mw267-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/25/2001-9/10/2001
LL2mw268-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/25/2001
LL2mw268-2	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/25/2001-9/7/2001
LL2mw269-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/25/2001-9/20/2001
LL2mw270-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/25/2001
LL2mw270-2	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/25/2001-9/7/2001
LL3mw232-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/23/2001-8/24/2001
LL3mw232-2	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/24/2001-9/11/2001
LL3mw234-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/24/2001-9/11/2001
LL3mw236-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/12/2001-9/11/2001
LL3mw237-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/23/2001-9/19/2001
LL3mw238-1	55-GALLON STEEL OPEN TOP	DEVELOPMENT WATER	8/24/2001-9/18/2001
LL3mw239-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/24/2001-9/18/2001
LL3mw240-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/24/2001-9/18/2001
LL3mw241-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/22/2001-9/21/2001
LL3mw242-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/20/2001-9/20/2001

CONTAINER NUMBER	CONTAINER TYPE	CONTENTS	GENERATION DATES
LL3mw243-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/21/2001
LL3mw243-2	55-GALLON STEEL CLOSED TOP	PURGE WATER	9/10/2001
LL4mw193-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/23/2001-9/6/2001
LL4mw194-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/21/2001-9/5/2001
LL4mw195-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/21/2001-9/5/2001
LL4mw196-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/14/2001-9/4/2001
LL4mw197-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/22/2001-9/5/2001
LL4mw198-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/23/2001-8/24/2001
LL4mw198-2	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/24/2001-9/6/2001
LL4mw199-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/22/2001-9/6/2001
LL4mw200-1	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/14/2001
LL4mw200-2	55-GALLON STEEL CLOSED TOP	DEVELOPMENT WATER	8/14/2001-8/21/2001
LL4mw200-3	55-GALLON STEEL CLOSED TOP	DEVELOPMENT/PURGE WATER	8/21/2001-9/6/2001
DECON PAD-1	55-GALLON STEEL CLOSED TOP	DECON WATER FROM DRILL RIG DECON PAD	7/24/2001- 7/28/2001
DECON PAD-2	55-GALLON STEEL CLOSED TOP	DECON WATER FROM DRILL RIG DECON PAD	7/28/2001- 8/8/2001
DECON PAD-3	55-GALLON STEEL CLOSED TOP	DECON WATER FROM DRILL RIG DECON PAD	8/8/2001-8/8/2001
DECON PAD-4	55-GALLON STEEL CLOSED TOP	DECON WATER FROM DRILL RIG DECON PAD	8/8/2001-8/10/2001
DECON PAD-5	55-GALLON STEEL CLOSED TOP	DECON WATER FROM DRILL RIG DECON PAD	8/10/2001-8/12/2001
DECON PAD-6	55-GALLON STEEL CLOSED TOP	DECON WATER FROM DRILL RIG DECON PAD	8/12/2001-8/12/2001
DECON PAD-7	55-GALLON STEEL CLOSED TOP	DECON WATER FROM DRILL RIG DECON PAD	8/12/2001-8/20/2001
SAIC DECON-1	55-GALLON STEEL CLOSED TOP	DECON WATER FROM EQUIPMENT DECON	7/28/2001-8/15/2001
SAIC DECON-2	55-GALLON STEEL CLOSED TOP	WASTE WATER WITH METHANOL FROM EQUIPMENT DECON	8/1/2001-9/21/2001
SAIC DECON-3	55-GALLON STEEL CLOSED TOP	DECON WATER FROM EQUIPMENT DECON	8/15/2001-8/28/2001
SAIC DECON-4	55-GALLON STEEL CLOSED TOP	DECON WATER FROM EQUIPMENT DECON	8/28/2001-9/21/2001

Table 2. Summary of Final Waste Classification and Recommended Disposal Options

Container Number	Medium	Waste Criterion	Disposal Recommendation
NON-HAZARDOUS, CONTAMINATED WASTE			
LL2mw261-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2mw262-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2MW263-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2MW264-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2mw264-2	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2mw265-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2mw266-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2mw267-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2MW268-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2MW268-2	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2mw269-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2MW270-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2MW270-2	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2mw59-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL2mw60-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw232-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw232-2	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw234-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw236-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw237-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw238-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw239-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw240-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw241-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw242-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw243-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL3mw243-2	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw193-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw194-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw195-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw196-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw197-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw198-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw198-2	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw199-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw200-1	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw200-2	groundwater	Inorganics, organics	Permitted Solid Waste Facility
LL4mw200-3	groundwater	Inorganics, organics	Permitted Solid Waste Facility
DECON PAD-1	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility
DECON PAD-2	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility
DECON PAD-3	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility

Container Number	Medium	Waste Criterion	Disposal Recommendation
DECON PAD-4	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility
DECON PAD-5	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility
DECON PAD-6	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility
DECON PAD-7	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility
SAIC DECON-1	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility
SAIC DECON-2	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility
SAIC DECON-3	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility
SAIC DECON-4	Decontamination fluids	Inorganics, organics	Permitted Solid Waste Facility

If you have any questions or require additional information, please do not hesitate to contact me at (330) 405-5804.

Sincerely,

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

Martha Clough

Martha Clough
Project IDW Coordinator

cc: John Jent, USACE
Paul Zorko, USACE
Eileen Mohr, Ohio EPA
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Kevin Jago, SAIC
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