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Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

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Mr. Douglas R. Sherwood
Hanford Project Manager
U.S. Environmental Protection Agency
712 Swift Boulevard, Suite 5
Richland, Washington 99352-0539

Dear Mr. Sherwood:

ENVIRONMENTAL RESTORATION DISPOSAL FACILITY LEACHATE DELISTING PETITION, DOE/RL-98-47, DRAFT A

Please find attached the subject document for review and comment. If you want to discuss this matter further or require additional information, please contact me at 373-6295.

Sincerely,

O. C. Robertson, Senior Project Manager
Remedial Actions Project

RAP:OCR

Attachment

cc w/attach:
P. S. Innis, EPA

0049663

DOE/RL-98-47
Draft A

Environmental Restoration Disposal Facility Leachate Delisting Petition

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United States
Department of Energy
Richland, Washington

For External Review

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DOE/RL-98-47
Draft A

Environmental Restoration Disposal Facility Leachate Delisting Petition

Date Published
July 1998

United States
Department of Energy
P.O. Box 550
Richland, Washington 99352

For External Review

EXECUTIVE SUMMARY

The Environmental Restoration Disposal Facility (ERDF) is a *Comprehensive Environmental Response, Compensation, and Liability Act of 1980*-regulated facility located on the Hanford Site. ERDF accepts contaminated soils and debris from Hanford National Priorities List sites. The facility generates leachate from the infiltration of precipitation through the wastes placed in ERDF. Because some *Resource Conservation and Recovery Act of 1976* (RCRA)-regulated listed wastes have been placed in ERDF, the leachate is a listed waste, and subject to RCRA management. Delisting the leachate would allow it to be managed under a less stringent (and less costly) program.

Limited sampling of the leachate conducted to date indicates that constituent concentrations are below delisting limits. The sampling that has been performed, however, does not encompass all of the constituents of concern. In addition, existing data were not subject to a data validation protocol and represent only a limited period of leachate generation.

A sampling program is described in this petition to delist the ERDF leachate that includes a baseline characterization of the leachate against delisting limits. One year of sampling will be conducted to establish the baseline and to determine whether the leachate is suitable for delisting. A semi-annual sample program will monitor constituents that are within a defined percentage of the delisting limit. Samples will be collected every 2 years to evaluate the full suite of constituents of concern.

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ACRONYMS AND ABBREVIATIONS

BHI	Bechtel Hanford, Inc.
CAS#	chemical abstract number
CERCLA	*Comprehensive Environmental Response, Compensation, and Liability Act of 1980*
CFR	*Code of Federal Regulations*
CMTP	Composite Model for Leachate Migration with Transformation Products
COC	contaminant of concern
COPC	contaminant of potential concern
D&D	decontamination and decommissioning
DOE	U.S. Department of Energy
DQA	data quality assessment
DQO	data quality objective
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
EQL	estimated quantitation limit
ERC	Environmental Restoration Contractor
ERDF	Environmental Restoration Disposal Facility
ESD	Explanation of Significant Difference
ETF	Effluent Treatment Facility
HEIS	Hanford Environmental Information System
IATA	International Air Transport Association
IDL	instrument detection limit
LWPF	Liquid Waste Processing Facility
NOS	not otherwise specified
NPL	National Priorities List
OU	operable unit
PCB	polychlorinated biphenyl
PNNL	Pacific Northwest National Laboratory
PQL	practical quantitation limit
QA	quality assurance
QC	quality control
RCRA	*Resource Conservation and Recovery Act of 1976*
ROD	Record of Decision
SAF	sample authorization form
SAP	Sampling and Analysis Plan
STR	Site Technical Representative
SVOA	semi volatile organic analyte
TDS	total dissolved solids
Tri-Party Agreement	*Hanford Federal Facility Agreement and Consent Order*
TSS	total suspended solids
VOA	volatile organic analyte
WAC	*Washington Administrative Code*
WAC	waste acceptance criteria

1.0 ADMINISTRATIVE INFORMATION

1.1 NAME OF PETITIONER

U.S. Department of Energy,
Richland Operations Office

1.2 CONTACTS

For additional information, contact:

Name	Title	Telephone Number
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Mailing Address for Contact:

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MSIN H0-12
Richland, Washington 99352

1.3 FACILITY NAME AND LOCATION

Environmental Restoration Disposal Facility
200 Area
Hanford Site, Richland, Washington

1.4 DESCRIPTION OF PROPOSED DELISTING ACTION

On January 20, 1995, the U.S. Department of Energy (DOE), the U.S. Environmental Protection Agency (EPA), and the Washington State Department of Ecology (Ecology) signed the Environmental Restoration Disposal Facility (ERDF) Record of Decision (ROD) (EPA 1995) to provide waste disposal capacity for remediation waste from contaminated areas at the Hanford Site. The ERDF ROD provides the overall plan to construct the facility and dispose of remediation waste. The facility design includes two adjacent disposal cells for placement of wastes and incorporates a *Resource Conservation and Recovery Act* (RCRA) liner system that meets minimum technology requirements to collect any leachate generated.

An Explanation of Significant Difference (ESD) (EPA et al. 1996) to the ERDF ROD was issued on July 26, 1996, which authorized the conditional use of the leachate for dust suppression and waste compaction through a waiver provision until the leachate is delisted. The ERDF ESD identified the intention to delist the leachate from regulation as a hazardous waste. The waiver was proposed as an alternative until sufficient data became available to support a determination that the liquid is, in fact, a nonhazardous waste. The leachate is considered a listed hazardous waste because a small volume of soil presumed to have contacted carbon tetrachloride (F001 listed) at very low concentrations was disposed to ERDF. Other listed hazardous constituents could be disposed to ERDF in the future, causing the leachate to be listed as F039. In order to delist the leachate, it must be demonstrated that the concentrations of hazardous contaminants found in the leachate would be protective of human health and the environment even if it were not managed under the hazardous waste rules. The demonstration will include comparison of leachate sample results with delisting limits. Delisting limits in general are based on EPA risk-based docket values; these values and associated limits are presented in Table 1-1.

In general, the proposed delisting limit for a particular constituent contained in the ERDF leachate will be set at the lower of (1) the characteristic dangerous waste levels found in the *Washington Administrative Code* (WAC) Section 173-303, as appropriate, or (2) constituent concentrations provided in the EPA docket multiplied by 10. The "10 times" factor represents the standard used by EPA when evaluating delisting petitions for large-volume wastes and provides for a conservative delisting value. If detected concentrations approach the 10 times values, these delisting limits will be reevaluated to determine if an adjustment to the limit is appropriate, or whether the leachate should be managed as a listed hazardous waste. These limits will establish values for constituents below which the leachate would be considered to be protective of human health and the environment. Leachate that meets these delisting limits will be sent to the Liquid Waste Processing Facility (LWPF) in the 200 East Area of the Hanford Site or recycled in the trench for compaction or dust suppression, based on a management determination. The Effluent Treatment Facility (ETF), a permitted waste treatment and disposal facility, along with the Liquid Effluent Retention Facility (LERF) are the primary facilities that comprise the LWPF. If a constituent in the leachate exceeds the delisting limits for three sample events, and there is no justifiable basis for adjusting the limit for that constituent, DOE/ Environmental Restoration Contractor (ERC) will establish the appropriate management procedures for the leachate under RCRA after consultation with EPA.

The delisting process that is described in this petition is based on the regulations established by the EPA as set out in Title 40, *Code of Federal Regulations* (CFR) Section 260.22. These requirements are essentially similar to the provisions of the State of Washington requirements for exempting and excluding wastes found in WAC 173-303-072. The federal delisting process described in 40 CFR also is substantially equivalent to the Washington State requirements for a petition, codified at WAC 173-303-910. Ecology will review and comment on this petition and has indicated support for the delisting of the ERDF leachate. The EPA is the lead agency for the ERDF project. Bechtel Hanford, Inc. (BHI) and its team are the ERC for the DOE at the Hanford Site.

Table 1-1. ERDF Leachate Delisting Limits. (5 Sheets)*

CAS #	Constituent	Docket Value	Delisting Limit	Unit
71-55-6	1,1,1-Trichloroethane	200	2000	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.4	4	ug/L
127-18-4	1,1,2,2-Tetrachloroethene	5	50	ug/L
79-00-5	1,1,2-Trichloroethane	5	50	ug/L
79-01-6	1,1,2-Trichloroethylene	8	80	ug/L
52663-67-9	1,1'-Biphenyl, 2,2',3,3',5,5'-hexachloro			
35065-29-3	1,1'-Biphenyl, 2,2',3,4,4',5-hexachloro			
38380-04-0	1,1'-Biphenyl, 2,2',3,4',5',?-hexachloro			
35065-27-1	1,1'-Biphenyl, 2,2',4,4',5,5'-hexachloro			
38380-01-7	1,1'-Biphenyl, 2,2',4,4',5-pentachloro			
26601-64-9	1,1'-Biphenyl, hexachloro			
75-34-3	1,1-Dichloroethane	0.9	9	ug/L
75-35-4	1,1-Dichloroethene	7	70	ug/L
120-82-1	1,2,4-Trichlorobenzene	70	700	ug/L
95-63-6	1,2,4-Trimethylbenzene			
95-50-1	1,2-Dichlorobenzene	600	6000	ug/L
107-06-2	1,2-Dichloroethane	5	50	ug/L
540-59-0	1,2-Dichloroethylene			ug/L
78-87-5	1,2-Dichloropropane	5	50	ug/L
541-73-1	1,3-Dichlorobenzene			ug/L
106-46-7	1,4-Dichlorobenzene	4	40	ug/L
75-01-4	1-Chloroethene	2	20	ug/L
611-14-3	1-ethyl-2-methyl benzene			
620-14-4	1-ethyl-3-methyl benzene			
95-95-4	2,4,5-Trichlorophenol	4000	40000	ug/L
88-06-2	2,4,6-Trichlorophenol	8	80	ug/L
120-83-2	2,4-Dichlorophenol	100	1000	ug/L
105-67-9	2,4-Dimethylphenol	700	7000	ug/L
51-28-5	2,4-Dinitrophenol	70	700	ug/L
121-14-2	2,4-Dinitrotoluene	70	700	ug/L
606-20-2	2,6-Dinitrotoluene	40	400	ug/L
78-93-3	2-Butanone	20000	200000	ug/L
91-58-7	2-Chloronaphthalene	3000	30000	ug/L
95-57-8	2-Chlorophenol	200	2000	ug/L

Table 1-1. ERDF Leachate Delisting Limits. (5 Sheets)*

CAS #	Constituent	Docket Value	Delisting Limit	Unit
104-76-7	2-ethyl-1-hexanol			
591-78-6	2-Hexanone			ug/L
91-57-6	2-Methylnaphthalene			ug/L
88-74-4	2-Nitroaniline			ug/L
88-75-5	2-Nitrophenol			ug/L
67-64-1	2-Propanone (Acetone)	4000	40000	ug/L
91-94-1	3,3 –Dichlorobenzidine	0.2	2	ug/L
534-52-1	4,6-Dinitro-o-cresol			ug/L
101-55-3	4-Bromophenylphenyl ether			ug/L
59-50-7	4-Chloro-3-methylphenol			ug/L
106-47-8	4-Chloroaniline	100	1000	ug/L
7005-72-3	4-Chlorophenylphenyl ether			ug/L
108-10-1	4-Methyl-2-pentanone	2000	20000	ug/L
106-44-5	4-Methylphenol	200	2000	ug/L
100-01-6	4-Nitroaniline			ug/L
100-02-7	4-Nitrophenol			ug/L
83-32-9	Acenaphthene	2000	20000	ug/L
208-96-8	Acenaphthylene			ug/L
7429-90-5	Aluminum			ug/L
7664-41-7	Ammonia			ug/L
120-12-7	Anthracene	10000	100000	ug/L
7440-36-0	Antimony	6	60	ug/L
7440-38-2	Arsenic	50	500	ug/L
7440-39-3	Barium	2000	20000	ug/L
13966-02-4	Be-7			pCi/L
71-43-2	Benzene	5	50	ug/L
80-17-1	Benzene Sulfohydrazide			
56-55-3	Benzo(a)anthracene	0.077	0.77	ug/L
50-32-8	Benzo(a)pyrene	0.2	2	ug/L
205-99-2	Benzo(b)fluoranthene	0.071	0.71	ug/L
191-24-2	Benzo(ghi)perylene			ug/L
207-08-9	Benzo(k)fluoranthene			ug/L
7440-41-7	Beryllium	4	40	ug/L
111-91-1	Bis(2-Chloroethoxy)methane			ug/L

Table 1-1. ERDF Leachate Delisting Limits. (5 Sheets)*

CAS #	Constituent	Docket Value	Delisting Limit	Unit
111-44-4	Bis(2-chloroethyl) ether	0.08	0.8	ug/L
108-60-1	Bis(2-Chloroisopropyl) ether			ug/L
117-81-7	Bis(2-ethylhexyl) phthalate	6	60	ug/L
75-27-4	Bromodichloromethane	1.4	14	ug/L
74-83-9	Bromomethane	50	500	ug/L
85-68-7	Butylbenzylphthalate	7000	70000	ug/L
7440-43-9	Cadmium	5	50	ug/L
7440-70-2	Calcium			ug/L
86-74-8	Carbazole	4	40	ug/L
75-15-0	Carbon disulfide	4000	40000	ug/L
56-23-5	Carbon tetrachloride	5	50	ug/L
16887-00-6	Chloride			mg/L
108-90-7	Chlorobenzene	100	1000	ug/L
75-00-3	Chloroethane			ug/L
67-66-3	Chloroform	100	1000	ug/L
74-87-3	Chloromethane			ug/L
7440-47-3	Chromium	100	1000	ug/L
218-01-9	Chrysene	2.7	27	ug/L
10061-01-5	cis-1,3-Dichloropropene			ug/L
10198-40-0	Co-60			pCi/L
7440-48-4	Cobalt	2100	21000	ug/L
7440-50-8	Copper	1300	13000	ug/L
13967-70-9	Cs-134			pCi/L
10045-97-3	Cs-137			pCi/L
53-70-3	Dibenz[a,h]anthracene	0.011	0.11	ug/L
132-64-9	Dibenzofuran			ug/L
124-48-1	Dibromochloromethane	1	10	ug/L
75-09-2	Dichloromethane (Methylene Chloride)	5	50	ug/L
84-66-2	Diethyl phthalate	30000	300000	ug/L
131-11-3	Dimethyl phthalate	400000	4000000	ug/L
84-74-2	Di-n-butylphthalate	4000	40000	ug/L
117-84-0	Di-n-octylphthalate	700	7000	ug/L
112-40-3	Dodecane			
100-41-4	Ethyl benzene	70000	700000	ug/L

Table 1-1. ERDF Leachate Delisting Limits. (5 Sheets)*

CAS #	Constituent	Docket Value	Delisting Limit	Unit
15585-10-1	Eu-154			pCi/L
14391-16-3	Eu-155			pCi/L
206-44-0	Fluoranthene	1000	10000	ug/L
86-73-7	Fluorene	1000	10000	ug/L
16984-48-8	Fluoride	4	40	mg/L
12587-46-1	Gross alpha			pCi/L
12587-47-2	Gross beta			pCi/L
118-74-1	Hexachlorobenzene	1	10	ug/L
87-68-3	Hexachlorobutadiene	1	10	ug/L
77-47-4	Hexachlorocyclopentadiene	50	500	ug/L
67-72-1	Hexachloroethane	6	60	ug/L
57-10-3	Hexadecanoic Acid			
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	2.1	ug/L
7439-89-6	Iron			ug/L
78-59-1	Isophorone	90	900	ug/L
13966-00-2	K-40			pCi/L
7439-92-1	Lead	15	150	ug/L
7439-95-4	Magnesium			ug/L
7439-96-5	Manganese			ug/L
7439-97-6	Mercury	2	20	ug/L
1825-61-2	Methyoxytrimethyl silane			
99-09-2	m-Nitroaniline			ug/L
91-20-3	Naphthalene	1000	10000	ug/L
7440-02-0	Nickel	100	1000	ug/L
14797-55-8	Nitrate			mg/L
14797-65-0	Nitrite			mg/L
98-95-3	Nitrobenzene	20	200	ug/L
621-64-7	N-Nitroso-di-n-propylamine	0.01	0.1	ug/L
86-30-6	N-Nitrosodiphenylamine	20	200	ug/L
95-48-7	o-Cresol	2000	20000	ug/L
57-11-4	Octadecanoic Acid			
87-86-5	Pentachlorophenol	0.7	7	ug/L
355-02-2	Perfluoro(methylcyclohexane)			
pH	pH			

Table 1-1. ERDF Leachate Delisting Limits. (5 Sheets)*

CAS #	Constituent	Docket Value	Delisting Limit	Unit
85-01-8	Phenanthrene			ug/L
108-95-2	Phenol	20000	200000	ug/L
7440-09-7	Potassium			ug/L
103-65-1	Propyl benzene			
129-00-0	Pyrene	1000	10000	ug/L
13967-48-1	Ru-106			pCi/L
14234-35-6	Sb-125			pCi/L
7782-49-2	Selenium	50	500	ug/L
7440-22-4	Silver	200	2000	ug/L
7440-23-5	Sodium			ug/L
SpecCond	Specific Conductance			uMHOS/cm
100-42-5	Styrene	100	1000	ug/L
14808-79-8	Sulfate			mg/L
7440-28-0	Thallium	2	20	ug/L
108-88-3	Toluene	1000	10000	ug/L
TDS	Total Dissolved Solids			mg/L
TOC	Total Organic Carbon			mg/L
TSS	Total Suspended Solids			mg/L
10061-02-6	trans-1,3-Dichloropropene			ug/L
75-25-2	Tribromomethane	100	1000	ug/L
1066-40-6	Trimethyl Silanol			
7440-61-1	Uranium			pCi/L
7440-62-2	Vanadium	300	3000	ug/L
1330-20-7	Xylene	10000	100000	ug/L
7440-66-6	Zinc	10000	100000	ug/L

*Analytes without docket values have no delisting limits.

1.5 STATEMENT OF NEED/JUSTIFICATION

Sampling and analyses of the leachate performed to date indicate that constituent concentrations are below any listed or characteristic values for hazardous waste. Nonetheless, leachate must currently be managed as a regulated waste due to prescribed regulatory requirements. These requirements impose physical and administrative limitations on the storage, handling, treatment, and disposal of the liquid. Leachate is currently stored in two aboveground "modu-tanks" consisting of double plastic liners supported by circular steel frames, adjacent to the ERDF

before shipment to the LWPF for treatment and disposal. These units are subject to occasional leakage from the primary containment into the secondary liners. This leakage does not conform to the "zero-leakage" standard for hazardous waste storage tanks; leakage rates are more similar to those encountered in hazardous waste surface impoundments.

Current maintenance costs for the two modu-tanks are estimated at $94,000. Upgrading the storage system to provide storage and surge capacity for the anticipated volume of leachate that will be generated with up to three open cells in ERDF will require from $726,000 to $1.3 million in capital investment. These storage units will also be subject to leakage and problems associated with freezing. These figures do not reflect units that would be designed to RCRA criteria (i.e., double lined with leak detection). Construction of RCRA-compliant surface impoundments would result in significant cost savings over aboveground tanks (a 1.5 million gal surface impoundment is estimated at $278,000), but RCRA-mandated monitoring would add significantly to this cost, as would monitoring associated with storage in units. Because the historical analyses of the leachate conducted to date indicate that there are no risks to human health or the environment associated with the leachate, delisting will eliminate burdensome requirements for storage and monitoring that are not appropriate for this waste stream.

Because of the hazardous waste listing, excess leachate currently is used at the ERDF for dust suppression, or transported as a hazardous waste by tanker truck and treated at the LWPF. The current cost of shipping waste to LWPF has averaged approximately $100,000 annually; this amount is expected to reflect a high end for transportation, based on leachate generation rates experienced to date. Construction of a pipeline to allow direct transfer to the LWPF will cost approximately $100,000—the same amount as 1 year of shipping. Direct transfer as a non-RCRA waste will result in additional cost savings due to the reduced paperwork requirements for this transfer. Delisting will allow a more flexible and cost-effective management of leachate without posing a threat to human health or the environment. After delisting, the waste will be managed under an approved leachate management plan. Leachate will be transferred to the ETF, a permitted waste treatment facility, for treatment and disposal via pipeline or will continue to be used for dust suppression and waste compaction at ERDF.

The EPA docket (EPA 1998) provides constituent concentrations to calculate delisting limits. The docket is the administrative record that the EPA maintains for rule making. For large volume waste streams such as the ERDF leachate, the EPA docket value is typically multiplied by 10 to establish limits for delisting. This multiplier represents a dilution/attenuation factor for the constituent in the leachate as it moves through a subsurface environment, based on a generally conservative, hypothetical disposal scenario developed by the EPA. The "10 times" factor represents the standard used by the EPA when evaluating delisting petitions for large volume wastes and provides for a conservative delisting value. Currently available sampling data indicate that constituent concentrations in the leachate are substantially lower than these 10 times values.

In some cases, the 10 times docket value may be less than the detection limit of the analytical method used to determine a constituent's concentration in the leachate. In such cases, the delisting limit may be adjusted to the detection limit of the analytical method. On a case-by-case

basis, the delisting limits might be adjusted when the constituent's concentration is above the analytical method detection limits.

The ERDF is managed by the ERC for the DOE under the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA). When alternative remedial actions are considered for a CERCLA site, the alternatives generally are evaluated against nine criteria, found at 40 CFR 300, 430 (e)(a)(iii). Although alternatives to delisting are not being formally evaluated as a part of the petition, a comparison of the action against these criteria provides a favorable perspective on the proposal. For example, delisting and the associated management of the leachate will ensure protection of human health and the environment; leachate will continue to be treated at ETF, further reducing any concerns associated with water quality; and cost savings will be achieved by delisting through the elimination of hazardous waste handling requirements. Ecology concurs with the proposed delisting action.

1.6 CERTIFICATION STATEMENT

I certify under penalty of law that I personally examined and am familiar with the information submitted in this petition and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

_____ _____

Petitioner
John D. Wagoner, Manager
U.S. Department of Energy,
Richland Operations Office

Date

2.0 WASTE AND LEACHATE MANAGEMENT HISTORY

The ERDF began operation on July 1, 1996. The design of ERDF is a single, 70-ft-deep trench consisting of two side-by-side cells with final dimensions of 1,420 ft long by 720 ft wide at the top of the trench and 1,000 ft long by 500 ft wide at the bottom. The facility is equipped with a RCRA double-liner and leachate collection and recovery system. The same RCRA design selected for the existing ERDF disposal cells will be used for the Phase II expansion scheduled to be completed in mid-1999. Phase II involves the construction of two additional cells adjacent to the existing cells. All four cells will be connected to the same leachate collection and storage system. The leachate recovery system consists of a sump in each disposal cell, a pump to recover the leachate, and two aboveground storage units to collect the leachate before use or treatment (Figure 2-1). The storage units each consist of free-standing steel walls with two flexible-membrane liners and a floating cover. Each unit has a storage capacity of approximately 200,000 gal (757,000 L).

As of June 30, 1998, approximately 1 million tons of waste from remedial action sites at Hanford have been placed in the two disposal cells currently authorized to receive waste. The majority of waste is in the form of contaminated soil with some demolition and debris material. Nearly all of the waste is contaminated with low-level radioactivity and minor amounts of hazardous substances. The amount of leachate generated from the operation of the two disposal cells is approximately 2 million gal in the first 2 years of operation. This section describes the operational history of ERDF to date, as well as the current management and characterization practices for the leachate.

2.1 WASTE DISPOSAL AND LEACHATE GENERATION IN ERDF

Three National Priorities List (NPL) sites are currently designated at Hanford: the 100 Area, 200 Areas, and 300 Area. Full-scale remediation at the Hanford 100 Area site commenced under the Environmental Restoration Program in July 1996. Remediation on the 100 Area NPL waste units currently accounts for 65% to 70% of the waste disposed in ERDF. The 300 Area remediation began in July 1997 and currently accounts for approximately 30% of the waste disposed in ERDF. Demolition debris generated by the decontamination and decommissioning (D&D) program accounts for less than 1% of the total ERDF waste stream. Minor amounts of waste originate from the 200 Area NPL site, primarily from site investigations.

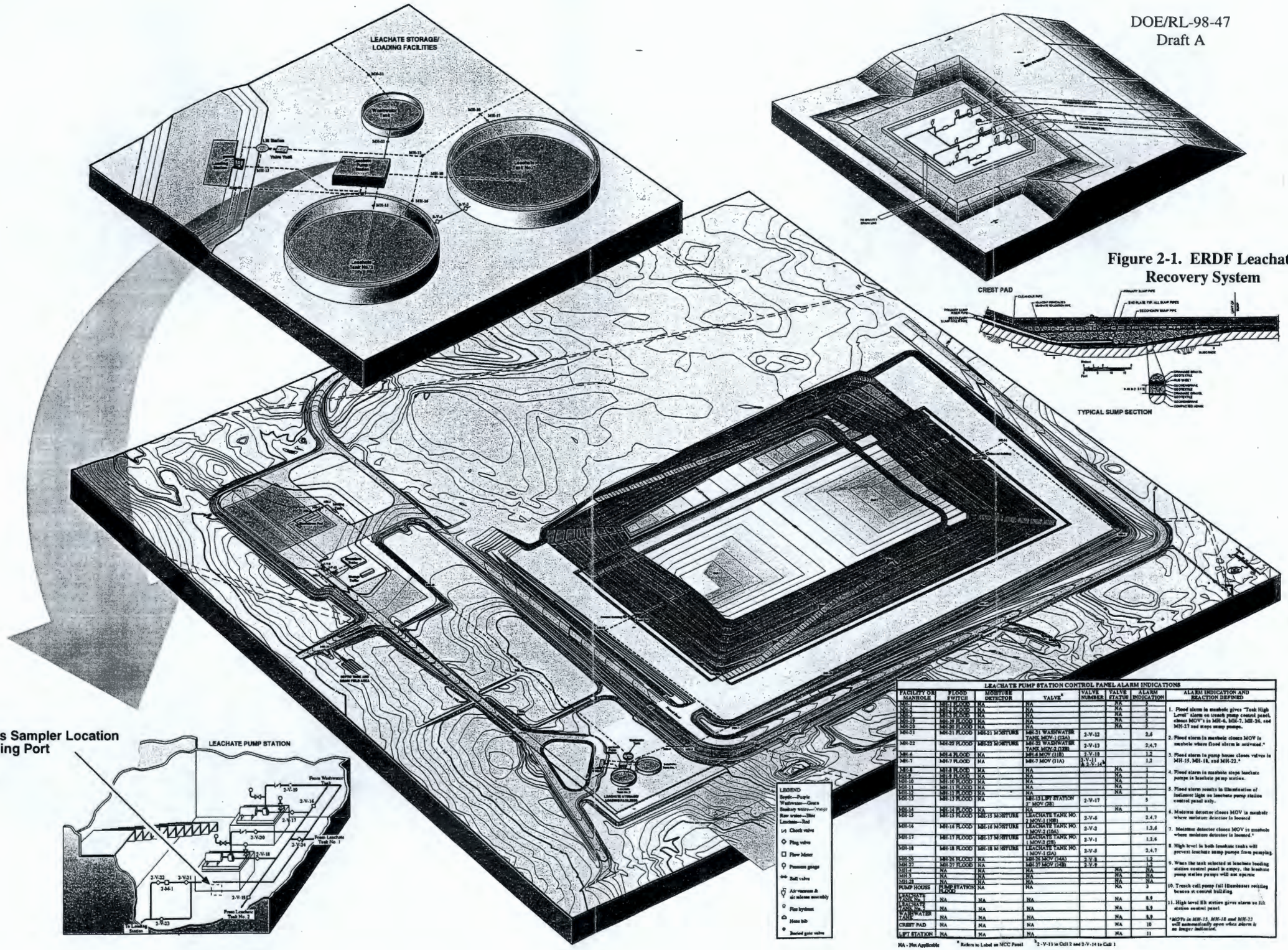


Figure 2-1. ERDF Leachate Recovery System

LEACHATE PUMP STATION CONTROL PANEL ALARM INDICATIONS							
FACILITY OR MANHOLE	FLOOD SWITCH	MOISTURE DETECTOR	VALVE[a]	VALVE NUMBER	VALVE STATUS	ALARM INDICATION	ALARM INDICATION AND REACTION DEFINED
MH-1	MH-1 FLOOD	NA	NA		NA	1	1. Flood alarm in manhole gives "Tank High Level" alarm on trench pump control panel, closes MOV's in MH-6, MH-7, MH-26, and MH-27 and stops sump pumps.
MH-2	MH-2 FLOOD	NA	NA		NA	1	
MH-3	MH-3 FLOOD	NA	NA		NA	1	
MH-19	MH-19 FLOOD	NA	NA		NA	1	
MH-20	MH-20 FLOOD	NA	NA		NA	1	
MH-21	MH-21 FLOOD	MH-21 MOISTURE	MH-21 WASHWATER TANK MOV-1 (12A)	2-V-12		2,6	2. Flood alarm in manhole closes MOV in manhole where flood alarm is activated.*
MH-22	MH-22 FLOOD	MH-22 MOISTURE	MH-22 WASHWATER TANK MOV-2 (12B)	2-V-13		2,4,7	
MH-6	MH-6 FLOOD	NA	MH-6 MOV (11B)	2-V-11		1,2	3. Flood alarm in pump house closes valves in MH-15, MH-16, and MH-22.*
MH-7	MH-7 FLOOD	NA	MH-7 MOV (11A)	2-V-11 & 2-V-14[b]		1,2	
MH-8	MH-8 FLOOD	NA	NA		NA	1	4. Flood alarm in manhole stops leachate pump in leachate pump station.
MH-9	MH-9 FLOOD	NA	NA		NA	1	
MH-10	MH-10 FLOOD	NA	NA		NA	1	
MH-11	MH-11 FLOOD	NA	NA		NA	1	5. Flood alarm results in illumination of indicator light on leachate pump station control panel only.
MH-12	MH-12 FLOOD	NA	NA		NA	1	
MH-13	MH-13 FLOOD	NA	MH-13 LIFT STATION 2" MOV (2B)	2-V-17		5	
MH-14	MH-14 FLOOD	NA	NA		NA	1	6. Moisture detector closes MOV in manhole where moisture detector is located
MH-15	MH-15 FLOOD	MH-15 MOISTURE	LEACHATE TANK NO. 2 MOV-1 (10B)	2-V-6		2,4,7	
MH-16	MH-16 FLOOD	MH-16 MOISTURE	LEACHATE TANK NO. 2 MOV-2 (10A)	2-V-2		1,2,6	7. Moisture detector closes MOV in manhole where moisture detector is located.*
MH-17	MH-17 FLOOD	MH-17 MOISTURE	LEACHATE TANK NO. 1 MOV-2 (2B)	2-V-1		1,2,6	
MH-18	MH-18 FLOOD	MH-18 MOISTURE	LEACHATE TANK NO. 1 MOV-1 (2A)	2-V-5		2,4,7	8. High level in both leachate tanks will prevent leachate sump pumps from pumping.
MH-26	MH-26 FLOOD	NA	MH-26 MOV (14A)	2-V-8		1,2	9. When the tank selected at leachate loading station control panel is empty, the leachate pump station pumps will not operate
MH-27	MH-27 FLOOD	NA	MH-27 MOV (14B)	2-V-9		1,2	
MH-4	NA	NA	NA		NA	NA	
MH-5	NA	NA	NA		NA	NA	10. Trench cell pump fail illuminates rotating beacon at control building
MH-28	NA	NA	NA		NA	NA	
PUMP HOUSE	PUMP STATION FLOOD	NA	NA		NA	3	
LEACHATE TANK No. 1	NA	NA	NA		NA	8,9	11. High level lift station gives alarm on lift station control panel
LEACHATE TANK No. 2	NA	NA	NA		NA	8,9	
WASHWATER TANK	NA	NA	NA		NA	8,9	
CREST PAD	NA	NA	NA		NA	10	
LIFT STATION	NA	NA	NA		NA	11	

NA - Not Applicable

[a] Refers to Label on MCC Panel

[b] 2-V-11 is Cell 2 and 2-V-14 is Cell 1

*MOVs in MH-15, MH-16 and MH-22 will automatically open when alarm is no longer indicated.

E9806107.1

2.1.1 Waste Sources

The ERDF is authorized to accept waste originating from environmental restoration on the Hanford Site. No waste from an ongoing production process or waste originating from off the Hanford Site is accepted for disposal at ERDF. The primary waste stream currently consists of soil from past-practice liquid waste disposal units that are contaminated with low levels of radioactivity.

A ROD was issued in September 1996 for remediation of high-priority liquid waste disposal sites in the 100-BC-1, 100-DR-1, and 100-HR-1 Operable Units (OUs). The ERDF was designated as the preferred disposal alternative for waste generated from these remedial actions. High-priority liquid waste disposal sites include retention basins, effluent trenches, sludge trenches, cribs, french drains, and effluent pipelines. An amendment to the ROD authorized remediation of 34 additional radioactive liquid waste disposal sites. These sites are the source of a significant percentage of the volume of waste sent to ERDF.

In July 1996, a ROD was signed for the 300-FF-1 and 300-FF-5 OUs. The 300-FF-1 OU contains source waste units related to process ponds and trenches, sewer systems, landfills, and burial grounds. The ROD authorizes ERDF as the preferred disposal alternative for waste generated from the remediation of sites in 300-FF-1. The 300-FF-5 is a groundwater OU that is being monitored and institutionally controlled, and does not currently generate waste.

A number of other RODs and Action Memoranda subsequently have been issued designating ERDF as the preferred disposal alternative. The combined waste load from these remedial actions constitutes a small percentage of the total ERDF waste.

The primary source of ERDF leachate is a result of precipitation infiltrating through the waste after rain or snowmelt. Waste arriving at the facility is primarily contaminated soil that contains a small percentage of moisture due to dust control activities at the remediation sites. Additional water may be added at the ERDF disposal point to further control dust. If necessary, water is added to the waste subsequent to disposal to provide for optimal compaction. Only a relatively small portion (10% or less) of the leachate generated is used in the trench for such purposes.

2.1.2 Leachate Generation

ERDF generated approximately 2 million gal of leachate from opening in July 1996 until July 1998. The facility operated only one of the two currently open cells until August 1997, when the second cell began to accept waste. Since that time leachate has been collected from the two cells instead of one. The characteristics and volume of the leachate are expected to vary somewhat over time, based on the number of cells that are open and actively accepting waste, and the volume of waste present in each cell. In general, the leachate is not anticipated to contain high concentrations of volatile or semivolatile organic analytes (VOA or SVOA). This assumption is based on the fact that the wastes that are being disposed at ERDF have been generated for the most part from sites where the contaminated materials have been residing in the open environment for many years. VOA and SVOA constituents should have degraded over the time periods that are involved with these sites. Other constituents that may be present in the waste

materials have also been subject to environmental degradation and leaching from precipitation that occurred at the location of waste generation.

Approximately 1.8 million gal of collected leachate has been transported for treatment at the ETF; the balance was used for dust control, waste compaction, or was lost to evaporation. ERDF's projected maximum annual leachate volume is estimated at 1 million gal per year per cell when a cell is in operation. Once a cell is full, an interim cover will be placed over the cell as operation in the adjacent cell allows access. Leachate generation will be significantly reduced over time once the cover is in place. A final cover will be placed over the entire facility as part of the closure plan.

2.1.3 Leachate Disposition

Leachate is collected in two aboveground modu-tanks with secondary containment/leak detection. A third unit is designated to collect washwater from ERDF decontamination operations, but may be used to collect leachate, if necessary.

The liners of the ERDF waste disposal cells are connected to a drainage sump to capture leachate that percolates through the waste, as well as any leachate that may breach the primary liner system. The modu-tanks collect the leachate before use or treatment. Leachate that is not used for dust control or waste compaction currently is transported by tanker truck to the 200 Area LWPF for treatment. Secondary waste from the treatment process is transported back to ERDF for disposal.

To date, ERDF has collected approximately 2 million gal of leachate from two disposal cells. Approximately 1.8 million gal of this water has been trucked to the 200 Area LWPF for processing, and 0.2 million gal were retained in the leachate and washwater storage units, used for dust suppression or waste compaction, or lost to evaporation.

2.2 SAMPLING AND MONITORING

This section describes the current program for characterizing ERDF waste and leachate from the facility.

2.2.1 Waste Characterization

The ERDF waste acceptance criteria (WAC) (BHI 1998) require that all waste disposed at the facility be characterized on the basis of source, physical form, and contaminant concentration levels. Characterization identifies the nature and extent of radioactive and dangerous/hazardous material contamination and describes the physical properties of the waste material. Characterization is based on historical analytical data, process knowledge, field screening, sample collection and analyses, or a combination of these factors.

Radioactive waste constituents must be adequately characterized to permit proper segregation, treatment, storage, and/or disposal. This characterization ensures that the major radionuclide content of the waste is known and recorded during the waste management process. Although

radionuclide characterization is a concern for ERDF acceptance, this aspect of the waste is not a consideration for delisting. The sampling strategy found in subsequent portions of this document will not include a strategy to characterize radionuclides. Radionuclides will continue to be managed under the authority of other regulatory programs, however, and characterized to support disposal alternatives for leachate. DOE Order 5820.2A, for example, governs the characterization of wastes containing radionuclides. The *Hanford Site Radiological Control Manual* (HSRCM-1 1996) contains procedures to ensure that worker exposure is within acceptable limits, as required under 10 CFR Part 835.

Waste shipped to ERDF is evaluated to determine if it is dangerous/hazardous and if the waste is prohibited from placement in ERDF due to land disposal restriction status. This determination may be satisfied by reference to existing waste characterization data, through waste analysis, or by citation of pertinent approved land disposal restriction waivers or variances.

Based on the characterization information, generators develop waste profiles and a waste designation that must be approved by ERDF management for each waste source (or sufficiently similar group of waste sources). Waste profiles are provided to the ERDF management and operations team prior to shipment of waste to ensure compliance with the ERDF WAC (BHI 1998) and to facilitate planning of waste transportation and disposal actions.

All ERDF users implement a verification program to ensure that generated waste intended for disposal at the ERDF is within the established waste profile. Verification activities may include application of field observation, process monitoring, sample collection and analyses, or a combination of these processes. Verification activities involving process monitoring or sample collection and analyses are planned and documented. For small waste streams, characterization and verification activities may consist of a single event. If a determination is made through verification activities that the physical nature, constituents, or constituent concentrations are not covered by or exceed those documented in the approved waste profile, the ERDF management and operations team is notified. After a project reevaluation of the assumptions used for waste profiling and characterization, the profile is revised to reflect the new values and submitted for acceptance to the ERDF management and operations team. If the profile does not conform to the ERDF WAC (BHI 1998), alternative treatment and/or disposal will be required.

2.2.2 Leachate Sampling

Leachate is sampled and analyzed before transport to LWPF. Results of the analyses conducted through December 1997 are summarized in Tables 2-1 through 2-5 along with the docket values. All sampling results to date are contained in Appendix A (Table A-1) for reference. Data presented for current sample results were validated by comparison to field and laboratory blanks, per EPA Organic and Inorganic Functional Guidelines (EPA 1994). Appendix B includes a description of the data validation process. Tables 2-1 through 2-5 provide the validated analytical results. These results indicate that currently monitored constituents are below the docket values for these compounds. Some of the constituents presented in these tables do not have an associated docket value; results are provided for information only.

Table 2-1. Summary Statistics for Volatile Organic Compounds With At Least One Detected Concentration.

CAS #	Compound	EQL	Docket Value	Non-Detects	Detects				
				Count	Count	Min	Max	Mean	SD
67-64-1	2-Propanone (Acetone)	20	4000	10	1	17	17	17	NA
108-88-3	Toluene	5	1000	10	1	2	2	2	NA

Units = µg/L
EQL = estimated quantitation limit
SD = standard deviation
NA = not applicable

Table 2-2. Summary Statistics for Semivolatile Organic Compounds With At Least One Detected Concentration.

CAS #	Compound	EQL	Docket Value	Non-Detects	Detects				
				Count	Count	Min	Max	Mean	SD
117-81-7	Bis(2-ethylhexyl) phthalate	10	6	6	5	1	14	5.6	4.93
85-68-7	Butylbenzylphthalate	10	7000	10	1	9	9	9	NA

Units = µg/L
EQL = estimated quantitation limit
SD = standard deviation
NA = not applicable

Table 2-3. Summary Statistics for Inorganic Compounds With At Least One Detected Value.

CAS #	Compound	EQL	Docket Value	Non-Detects	Detects				
				Count	Count	Min	Max	Mean	SD
7429-90-5	Aluminum	200	NA	9	2	213	422	318	148
7439-89-6	Arsenic	10	50	0	11	13.6	32.6	21.8	5.07
7439-95-4	Barium	200	2000	0	11	29.4	63.3	41.9	9.98
7440-41-71	Beryllium	5	4	3	8	0.33	0.77	0.58	0.18
7439-96-5	Calcium	5000	NA	0	11	75500	227000	124955	39132
7440-02-0	Chromium	10	100	4	7	3.8	13.9	8.93	4.24
7440-09-7	Copper	25	1300	10	1	10.2	10.2	10.2	NA
7440-23-5	Iron	100	NA	7	4	102	798	480	313
7440-38-2	Magnesium	5000	NA	0	11	21000	65300	36855	11085
7440-39-3	Manganese	15	NA	2	9	4.4	17.7	10.4	5.31
7439-97-6	Mercury	0.2	2	9	2	0.16	0.16	0.16	NA
7440-47-3	Nickel	40	100	10	1	10.2	10.2	10.2	NA
7440-50-8	Potassium	5000	NA	0	11	10600	17000	13364	1691
7440-62-2	Sodium	5000	NA	0	11	179000	249000	216000	25791
7440-66-6	Vanadium	50	300	1	10	27.3	52.9	35.1	8.01
7440-70-2	Zinc	20	10000	9	2	19.5	49.7	34.6	21

Units = µg/L
EQL = estimated quantitation limit
SD = standard deviation
NA = not applicable

Table 2-4. Summary Statistics for Radioactive Compounds With At Least One Detected Concentration.

CAS #	Compound	EQL	Docket Value	Non-Detects	Detects				
				Count	Count	Min	Max	Mean	SD
7440-61-1	Uranium	n/a	NA	8	1	213	213	213	NA

Units = pCi/L
EQL = estimated quantitation limit
SD = standard deviation
NA = not applicable
n/a = not available

Table 2-5. Summary Statistics for Wet Chemistry Compounds With At Least One Detected Value.

CAS #	Compound	EQL	Docket Value	Non-Detects	Detects				
				Count	Count	Min	Max	Mean	SD
7664-41-7	Ammonia (µg/L)	n/a	NA	10	1	151	151	151	NA
16887-00-6	Chloride	n/a	NA	0	11	154	443	261	99.6
16984-48-8	Fluoride	n/a	4	0	11	0.73	1.18	0.983	0.135
7697-37-2	Nitrate	n/a	NA	0	11	3.42	19.3	11.3	4.16
PH	pH	n/a	NA	0	11	7.51	8.5	7.88	0.265
SpecCond	Specific Conductance (uMHOS/cm)	n/a	NA	0	3	1595	1673	1646	44.2
14808-79-8	Sulfate	n/a	NA	0	11	247	534	320	88.2
TDS	Total Dissolved Solids	n/a	NA	0	3	1050	1090	1073	20.8
TOC	Total Organic Carbon	n/a	NA	0	2	9.74	12.1	10.92	1.67
TSS	Total Suspended Solids	n/a	NA	0	2	3	17	10	9.90

Units = mg/L where not otherwise specified
EQL = estimated quantitation limit
SD = standard deviation
NA = not applicable
n/a = not available

2.2.3 Constituents of Concern

This section describes the process used to develop a list of contaminants of concern (COCs) for leachate monitoring. This process makes use of historical leachate data summarized in Section 2.2.2 and provided in Appendix A. The logic for the selection process is described in Figures 2-2 through 2-5 (see Table 2-6 for summary descriptions of the figures) and results in a list of contaminants of potential concern (COPCs). Each decision in the logic pathway is identified with a "D," and each database query is identified with a "Q." The contaminants that are used in the routine leachate monitoring, described in Section 3.1, are referred to as the COCs. Tables providing the results from the individual queries are included in Appendix A.

2.2.3.1 ERDF Organic Data. The initiation point for selection of analytes in Figure 2-2 is the list of validated and nonvalidated analytical data for historical results from samples of the ERDF leachate. This list includes detected and nondetected analytes from historical ERDF leachate data. The Chemical Abstract Numbers (CAS#) from this list were consolidated to ensure compatibility with CAS#s in later steps. This step included, for example, combining various Aroclors into one polychlorinated biphenyl (PCB) class. The question "Are other than organic

compounds on the input list" is presented in D1 to focus this logic on organic compounds. Other analytical constituents, such as organometalics and metals, are addressed in Section 2.2.4.

Table 2-6. Organic COPC Selection Logic.

Figure 2-2. ERDF Organic Data. Figure 2-2 provides the approach that was used to classify the organic analytes into one group of TICs and detected organic compounds in the ERDF leachate.
Figure 2-3. Organic Regulatory Input List. Figure 2-3 provides the logic for the consolidation of the starting lists of organic compounds from relevant regulatory source documents and to divide constituents into organic and non-organic compounds (metals, organometalics, test parameters, radionuclides) to simplify their review.
Figure 2-4. Organic Compound Evaluation for Analysis. Figure 2-4 compares Figure 2-2 to the list of regulated analytes to establish the compounds that will be evaluated for analysis.
Figure 2-5. Organic Analytical Method Evaluation. Figure 2-5 shows the evaluation process for determining whether regulated organic analytes that were not analyzed previously can be analyzed by established SW-846 analytical methods and provides organic baseline COPCs.

COPC = contaminants of potential concern
ERDF = Environmental Restoration Disposal Facility
TIC = tentatively identified compound

Appendix A, Table A-2 (Q2) presents the list of metals, test parameters, and organometalics, which were evaluated in the leachate. Although previous analyses of leachate evaluated radionuclide constituents, they are not being addressed as part of this petition.

The organic analytes then were screened to separate those detected in the leachate. Tentatively identified compounds and compounds with positive detects in ERDF leachate (Appendix A, Table A-3, Q3) were then moved forward for additional consideration.

2.2.3.2 Organic Input List. Figure 2-3 presents the logic for the determination of the regulated organic COPCs. The Toxicity Characteristic Analytes from 40 CFR 261.24, the Appendix VIII list of chemicals and compounds from 40 CFR 261, additional analytes from the *Petitions to Delist Hazardous Wastes, A Guidance Manual* (EPA 1993), and the list of analytes presented in the EPA delisting docket list, based on potential risk, were used as a starting point. The compounds from each source were combined into a master list and the CAS#s were consolidated. The following steps were incorporated into the consolidation process:

1. Because no specific CAS#s are available for compounds such as oil and grease, unique identification numbers were established for this comparison.

2. The isomers of the cresols were consolidated as total cresol.

3. The isomers of xylene are listed separately in the database.

4. Appendix VIII lists classes of compounds "Not Otherwise Specified" (NOS), such as the following chlorinated compounds:

   - Benzenes, ethanes, fluorocarbons, naphthalene, phenols, alkyl ethers
   - PCBs.

   To allow the evaluation of NOS compounds, the compounds fitting these classifications were identified in the ERDF database based on waste profile sheets and are listed in Table A-4. These compounds were added to the Appendix VIII list in the ERDF database to facilitate computerized comparison to delisting criteria.

The question "Are other than organic compounds on the input list?" is presented in D2 to remove inorganics, metals, and organometalics for a separate evaluation. Table A-5 (Q7) in Appendix A presents this list of metals, inorganics, and organometalics to be considered in Sections 2.2.4 and 2.2.5.

In decision D3 the regulated compounds from D2 were compared to the list of pesticides known to be used at Hanford since 1990. This comparison identified two pesticides, Bendiocarb and 2,4-D, that will remain in the list of compounds potentially used at Hanford. The remaining regulated compounds were compared to previous studies of Hanford data in D4, to screen out compounds determined through previous site investigations not to be used at Hanford.

Two major documents supply useful information for this petition concerning regulated compounds highly unlikely to have been used at Hanford. One document was created during the Regulatory Data Quality Objective (DQO) process, which evaluated the potential contents of 177 high-level waste tanks at Hanford (PNNL 1998). Although the Regulatory DQO used a different starting list than the ERDF delisting petition, some constituents are common to both starting lists. These constituents can be excluded from further consideration based on the established fact that they were not previously used at Hanford. The second document is the ETF delisting petition (DOE-RL 1993), which also resulted in a list of chemicals unlikely to have been used at Hanford. Tables 2-7 and 2-8 further describe the two documents.

Table 2-7. Regulatory DQO—Analytes Potentially Not Used at Hanford. (2 Sheets)

The starting list of regulated compounds was reviewed by the technical staff of Pacific Northwest National Laboratory (PNNL), the Washington State Department of Ecology, and independent consultants to screen for specific compounds typically used in industries or applications unrelated to Hanford activities. The general categories for evaluation are listed below:

- Pesticides
- Military Ordnance
- Dyestuff
- Pharmaceutical
- Solvents
- Consumer
- Group/Mixture
- Polymer
- Independent Review.

Table 2-7. Regulatory DQO—Analytes Potentially Not Used at Hanford. (2 Sheets)

A discussion of each category is presented below with examples of compounds considered within each category present. Material Safety Data Sheets, the Merck Index, and other technical databases were consulted to evaluate the potential uses of each compound. A team of technical experts with extensive Hanford experience reviewed the information to assess whether the compounds would have been used in processes at Hanford. The detailed list of removed compounds in each category is included in Table A-6 (Q10).

Pesticides. Compounds included in this category, and referred to in this logic as pesticides, include pesticides, miticides, insecticides, fungicides, rodenticides, and herbicides. A detailed discussion of the method to identify the pesticides/miticides/insecticides that were excluded and included in the logic is provided in the Regulatory DQO. The records for uses of pesticides at Hanford before 1990 were incomplete. Compounds that were narrowly focused on specific crops or pests not applicable to Hanford were not evaluated further in the Regulatory DQO. Available information suggests that pesticides used at Hanford were used primarily within enclosed operating facilities and offices, not the "outdoor" environment. Only where a decision could be defensibly made regarding the not-usage at Hanford, the compound was included in this list. Examples of compounds potentially not used at Hanford include TEPP (CAS# 107-49-3) and naled (CAS# 300-76-5).

Military. This category includes compounds such as explosives and chemical war agents. Examples of compounds include nitrogen mustard N-oxide (CAS# 126-85-2) and nitroglycerin (CAS# 55-63-0).

Dyestuff. This category includes compounds used in the fabrication of dyes or actual dyes used in all types of materials, food, textiles, etc. Examples of these compounds include xylidine (CAS# 1300-73-8) and o-anisidine (CAS# 90-04-0).

Pharmaceuticals. This category includes chemicals used in making pharmaceuticals. An example of a compound used in pharmaceuticals is safrole (CAS# 94-59-7).

Solvent. This category includes solvents that were not used in Hanford processes. An example is epichlorohydrin (CAS# 106-89-8), a solvent for natural and synthetic resins, gums, cellulose esters and ethers, paints, varnishes, nail enamels and lacquers, and cements for celluloid.

Consumer. This category includes chemicals used in consumer products. An example is isosafrole (CAS# 120-58-1), used to manufacture heliotropin, to modify oriental perfumes, to strengthen soap perfumes, and in small quantities together with methyl salicylate as an additive in root beer and sarsaparilla flavors.

Group/Mixtures. This category includes mixtures such as turpentine and asphalt.

Polymers. This category includes chemicals used to make polymers such as neoprene and rubbers. 4,4'-methylenebisbenzenamine dihydrochloride (CAS# 13552-44-8), for example, is used as a closed-system intermediate in the production of 4,4'-methylenediphenyl diisocyanate, which is used in rigid urethane foams for insulation material, in semiflexible polyurethane foams for automobile safety cushioning and in the manufacture of elastomers such as spandex fibers. It is also used as a curing agent for epoxy resins (as a cross-linking agent), in the manufacture of 4,4'-methylenebis (cyclohexaneamine), in the formation of a polyamide imide or a polyester imide (which is used as a wire coating), in the preparation of azo dyes, as a reagent in the analysis of tungsten and sulfates, as a corrosion inhibitor for iron under acidic conditions, as a curative for neoprene rubber, in a heat-sensitive hair-setting cream and in the formulation of polyurethanes for encapsulating instruments for measuring water flow.

Independent Review. Independent consultants with extensive Hanford on-site experience performed an independent review of the regulatory compounds. Based on their professional judgement, certain regulatory compounds could be eliminated as not being used at Hanford.

Table 2-8. ETF Delisting—Chemicals Excluded from Regulatory List.

The ETF delisting petition addressed treated waste from evaporator condensate from tank farms. Tank farms accepted a wide range of waste from Hanford Site processes from 1950 through the 1970s. ETF's approved delisting petition examined all compounds potentially used at Hanford to identify those that could be expected in the condensate. The petition considered categories of compounds similar to those reviewed in the Regulatory DQO, e.g., pesticides, ordnance, dyestuff, etc. The ETF Delisting Petition, C-018H Surrogate Test Solution, Table D-1 (DOE/RL-92-72, rev 1, August 1993) lists the compounds and the reason for removal from the ETF lists. Compounds that are salts or NOS were excluded. The NOS compounds, as previously discussed, are addressed by analysis of the specific underlying metal or salt identified in the ERDF database.

DQO = Data Quality Objective
ERDF = Environmental Restoration Disposal Facility
ETF = Effluent Treatment Facility
NOS = not otherwise specified

Both the Regulatory DQO and the ETF "Not Used at Hanford" lists are considered applicable to ERDF. These lists were used to eliminate from consideration regulated materials not be present on the Hanford Site and, thus, not in the ERDF leachate (Table A-7, Q11). This table does not include all of the compounds listed in Table A-6, since the projects used different regulatory starting lists.

From the logic illustrated in Figure 2-3, a table of regulated organic compounds potentially used at Hanford is presented in Table A-8 (Q13).

2.2.3.3 Organic Compound Evaluation for Analysis. In Figure 2-4, the list of regulated organic compounds was reviewed to identify uses by industries unrelated to Hanford (D5); this step involved an assessment of the remaining compounds to determine whether the COPC was likely to be present on the Hanford Site. A preliminary review of the analyte list has suggested that some of the regulated compounds remaining on the list could be eliminated based on industry use or professional judgement. This evaluation was based on the search of publications and Material Safety Data Sheets to determine the compound's industrial use or its solubility in water. Since this petition applies to leachate, organic compounds insoluble in water would not have to be considered for analysis. Compounds eliminated in this study are listed in Table A-9 (Q14). Decision D-6 then compares the remaining compounds potentially used at Hanford against the analytes detected in ERDF leachate from Figure 2-2. Using the information from Figures 2-2 and 2-3 results in the following sets of analytes:

- Regulated organic compounds detected in ERDF leachate that will continue to be analyzed, Table A-10 (Q16), and
- Regulated organic compounds not detected in ERDF leachate that will be evaluated for analysis, Table A-11 (Q17).

2.2.3.4 Organic Analytical Method Evaluation. Figure 2-5 provides the logic used to evaluate compounds not detected in the leachate for future analysis. The regulated organic compounds not detected in ERDF leachate were evaluated to determine whether they are amenable to analysis by SW-846. If an analytical method from SW-846 exists for the regulated compound,

the analyte remained in the assessment (Q18). If no SW-846 method exists, the analyte was compared to the risk values listed in the docket and, if there is no associated risk, the compound was not included as a COPC (Q23). Analytes that are listed on the docket and are either not capable of analysis through an accepted SW-846 method, or are single method analytes from SW-846 listed in Table 2-9 (Q22) are included in the baseline COPC list (Q25). The remaining compounds from Q18 were then screened to determine whether more than one analyte can be analyzed through an SW-846 analytical method.

Table 2-9. Regulated Organic Compounds Listed in Docket to be Analyzed by Unique or Suggested Analytical Method.

CAS #	Constituent	Delisting Limit [mg/L]	SW-846 Method	Proposed Analytical Method
1336-36-3	Polychlorinated biphenyls (PCBs)	0.0005	8082	
156-59-2	1,2-cis-Dichloroethene	0.4		8260B
39638-32-9	Bis(2-chloroisopropyl)ether	0.001		8260B
50-00-0	Formaldehyde	7	8315A	
823-40-5	Toluene-2,6-diamine	7		8270C

If the analyte can be determined by a multi-analyte technique, such as method 8270C, the compound was included in the organic baseline COPC list (Q25). If the analyte can only be analyzed by a unique method (Q21), then the analyte was compared with health-based risk criteria provided in the EPA docket (D9). If no criteria were established in the Docket List, the analyte was not included as COPC (Table A-12 [Q23]).

If the regulated organic compound is on the docket list (Q22), or can be analyzed by an SW-846 multi-analyte method (Q20), the analyte is included in the organic baseline COPC list (Q25).

2.2.4 Metals and Ions

The regulated metals/ions, inorganic compounds and organometalic compounds from the Figure 2-3 source documents were compared to the historical ERDF leachate data from Figure 2-2. Although the logic used is similar to the process used to select organic analytes, inorganic and organometalic compounds disassociate to the ions in acidic solutions used during analysis of metals and are measured as ions in EPA anion and cation methods. The relevant analyses are for the cation or the anion form. Therefore, inorganic and organic compounds must be separated into regulated form to compare their ionic components against the analytical results.

1. The inorganic and organometalic ERDF leachate results were consolidated in Table A-13.

2. The regulated inorganic and organometalic compounds were listed and the resulting cations and anions were consolidated in Table A-14.

The comparison of the outputs from #1 and #2 results in the following groups of metals/ions:

- Metals/ions on the regulatory list and not analyzed in the ERDF leachate.
- Metals/ions on the regulatory list and analyzed in the ERDF leachate multiple times.
- Metal/ions analyzed in the ERDF leachate that are not on the regulatory input list.

The following discussion presents the logic of including or excluding metals/ions in the list of COPCs from these groups.

2.2.4.1 Metals/Ions on the Regulated List and Not Analyzed in the Leachate. Table 2-10 identifies those metals/ions that are on the list of regulated compounds that have never been analyzed in the ERDF leachate.

Table 2-10. Regulated Metals/Ions Not Analyzed for in ERDF Leachate.

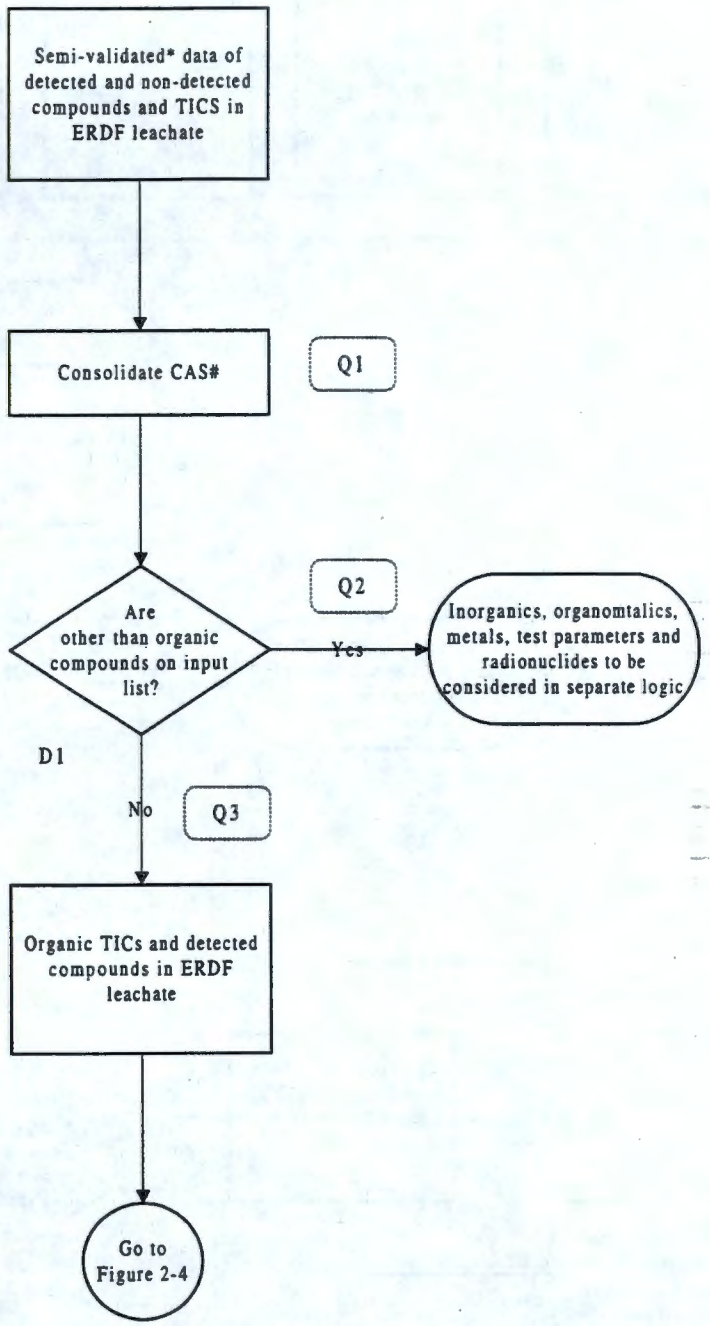
CAS #	Constituent	Ion	COPC
1333-86-4	Carbon black	C	No
57-12-5	Cyanide	CN	Yes
7440-04-2	Osmium	Os	No
7440-31-5	Tin, metal	Sn	Yes
7723-14-0	Phosphorous	P	No
24959-67-9	Bromine	Br	No
63705-05-5	Sulfur	S	No
3812-32-6	Carbonate	Co_3	No
18540-29-9	Chromium (VI)	Cr (VI)	No
16065-83-1	Chromium (III) ion	Cr (III)	Yes

Carbon black and carbonate are neither regulated by health-based requirements nor listed in the docket. If carbonate is present, it will be associated with another metal cation. Carbon black and carbonate, therefore, will not be included as COPCs.

Cyanide has an established delisting level in the docket. Although cyanide is not expected to be present in the leachate, baseline data will be gathered and evaluated. Therefore, it remains a COPC.

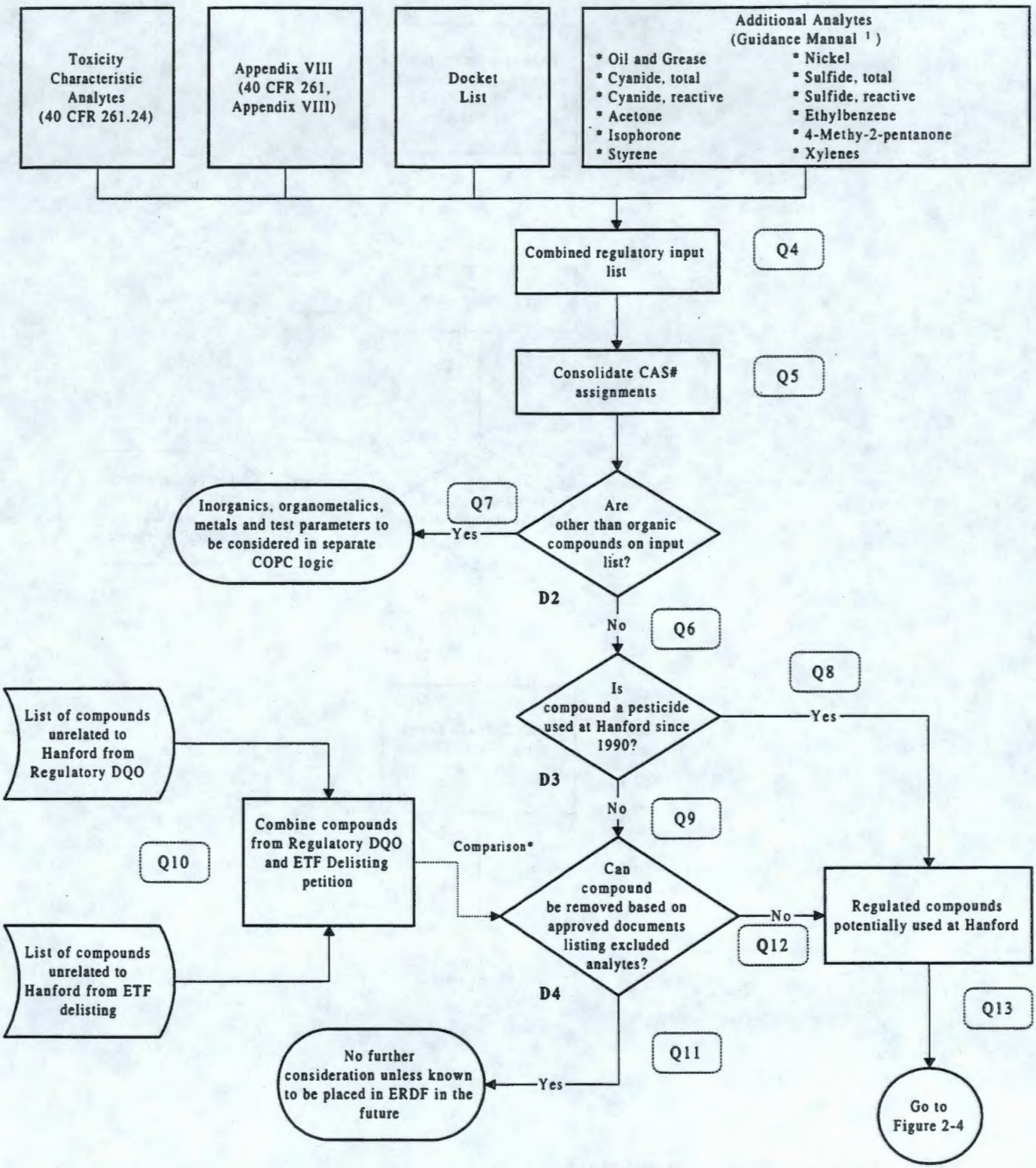
Osmium is seldom used in industry and is not listed in the Klem and Agnew inventories of the inorganics at the Hanford site or those that are likely to be in the tank waste (Klem 1990, Agnew 1997). No risk level is present in the docket; therefore, osmium is not retained as a COPC.

Figure 2-2. ERDF Organic Data.



* Metal, volatile and semi-volatile data were validated for blank contamination only.

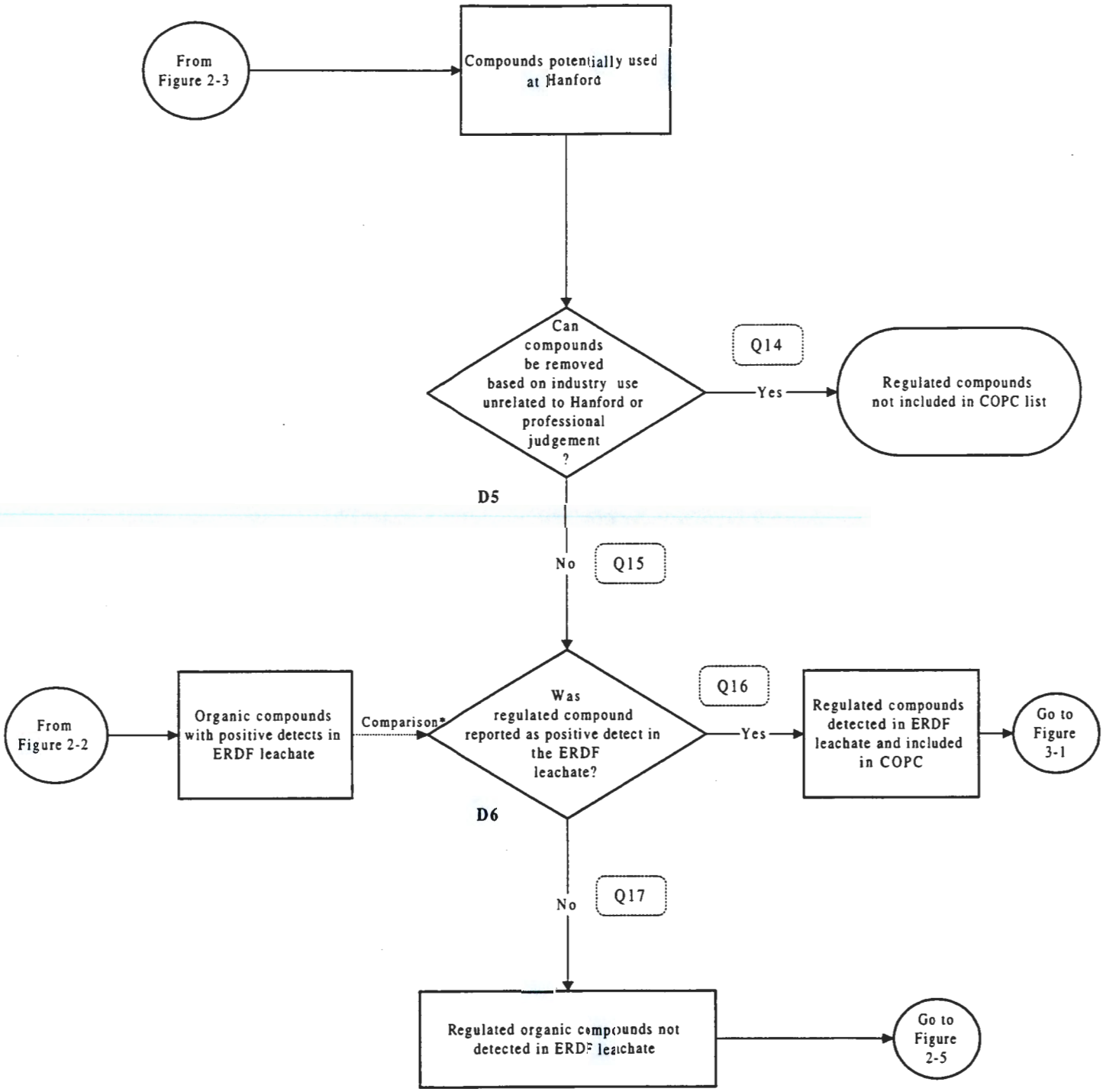
Figure 2-3. Organic Input List.



1) Petitions to delist hazardous wastes, a guidance manual, 2nd edition, EPA 530-R-93-007, March 1993

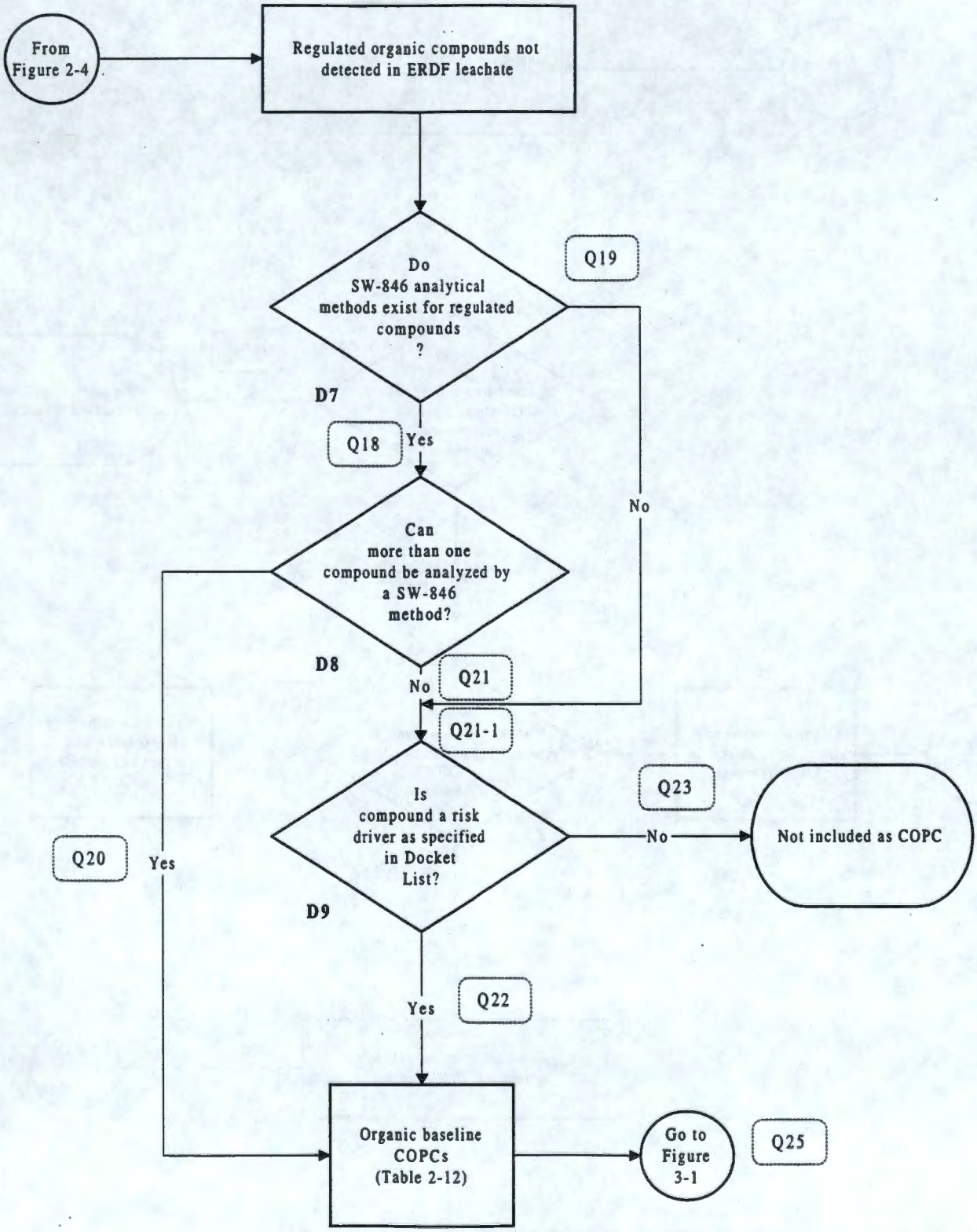
* During this comparison the total number of compounds from the inflow might not be represented in the total number of compounds in the outflow. Duplicate and non-regulated compounds were not considered.

Figure 2-4. Organic Compound Evaluation for Analysis.



* During this comparison the total number of compounds from the inflow might not be represented in the total number of compounds in the outflow. Non-regulated compounds are not considered.

Figure 2-5. Organic Analytical Method Assessment.



Hexavalent chromium has not been analyzed in the ERDF leachate. Hexavalent chromium is on the docket list and has a delisting value, but is not on Appendix VIII. Total chromium, which includes chromium III and VI, has been detected in leachate samples 10 times with results ranging from 3.8 to 13.9 µg/L. The delisting level for hexavalent chromium is 1,000 µg/L (10 x 100 µg/L) and for total chromium is 40,000 µg/L. If all the chromium were in the hexavalent state, it would still be a factor of 100 below the delisting level for hexavalent chromium. Therefore, total chromium will be used as an indicator for hexavalent. If total chromium levels exceed five times the docket values, hexavalent chromium will be measured in the next two rounds of sampling.

Tin has a docket value and for that reason it will be included as a baseline COPC.

Phosphorous, bromine, and sulfur are not on the docket list as anions or as part of compounds and have not been analyzed in the leachate. Therefore, these anions will not be included as baseline COPCs.

2.2.4.2 Metals/Ions on the Regulated List and Analyzed in the Leachate Multiple Times. Table A-15 lists the metals/ions from the list of regulated compounds, the number of the times detected in the leachate, number of times analyzed, and compares the results to 10 times the docket values. No metals or ions analyzed have been found at concentrations above the docket values; therefore, all are below the delisting limit.

The analytes for which delisting limits can be established will be kept on the baseline COPC list and are listed in Table 2-12. Sufficient information has been developed for those analytes that have no health-based docket values to exclude these from the initial COPCs and are listed in Table A-16.

2.2.4.3 Metals/Ions Analyzed in the Leachate that are not on the Regulated Input List. Table 2-11 identifies these analytes that are not on the Appendix VIII or the docket list; therefore, they will not be analyzed and are not considered COPCs.

Table 2-11. Detected Metals in ERDF Included Neither in Regulatory Input nor Docket List.

CAS #	Constituent	Ion
7439-89-6	Iron	Fe
7439-95-4	Magnesium	Mg
7440-61-1	Uranium	U

The remaining metals are incorporated in the list of initial COPCs identified in Table 2-12.

Table 2-12. Initial Baseline Organic and Inorganic COPCs (Q26). (5 Sheets)

CAS #	Constituent	SW-846 Method	Proposed Analytical Method
7429-90-5	Aluminum	6010B	
7440-36-0	Antimony	6010B	
7440-38-2	Arsenic	6010B	
7440-39-3	Barium	6010B	
7440-41-7	Beryllium	6010B	
24959-67-9	Bromide	9056	
7440-43-9	Cadmium	6010B	
7440-70-2	Calcium	6010B	
7440-47-3	Chromium	6010B	
7440-48-4	Cobalt	6010B	
7440-50-8	Copper	6010B	
7439-92-1	Lead	6010B	
7439-96-5	Manganese	6010B	
7439-95-4	Magnesium	6010B	
7439-97-6	Mercury	7470A	
7440-02-0	Nickel	6010B	
7440-09-7	Potassium	6010B	
7782-49-2	Selenium	6010B	
7440-21-3	Silicon	6010B	
7440-22-4	Silver	6010B	
7440-23-5	Sodium	6010B	
7440-28-0	Thallium	6010B	
7440-31-5	Tin, metal	6010B	
7440-62-2	Vanadium	6010B	
7440-66-6	Zinc	6010B	
7664-41-7	Ammonia		350.2
16887-00-6	Chloride	9056	
57-12-5	Cyanide	9012A	
16984-48-8	Fluoride	9056	
14797-55-8	Nitrate	9056	
14797-65-0	Nitrite	9056	
14265-44-2	Phosphate	9056	
14808-79-8	Sulfate	9056	
71-55-6	1,1,1-Trichloroethane	8260B	

Table 2-12. Initial Baseline Organic and Inorganic COPCs (Q26). (5 Sheets)

CAS #	Constituent	SW-846 Method	Proposed Analytical Method
79-34-5	1,1,2,2-Tetrachloroethane	8260B	
127-18-4	1,1,2,2-Tetrachloroethene	8260B	
79-00-5	1,1,2-Trichloroethane	8260B	
79-01-6	1,1,2-Trichloroethylene	8260B	
75-34-3	1,1-Dichloroethane	8260B	
75-35-4	1,1-Dichloroethene	8260B	
76-13-1	1,2,2-Trichlorotrifluoroethane (Freon 113)	8260B	
1464-53-5	1,2,3,4-Diepoxybutane	8260B	
120-82-1	1,2,4-Trichlorobenzene	8270C	
156-59-2	1,2-cis-Dichloroethene		8260B
95-50-1	1,2-Dichlorobenzene	8270C	
107-06-2	1,2-Dichloroethane	8260B	
78-87-5	1,2-Dichloropropane	8260B	
122-66-7	1,2-Diphenylhydrazine	8270C	
156-60-5	1,2-trans-Dichloroethene	8260B	
541-73-1	1,3-Dichlorobenzene	8270C	
542-75-6	1,3-Dichloropropene	8260B	
99-65-0	1,3-Dinitrobenzene	8270C	
106-46-7	1,4-Dichlorobenzene	8270C	
100-25-4	1,4-Dinitrobenzene	8270C	
123-91-1	1,4-Dioxane	8260B	
130-15-4	1,4-Naphthoquinone	8270C	
591-08-2	1-Acetyl-2-thiourea	8270C	
75-01-4	1-Chloroethene (Vinyl Chloride)	8260B	
95-95-4	2,4,5-Trichlorophenol	8270C	
88-06-2	2,4,6-Trichlorophenol	8270C	
120-83-2	2,4-Dichlorophenol	8270C	
105-67-9	2,4-Dimethylphenol	8270C	
51-28-5	2,4-Dinitrophenol	8270C	
78-93-3	2-Butanone (MEK)	8260B	
4170-30-3	2-Butenaldehyde	8260B	
110-75-8	2-Chloroethyl vinyl ether	8260B	
91-58-7	2-Chloronaphthalene	8270C	
95-57-8	2-Chlorophenol	8270C	

Table 2-12. Initial Baseline Organic and Inorganic COPCs (Q26). (5 Sheets)

CAS #	Constituent	SW-846 Method	Proposed Analytical Method
131-89-5	2-Cyclohexyl-4,6-dinitrophenol	8270C	
126-98-7	2-Methyl-2-propenenitrile	8260B	
78-83-1	2-Methylpropyl alcohol	8260B	
109-06-8	2-Methylpyridine (2-Picoline)	8270C	
91-59-8	2-Naphthylamine	8270C	
67-64-1	2-Propanone (Acetone)	8260B	
107-18-6	2-Propen-1-ol (Allyl alcohol)	8260B	
107-05-1	3-Chloropropene	8260B	
542-76-7	3-Chloropropionitrile	8260B	
101-55-3	4-Bromophenylphenyl ether	8270C	
59-50-7	4-Chloro-3-methylphenol	8270C	
108-10-1	4-Methyl-2-pentanone	8260B	
100-02-7	4-Nitrophenol	8270C	
57-97-6	7,12-Dimethylbenz[a]anthracene	8270C	
194-59-2	7H-Dibenzo[c,g]carbazole	8270C	
83-32-9	Acenaphthene	8270C	
141-78-6	Acetic acid ethyl ester	8260B	
108-05-4	Acetic acid vinyl ester	8260B	
75-05-8	Acetonitrile	8260B	
98-86-2	Acetophenone	8270C	
107-02-8	Acrolein	8260B	
107-13-1	Acrylonitrile	8260B	
122-09-8	alpha,alpha-Dimethylphenethylamine	8270C	
319-84-6	alpha-BHC	8081A	
134-32-7	alpha-Naphthylamine	8270C	
62-53-3	Aniline	8270C	
120-12-7	Anthracene	8270C	
71-43-2	Benzene	8260B	
56-55-3	Benzo(a)anthracene	8270C	
50-32-8	Benzo(a)pyrene	8270C	
205-99-2	Benzo(b)fluoranthene	8270C	
207-08-9	Benzo(k)fluoranthene	8270C	
100-51-6	Benzyl alcohol	8270C	
319-85-7	beta-BHC	8081A	

Table 2-12. Initial Baseline Organic and Inorganic COPCs (Q26). (5 Sheets)

CAS #	Constituent	SW-846 Method	Proposed Analytical Method
111-91-1	Bis(2-Chloroethoxy)methane	8270C	
111-44-4	Bis(2-chloroethyl) ether	8270C	
108-60-1	Bis(2-Chloroisopropyl) ether	8270C	
117-81-7	Bis(2-ethylhexyl) phthalate	8270C	
598-31-2	Bromoacetone	8260B	
75-27-4	Bromodichloromethane	8260B	
74-83-9	Bromomethane	8260B	
85-68-7	Butylbenzylphthalate	8270C	
75-15-0	Carbon disulfide	8260B	
56-23-5	Carbon tetrachloride	8260B	
108-90-7	Chlorobenzene	8260B	
75-00-3	Chloroethane	8260B	
67-66-3	Chloroform	8260B	
74-87-3	Chloromethane	8260B	
218-01-9	Chrysene	8270C	
1319-77-3	Cresols, total	8270C	
53-70-3	Dibenz[a,h]anthracene	8270C	
124-48-1	Dibromochloromethane	8260B	
25321-22-6	Dichlorobenzene	8260B	
75-71-8	Dichlorodifluoromethane	8260B	
75-09-2	Dichloromethane (Methylene Chloride)	8260B	
84-66-2	Diethyl phthalate	8270C	
94-58-6	Dihydrosafrole	8270C	
131-11-3	Dimethyl phthalate	8270C	
84-74-2	Di-n-butylphthalate	8270C	
25154-54-5	Dinitrobenzene	8270C	
117-84-0	Di-n-octylphthalate	8270C	
100-41-4	Ethyl benzene	8260B	
60-29-7	Ethyl ether	8260B	
62-50-0	Ethyl methanesulfonate	8270C	
106-93-4	Ethylene dibromide	8260B	
206-44-0	Fluoranthene	8270C	
86-73-7	Fluorene	8270C	
50-00-0	Formaldehyde	8315A	

Table 2-12. Initial Baseline Organic and Inorganic COPCs (Q26). (5 Sheets)

CAS #	Constituent	SW-846 Method	Proposed Analytical Method
1024-57-3	Heptachlor Epoxide	8081A	
87-68-3	Hexachlorobutadiene	8270C	
67-72-1	Hexachloroethane	8270C	
70-30-4	Hexachlorophene	8270C	
193-39-5	Indeno(1,2,3-cd)pyrene	8270C	
78-59-1	Isophorone	8270C	
109-77-3	Malononitrile	8260B	
122-39-4	N,N-Diphenylamine	8270C	
91-20-3	Naphthalene	8270C	
71-36-3	n-Butyl alcohol	8260B	
98-95-3	Nitrobenzene	8270C	
1116-54-7	N-Nitrosodiethanolamine	8270C	
621-64-7	N-Nitroso-di-n-propylamine	8270C	
86-30-6	N-Nitrosodiphenylamine	8270C	
59-89-2	N-Nitrosomorpholine	8270C	
62-75-9	N-Nitroso-N,N-dimethylamine	8270C	
107-10-8	n-Propylamine	8260B	
126-68-1	O,O,O-Triethyl phosphorothioate	8270C	
87-86-5	Pentachlorophenol	8270C	
108-95-2	Phenol	8270C	
1336-36-3	Polychlorinated biphenyls (PCBs)	8082	
106-50-3	p-Phenylenediamine	8270C	
107-12-0	Propionitrile	8260B	
129-00-0	Pyrene	8270C	
110-86-1	Pyridine	8270C	
100-42-5	Styrene	8260B	
108-88-3	Toluene	8260B	
823-40-5	Toluene-2,6-diamine		8270C
75-25-2	Tribromomethane	8260B	
75-69-4	Trichlorofluoromethane	8260B	
1330-20-7	Xylene	8260B	

2.2.5 Other Constituents/Test Parameters

Parameters that were removed from both the ERDF database (Figure 2-2) and the regulatory input list (Figure 2-3) include radionuclides and test parameters, such as pH. Radionuclides are being analyzed per DOE and EPA requirements under other regulatory programs but are not part of the RCRA delisting process. The following analyses have been added to the test list in Section 3.8 (analytical methods) for the general water quality information that they provide:

- pH
- Specific conductance
- Total dissolved solids
- Total organic carbon
- Total suspended solids
- Oil and grease.

The outputs from the logic presented in Figures 2-2 through 2-5 provide the basis for the sample design logic, illustrated in Figure 3-2 and discussed in Section 3.0. Table 2-12 presents the complete list of COPCs for baseline analysis.

In addition to the analyses required to support delisting, ERDF leachate must be characterized to ensure that it meets ETF WAC (BHI 1998). Silicon, bromide, and magnesium have been added to Table 2-12 to meet ETF WAC concerns.

3.0 SAMPLING AND ANALYSIS PLAN

This section presents the sampling objectives, developed from the logic in Section 2.0, along with the sampling plan.

3.1 SAMPLING OBJECTIVES

There are currently two alternatives for handling the ERDF leachate: store the leachate and reuse it at the ERDF facility, or transport the leachate to the LWPF for treatment. Appropriate reuse of the leachate includes dust suppression and waste compaction. Whether the leachate is reused or transported to the LWPF, sampling is required to determine initial and ongoing compliance with the delisting criteria. Therefore, the objectives of leachate sampling include:

1. Collect baseline information through 1 year of quarterly samples to fill data gaps identified through the logic shown in Figures 2-2 through 2-5, to determine whether the leachate can be delisted on a compound-by-compound basis.

2. Evaluate the ongoing compliance of the leachate with delisting criteria.

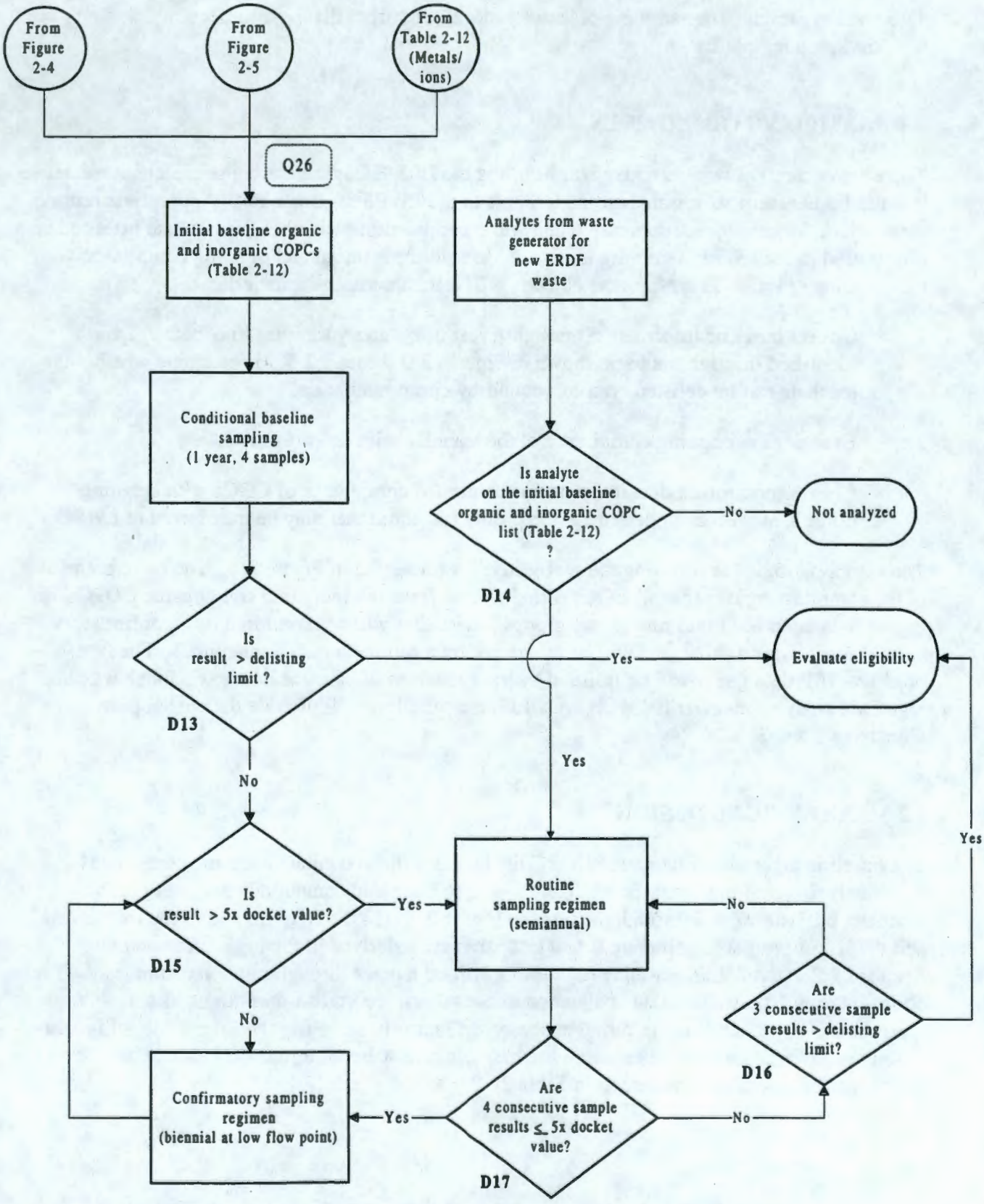
3. Collect monitoring data to determine continued compliance of COCs with delisting criteria, as well as to determine the profile for liquid that may be transferred to LWPF.

The sampling logic for fulfilling these objectives is presented in Figure 3-1. The basic premise of the sampling logic is that all COCs (titled "Initial Baseline Inorganic and Organic COPCs" in Figure 3-1) are placed into one of two groups: those that will be monitored on a confirmatory basis (biennial), and those that will be monitored on a routine basis (semiannual). The first objective (fill data gaps) will be fulfilled by the collection of baseline data to establish whether regulated analytes meet delisting criteria. Routine sampling will provide data to support objectives 2 and 3.

3.2 ANALYTICAL DESIGN

The baseline organic and inorganic COPC list includes those regulated organic compounds previously detected in the leachate (Figure 2-4, Q16), organic compounds not found in the leachate, but determined through the logic in Figure 2-5 (Q25) to require additional monitoring, and the list of inorganic compounds and test parameters derived in the logic presented in Sections 2.2.4 and 2.2.5. Baseline monitoring will take place through quarterly samples collected over 1 year of leachate collection to establish a record of water quality that is representative of operations in different seasons. Quarterly sampling should provide sufficient baseline analytical data to characterize leachate quality. A list of initial COPCs that will be evaluated for delisting is presented in Table 2-12.

Figure 3-1. Sampling Logic.



Historical leachate data for many of these baseline analytes are available; summary statistics for analytes detected in leachate are presented in Tables 2-1 through 2-5. Analytical data by sample event is presented in Appendix B, Tables B4-1 and B4-2. The historical leachate data did not undergo complete data validation. The limited validation that was performed consisted of a comparison of laboratory and field blanks to sample results, per the EPA Organic and Inorganic Functional Guidelines (EPA 1994). The details of this validation are provided in Appendix B.

Data were not collected for all COPCs during the analyses of leachate that have been completed to date. In addition, the available data do not appear to characterize leachate from the "low flow" periods of leachate generation. Samples collected during low-flow periods may have potentially higher concentrations of analytes. Samples collected to date also represent leachate that has been generated from waste cells that have not been filled with waste. Leachate characteristics; therefore, may not be fully representative of water quality that will be generated from infiltration through a larger volume of waste. The baseline sampling program, therefore, requires all target COPCs to be sampled quarterly for 1 year to establish a baseline condition for each analyte. One of these samples will be collected during the low-flow period of leachate generation. Those COPCs that are below five times the docket value will be moved into a biennial confirmatory sampling regimen; those COPCs that do not will be monitored through a semiannual sampling regimen.

Five times the docket value was selected as a "warning" level, which indicates a need for more frequent analysis. Analytes that are not detected above the five times value are considered to be at levels below regulatory concern. Those analytes that do not exceed five times their delisting docket value will be monitored on a confirmatory regimen that consists of biennial sample collection and analysis. Those analytes that exceed the five times criteria will be placed on a routine sampling regimen, which consists of semiannual sampling and analysis. Figure 3-1 illustrates the mechanisms to move analytes between confirmatory and routine sampling regimens, as well as to determine whether analytes from new wastes entering ERDF are assigned a sampling regimen.

Over time, it is anticipated that some analytes initially requiring routine monitoring will be below the five times criteria continuously for consecutive sample events and could be moved into a confirmatory sampling regimen. Therefore, if data for four consecutive samples indicate that the analytical results are less than the five times criteria, that analyte will be moved into the confirmatory sampling regimen and only analyzed for on a biennial basis.

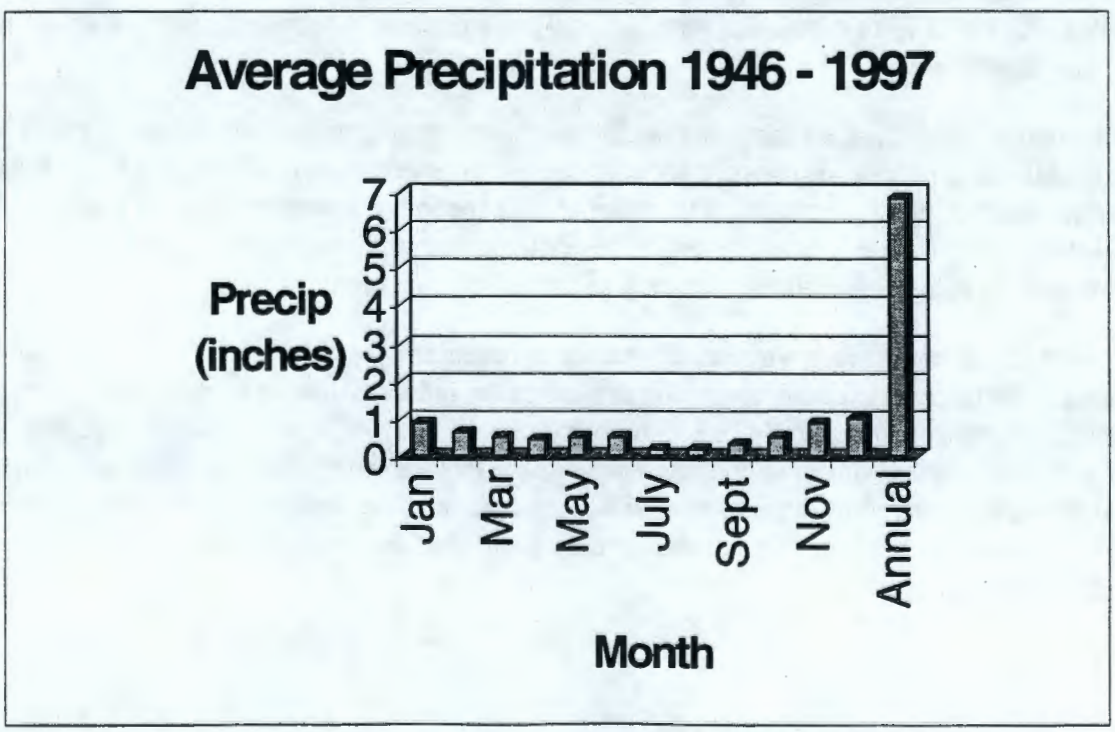
Because of the changing environment and waste inventory, it is also anticipated that analytical results from the confirmatory sampling program may indicate that an analyte's concentration increases over time and should be routinely monitored. In this case, if the concentration of a compound evaluated during a confirmatory sample event exceeds the five times criteria, the analyte will be moved into the routine sampling regime. The analyte subsequently must meet the five times criteria for four consecutive sample events before it can be reclassified as a confirmatory analyte.

3.2.1 Rationale

Several factors may contribute to the variability of leachate analytical results and should be considered when determining the frequency of sample collection. Factors that may affect chemical, physical, and biological processes occurring within the facility include (1) seasonality, (2) waste stream, (3) configuration of ERDF, and (4) operational changes that may take place over time. Seasonal variations in temperature and precipitation affect the composition of the leachate.

For the year beginning in July 1996, ERDF generated approximately 1.7 million gal of leachate from cell 1. During the second year of operation beginning in July 1997, ERDF generated approximately 0.4 million gal of leachate from the combined operation of cells 1 and 2. The large difference in leachate generation between the two years is primarily a result of differences in precipitation and the amount of waste in the cells. The yearly total precipitation for the 1996-97 operation was 11.2 in., whereas for the 1997-98 operation was approximately 6.4 in. The average annual precipitation from 1947 through 1997 has been 6.83 in. Figure 3-2 illustrates the average precipitation values at the Hanford Site for the past 50 years. Based on average precipitation, ERDF would be expected to collect from 0.2 to 0.3 million gal of leachate per operating disposal cell per year, with a maximum approaching 2 million gal. ERDF is expected to have up to three cells operating at one time during the expansion phase, which could generate 0.6 to 0.9 million gal annually during years of average precipitation. However, the leachate generated could be substantially more during years of high precipitation, as experienced in 1996 and 1997 (12.31 and 12.19 in., respectively). This buildup is enhanced when there is little waste in the cell.

Figure 3-2. Hanford Site Average Precipitation Values, 1946 - 1997.



The "wet" season typically occurs between November and February, which also generally corresponds to the coldest months of the year. June through September are typically the driest months, which correspond to the warmest weather months. The proposed sample program is expected to be capable of characterizing any seasonal variations. If experience shows that only limited volumes of leachate are generated or shipped in dry months, the sampling program will be evaluated to consider grab samples for this time period.

ERDF may accept waste from different areas within the Hanford Site, but generally only receives waste from a subset of areas over a period of months. The waste matrix, as well as the COPCs associated with the waste, may influence leachate concentrations. Therefore, at least semi-annually, the waste matrix will be evaluated by the project engineer for variability. If waste matrices not previously received enter the facility, the monitoring program will be evaluated to consider the regulated COPCs that are defined in the waste profile, but are not currently being monitored. This evaluation will include risk drivers, as identified in the docket list, that are placed in the ERDF in significantly greater volumes than previously disposed at ERDF. It is anticipated that the proposed sample approach will be sufficient to monitor any changes in leachate concentration that may be affected by waste matrix.

The ERDF ROD authorizes the construction of two disposal cells; the ROD amendment authorizes the construction of two additional cells. As new cells are constructed and full cells are capped, the volume and composition of the leachate may be affected by variations in the waste matrices exposed to precipitation (i.e., waste within a capped cell may not generate as much leachate and a cell that is open, but not receiving waste will generate "cleaner" leachate than a cell actively receiving waste). It is difficult to determine the effects on the leachate of a different configuration of the facility; however, the proposed sampling is expected to be frequent enough to identify any changes that may be attributed to variations in open cells. In addition, mixing within the storage units provide a buffer that reduces the variability associated with leachate from different cells. Therefore, additional sampling is not proposed when the configuration of the facility changes.

The final factor considered for its effects on the leachate is operational changes at the facility. Such changes may include the amount of liquid used for dust suppression and compaction, and opening a new cell for waste placement. Removal of the floating covers from the storage units or redesign of the leachate storage facility could result in higher evaporation rates, concentrating some COCs in the leachate. The proposed sampling plan will accommodate this variability.

3.2.2 Sampling Strategy

The goal of this petition is to delist the leachate that is stored at ERDF. Delisting will allow the leachate to be stored and transported without being managed as a hazardous waste. Because the leachate is being stored for shipment to LWPF, characterizing the leachate at a location near the transfer point was considered to provide a representative sample. Figure 2-1 identifies the sample locations.

A flow-proportional device will be used to collect representative leachate samples for all monitored compounds except volatile organics and oil and grease. A grab sample will be

collected for volatiles and oil and grease analysis when the composite sample from the flow-proportional device is retrieved for analysis. Flow-proportional samples will present a volume-averaged profile of the leachate over time, as opposed to a grab sample that reflects only a limited volume of the leachate stream. The sampling device will be installed in-line between the storage tanks and the discharge point to the pipeline for transfer to LWPF or to tankers. The flow-proportional device will be triggered by the flowmeter that will measure leachate volumes shipped from ERDF. The device will be calibrated to collect samples based on the projected volume of leachate that will be shipped over the upcoming sample period. Flow-proportional sampling will collect leachate that represents all stages of leachate generation, from low to high flow. Because stored leachate might not be transferred to the LWPF during periods of low leachate generation, grab samples may be required to be collected to characterize this material. The need for grab samples will be evaluated, based on leachate generation and transfer rates.

Over time, it is anticipated that compounds will be placed in ERDF that have not been evaluated through previous analysis of the leachate. Waste streams that have not previously been placed in ERDF will be evaluated for the presence of compounds that are not on record as being contained in ERDF wastes. These compounds will be evaluated against the initial list of COPCs (Table 2-12) to determine whether constituents are regulated, could have been used at Hanford, can be analyzed for, and are identified as a risk driver on the EPA docket list. Compounds that remain after this screen (the same process that was used to develop the initial COPC list) will be evaluated for testing in the routine sampling program. If, after 1 year, the compound is not detected above the five times level, the compound can be eliminated from the routine monitoring list.

3.2.3 Revisiting Limits

Analyses of leachate over time may indicate that individual constituents are consistently present at levels greater than the established delisting limit. Once a constituent appears in the analytical results at a concentration greater than the delisting limit, an assessment will be performed to determine whether there is a justifiable basis for this value. Examples of justification include laboratory contamination, naturally occurring constituents in groundwater, or an adjustment to the dilution/attenuation factors that were assumed when the delisting limits were established. If a compound appears in analyses from two consecutive sampling events at levels greater than the delisting limit, an evaluation of the analytical data will be conducted to determine if there is a problem with laboratory contamination. If the data are confirmed as accurate, the data will be compared against background concentrations for groundwater to determine whether the detected values would present a potential threat to groundwater quality. If the levels indicate a potential concern, ERC will conduct a site-specific analysis using EPA's Composite Model for leachate migration with Transformation Products (EPA CMTP) computer code. This analysis will be used to develop site-specific transport properties and individual risk scenarios for contaminants. The CMTP may support the development of alternative COC concentrations in the leachate.

The results from each step in this process will be discussed with EPA to determine the need for additional analyses before proceeding to the next step. If analysis continues to the stage of conducting analyses through the CMTP model, ERC/DOE will evaluate the results from the

model and consult with EPA to determine the appropriate response for future waste management practices at ERDF.

3.3 PROJECT ORGANIZATION AND RESPONSIBILITY

This section provides the organizational and project roles and responsibilities for sample collection, laboratory analysis, data management, and data assessment for ERDF leachate characterization and monitoring activities.

3.3.1 Project Responsibility

Site Technical Representative: The ERC/ERDF Site Technical Representative (STR) is responsible for coordinating efforts of support organizations as needed to complete the required tasks. The STR determines the timing and volume of leachate transfers.

Project Engineer: The ERC/ERDF Project Engineer has the primary responsibility for directing and approving all technical aspects of the leachate characterization. Responsibilities include leachate flow volume calculations for programming of the automatic sampler to ensure that collected samples are representative of the leachate and assessment of incoming waste profiles to evaluate any need for additional analysis.

Project Environmental Lead: The ERC/ERDF Environmental Lead is responsible for interfacing with the regulators to ensure that the characterization objectives for the leachate are consistent with regulatory requirements.

Project Technician: An ERC/ERDF technician is responsible for inspections of the automatic sampler, documenting the inspections in the field logbook, and interfacing with ERDF operations and sampling support groups to ensure that the sampler functions as required.

3.3.2 Support Responsibilities

The following organizations will be responsible for performing all services to the ERDF project in accordance with the requirements in this Sampling and Analysis Plan (SAP).

Sample Management: Sample Management is responsible for coordinating the sampling, laboratory services, data reporting, and data validation for leachate characterization. Additional responsibilities include handling and storage of deliverables generated through the process.

Project Chemist/Sample Coordinator: The chemist will ensure that validation is performed by qualified validators that may be ERC or qualified subcontractors. The chemist will assess the analytical data after validation and compare it to the warning levels (five times docket) and delisting limits (10 times docket). The chemist will coordinate with the Project Engineer to ensure that analytes are added to and removed from the sampling program, as provided on the logic presented in Figure 3-1.

Analytical Field Services: Analytical Field Services will provide qualified samplers to program the flow-proportional sampler, based on projected flow rates provided by the Project Engineer. Field Services will collect, package, and ship leachate samples to the laboratory.

Data Management: Data management will provide support for access to information stored in the Hanford Environmental Information System (HEIS) database.

Data Assessment: A statistician and the project chemist will assess the data for trends and perform statistical analysis after the first year of data collection, and on an ongoing basis, to evaluate trends in leachate quality.

ERC Quality Programs: Quality assurance (QA) assessments and surveillances will be provided by the ERC Quality Management Organization.

3.4 SAMPLE COLLECTION

This section provides the requirements for collection, packaging, and shipment of leachate samples. Sample collection will be performed in accordance with this sampling and analysis plan and approved ERC procedures.

3.4.1 Sample Collection Techniques

An automatic sampler will be used to collect flow-proportional, representative composite samples of the leachate. The flow-proportioned samples will be based on equal increments of flow as measured by an associated flow meter. The flow meter is being installed to measure the volumes of leachate pumped from the modu-tanks to the LWPF. The automatic sampler will be installed downstream of this flow meter. The composite sample consists of small aliquots collected in a single container over pre-determined increments of flow and will provide the most representative sample of the flow over the sample period. The composite sample will be analyzed for all monitored compounds except VOAs and oil and grease. A grab sample will be collected for VOA analysis and the oil and grease analysis.

3.4.1.1 Automatic Sample Collection. The automatic sampler will be programmed to collect flow-proportional aliquots for the composite leachate sample. It is anticipated that a 4-gal container will provide sufficient sample volume for laboratory analysis of all monitored compounds. Programming of the sampler will take into consideration the anticipated volumes and associated time frames of leachate collection in order to adequately determine the proper aliquot collection volumes for the upcoming sampling period and ensure that the composite is representative of the total leachate flow. The ERDF Project Engineer will assist the ERC sampling organization in determining individual sample aliquot volumes required for the automatic sampler, based on total leachate that will be transferred during the sampling period. A total volume of 4 gal for the composite sample will be required for the analyses that have been identified. The size of the individual aliquots and sample intervals (i.e., gallons pumped between samples) must be established for each sample period and programmed into the device by analytical field services.

A refrigerated automatic sampler will be permanently installed inside the ERDF Leachate Pump Station (see Figure 2-1). An ERC procedure will be prepared for operation and maintenance of the automatic sampler. The components of the automatic sampler that will be addressed during procurement and within the procedure include:

- Electronic Controller. The electronic controller will be programmed to run the leachate sampling routine. The controller activates the pumping system to collect the samples and deposit them in the sample container, as prescribed by the sampling program.

- Sample Delivery System. The automatic sampler will use a peristaltic pump. The advantages of the peristaltic pump is that the sample only touches the sample tubing.

- Sample Intake. The sample intake is the first point where the leachate sample enters the sampler. The sample intake should be large enough to allow the sample to enter without any obstruction. The intake should be made of a material that will not alter the sample through leaching or absorption.

- Sample Transport Line. The sample transport line connected to the sample intake will be made of an inert material (teflon) that will not alter the sample, chemically or physically, through leaching, absorption, or desorption. Precautions will be taken to ensure that the line is free of kinks, twists, and sharp bends and should be as short as possible.

- Sample Storage. The sample container will be placed inside the refrigerated compartment of the automatic sampler for collection of the composite. The sample container type and volume will be selected to meet the requirements of the sample authorization form (SAF) and in accordance with EPA requirements for cleaning and sample container compatability.

- Power Source. The automatic sampler will be located inside the ERDF Leachate Pumping Station and will use an AC line power source

3.4.1.2 Grab VOA and Oil and Grease Sample Collection. A discrete grab sample will be collected for VOAs and for the oil and grease analysis from a tap near the automatic sampler. The rationale for the collection of a grab sample is that VOAs are lost into the air space of the sample container if a continuous or automatic compositing sampler is used. And because losses of grease will occur on sampling equipment, the collection of a composite sample is impractical. The grab sample will be manually collected at the time that the composite sample is removed from the automatic sampler. Although this method for evaluating VOAs and oil and grease is not consistent with the composite approach used for other constituents, this approach will provide a more accurate, if limited, representation of concentrations than compositing.

3.4.2 Sample Equipment Decontamination

The automatic sampler will be conditioned before first use and after maintenance operations that include exchange of the sampling tubing, by flushing the equipment and components with de-ionized water.

3.4.3 Sample Locations and Frequencies

The ERDF leachate sample collection system located at the Leachate Pump Station will be the key monitoring location. Composite samples will be collected using the automatic sampler at a location where the total effluent flow is accessible. Grab samples will be collected at a tap near the automatic sampler or from the modu-tank itself. See Figure 2-1 for sample collection locations.

3.4.4 Corrective Action

If for any reason the composite sampler malfunctions or is not available, grab samples for the appropriate suite of analyses will be collected from the tap or from one of the modu-tanks. Grab samples also will be used to collect samples at times of limited flow. If, for example, insufficient leachate is pumped over the course of the sample period to generate an adequate composite sample to perform the required analyses, Field Services will collect additional grab sample volume to make up the shortfall in the composite sample. This volume will be added to the composite sample in the field before preparation of samples for shipment.

Because the composite sampler will be programmed based on projected leachate pump rates, the actual volume pumped could significantly exceed the volumes that are used for determining the size and timing of individual aliquots. If this occurs, the composite may not accurately represent the total quantity of leachate pumped. If the total volume pumped over the sample period exceeds by more than 30% the volume used to calculate aliquots for a sample period (based on analysis of flow meter records), Field Services will collect a leachate sample from the grab sample tap at the time of sample collection and add this volume to the composite before packing samples for shipment. The amount of grab samples collected should be proportional to the amount of excess leachate pumped (e.g., if 50% more leachate than projected was pumped over a sample period, 50% of the composite sample volume—2 gal—should be collected as a grab sample and added to the composite).

3.4.5 Sample Volume, Preservation, and Holding Times

The volume of sample collected depends upon the type and number of analyses needed, as reflected in the parameters to be measured and the requirements of the analytical laboratory being used. Sample volume must be sufficient for all analyses, including laboratory QA/quality control (QC). The total composite volume required for analyses is 3.5 gal with a total sampler capacity of up to 4 gal. Final sample volumes will be specified in the SAF; SAF procedures are found in BHI-EE-01, *Environmental Investigations Procedures*, EIP 2.0, "Sample Event Coordination." Table 3-1 lists the analytical methods, preferred volumes, and a prioritized list of methods for analysis in the event of insufficient sample collection for analysis of the complete list of COCs. Sample analyses were prioritized based on multi-analyte methods and higher health-risk associated analytes.

Table 3-1. Sampling and Holding Time Requirements for the COPC's Analytical Methods. (2 Sheets)

Analytical Method	Title	Preferred Sample Volume	Total Sample Volume, QC included	Container	Preservation	Hold Time		Priority
						Sampling to Prep	Prep to Analysis	
6010B	Inductively Coupled Plasma-Atomic Emission Spectrometry	100 mL	300 mL	Glass or plastic	HNO3 to pH<2	6 month		3
7470A	Mercury in Liquid Waste (Manual Cold Vapor Technique)	100 mL	300 mL	Glass or plastic	HNO3 to pH<2	28 days		5
8081A/ 8082	Organochlorine Pesticides by Gas Chromatography (GC)/Polychlorinated Biphenyls (PCBs) by GC	1L	3 L	Glass, teflon-lined cap	Cool, 4 degree C	7 days	40 days	4
8270C	Semivolatile Organic Compounds by GC/Mass Spectrometry MS	1L	3L	Amber glass with Teflon-lined lid	Cool, 4 degree C	7 days	40 days	1
8315A	Determination of Carbonyl Compounds by High Performance Liquid Chromatography (HPLC)	100 mL	300 mL	Glass, teflon-lined cap	Cool, 4 degree C	3 days	3 days	of lower priority
8321A	Solvent Extractable Nonviolatile Compounds by HPLC/Thermospray/MS or Ultraviolet Detection	1 L	3L	Glass, teflon-lined cap	Cool, 4 degree C	7 days	40 days	of lower priority
9012A	Total and Amenable Cyanide (Distillation/Automated Colorimetric)	500 mL	1500 mL	Glass or plastic	Cool, 4 degree C; if oxidizing agents present add 5mL 0.1N NaAsO2 per L or 0.06 g of ascorbic acid per L; adjust pH>12 with 50% NaOH	14 days		6
9056	Determination of Inorganic Anions by Ion Chromatography	100 mL	100 mL	Glass or plastic	Cool, 4 degree C	Analyze immediately		7
9060	Total Organic Carbon	100 mL	100 mL	Glass	Cool, 4 degree C; adjust pH<2 with HCl or H2SO4	28 days		of lower priority
9050A	Specific Conductance	100 mL	100 mL	Glass or plastic	Cool, 4 degree C	28 days		of lower priority
9040	pH Electrometric Measurement	100 mL	100 mL	Glass or plastic	Cool, 4 degree C	Analyze immediately		8
160.1	Total Dissolved Solids	100 mL	300 mL	Glass or plastic	Cool, 4 degree C	7 days		of lower priority
160.2	Total Suspended Solids	100 mL	300 mL	Glass or plastic	Cool, 4 degree C	7 days		of lower priority

Table 3-1. Sampling and Holding Time Requirements for the COPC's Analytical Methods. (2 Sheets)

Analytical Method	Title	Preferred Sample Volume	Total Sample Volume, QC included	Container	Preservation	Hold Time		Priority
						Sampling to Prep	Prep to Analysis	
350.1	Ammonia	400 mL	1200 mL	Glass or plastic	Cool, 4 degree C; adjust pH<2 with H2SO4	28 days		of lower priority
	Total Volume for Composite Sample	**4.8 L**	**13.6 L**					
8260B	Volatile Organic Compounds by GC/MS	2 x 40 mL	6 x 40 mL	40 mL glass vial with Teflon lined septum caps	Cool, 4 degree C, adjust pH<2 with HsSO4, HCl or solid NaHSO4	14 days		2
9070	Total Recoverable Oil & Grease (Gravimetric, Separatory Funnel Extraction)	1L	3 L	Glass	Cool, 4 degree C; adjust pH<2 with HCl	28 days		of lower priority
	Total Volume for Grab Sample	**1.08 L**	**3.24 L**					

Sample preservation ensures that the sample remains representative of the leachate from the time of collection until the time of analysis. Sample preservation techniques consist of refrigeration and pH adjustment. Because sample deterioration can take place during the sample compositing process, it will be necessary to refrigerate the samples during compositing, in addition to preserving any aliquot samples before shipment to the laboratory. Samples will be refrigerated to 4° $\pm$ 2° C during compositing to decrease the potential for chemical degradation. After samples are aliquoted into bottles for specific analyses, samples will be preserved per Table 3-1. Refrigeration continues using wet ice (or equivalent) during sample shipment and until the sample is received in the laboratory for analysis. Final sample preservation requirements will be specified in the SAF and are shown in Table 3-1.

In addition to preservation techniques, holding times between sample collection and analysis must be met for the sample data to be considered valid. The leachate composite becomes a sample upon the removal of the composite sample from the 4-gal container. At that point, holding time limitations begin. Final sample holding times will be specified in the SAF and are shown in Table 3-1.

3.4.6 Sample Documentation

All information pertinent to field sampling and analysis will be recorded in bound logbooks in accordance with BHI-EE-01, EIP 1.5, "Field Logbooks." Entries made in the logbook will be dated and signed by the individual who makes the entry.

3.4.7 Sample Identification and Labeling

The Hanford Sample Data Tracking database will be used to track the sample and laboratory results. Sample numbers will be issued to the sampling organization in accordance with BHI-EE-01, EIP 2.0, "Sample Event Coordination." Each sample will be identified and labeled with a unique sample number. The sample location, date, and time of collection along with the corresponding number will be recorded on the chain-of-custody form and in the field sampling logbook.

Each sample container will be labeled with the following information using a waterproof marker on firmly affixed, water-resistant labels:

- Sample number
- Sample collection date/time
- Name/initials of sampler
- Analysis required
- Preservation method, if applicable.

3.4.8 Chain-of-Custody Procedures

All samples will be controlled from the point of origin to the analytical laboratory in accordance with BHI-EE-01, EIP 3.0, "Chain of Custody." A chain-of-custody record will be initiated in the field at the time of collection and will accompany each set of samples. Chain-of-custody procedures will be followed throughout the sample collection, transfer, analysis, and disposal to ensure that the integrity of the sample is maintained.

A custody seal (evidence tape) will be affixed to the lid of each sample container. The custody seal will be initialed and dated by the sampler at the time the container is sealed.

3.4.9 Sample Packaging and Shipping

Samples will be packaged and shipped in accordance with BHI-EE-01, EIP 3.1, "Sample Packaging and Shipment." After the samples are properly labeled, they will be placed in a transportation package along with the chain of custody and sample analysis request form. Samples will be placed in sufficient ice to maintain the temperature at $4° \pm 2°$ C throughout the shipment.

Most samples will not require any special transportation precautions except careful packaging to prevent breakage and/or spillage. The sample shipment must comply with applicable U.S. Department of Transportation Hazardous Materials Regulations (49 CFR Parts 171-177) and International Air Transport Association (IATA) air shipment requirements.

3.5 SAMPLING QUALITY ASSURANCE AND QUALITY CONTROL

Quality assurance requirements for sampling are established in BHI-QA-03, *Quality Assurance Program Plans*, Procedure 5.1, "Field Sampling Quality Assurance Program Plan." All sampling personnel will be sufficiently trained to ensure the acquisition of complete and high-quality data.

3.5.1 Equipment Operation and Calibration

All sampling and field measurement equipment used to support this project will be calibrated to operate within the specifications provided by the manufacturer and in accordance with applicable ERC procedures. Calibrations will be performed as stipulated by the manufacturer's calibration procedure, the project-specific calibration requirements, or as specified within the requirements defined by the analytical method.

3.5.2 Preventive Maintenance

All measurement and testing equipment used in the field that directly affects the quality of the analytical data is subject to preventive maintenance measures that ensure minimization of measurement system downtime.

Analytical field services will be responsible for maintenance of the automatic sampler in accordance with manufacturers' recommendations. An ERDF project technician will perform routine inspections of the equipment and notify analytical field services if problems occur with the equipment. Maintenance requirements, such as parts lists and instructions, will be included in the operating procedure for the automatic sampler. Field repairability of the sampler may be limited to replacement of expendable items or certain mechanical parts. Electronic parts must be repaired by a skilled technician who has access to the proper test equipment, which may, therefore, require repair by the manufacturer.

3.5.3 Field Quality Control Requirements

QC samples are introduced into the collection system to monitor the adequacy of the sampling system and the integrity of the samples during their transfer from the field collection point through the laboratory analysis. Quality control requirements for the field sample collection process are defined as follows:

- One container rinsate blank will be collected from the 4-gal carboy for each new sampling event. The equipment rinsate blank will assess the cleanliness of the 4-gal sample container and the effectiveness of the container decontamination process. The rinsate blank will be collected using ASTM Type II water passed through the decontaminated 4-gal sampling container prior to starting the next sampling event. The rinsate blank will be analyzed for the same chemical constituents as actual samples collected during the sampling period. All sample results will be evaluated to determine the possible effects of any contamination that may be introduced by the sample collection container, as detected in the rinsate blank.

The container rinsate blanks will be collected and submitted to the laboratory at the time of collecting the current composite sample; however, the analytical results will correlate to the subsequent composite sampling event.

- One field duplicate sample of the leachate will be collected for each sampling event. Field duplicates are composed of two samples produced from the same matrix and collected at the same location. The field duplicates provide information concerning the homogeneity of the matrix, as well as an evaluation of the precision of the sampling and analysis process.

  When the sampling event cycle is completed, and aliquots are prepared for the individual sample analyses, equal aliquots will be assigned to field duplicate samples.

- One VOA trip blank will be collected for every VOA sampling event. Trip blanks are samples prepared by adding clean, analyte-free water to sample containers for analysis of volatile organic compounds. Preservatives are added to the blank, and the containers are sealed before the sampling trip. Trip blanks are usually prepared in the laboratory and are transported with empty sample containers to the site of work and remain sealed until analyzed with the collected samples at the laboratory. Trip blanks permit evaluation of contamination generated from sample containers or occurring during the shipping and laboratory storage process.

3.6 LABORATORY ANALYSIS

3.6.1 Analytical Methods

Analytical methods will be as defined in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (EPA 1997) except for ammonia, total suspended solids (TSS), and total dissolved solids (TDS). Ammonia, TSS, and TDS analytical methods will be as defined in *Chemical Analysis of Water and Wastes* (EPA 1995). Table 3-2 identifies analytes and the associated method references and target detection limits identification for all COPCs. Analyses will be performed on unfiltered samples. Analyses are expected to be performed on and reported as undiluted samples except for quantification of constituents exceeding the upper calibration limit of the associated analytical method.

3.6.2 Detection Limits

Method detection limits and estimated quantitation limits (EQLs), as defined in Chapter 1 of SW-846, will be used to assess method sensitivity. Laboratories report practical quantitation limits (PQLs), which is another term that is equivalent to the EQL. Table 3-2 lists the analytes, the method, the delisting limit (10 times the docket value) and the laboratory PQLs/EQLs. Where the PQL/EQL previously reported is above the delisting limit, Table 3-2 also provides instrument detection limits (IDLs) that are below the PQL/EQL. Based on the large difference between the PQL/EQL and the IDL, the laboratory should be able to achieve detection at or below the delisting limit. Table 3-3 lists the following relationships between the PQL/EQL, the delisting limit, and the proposed approach for evaluation of the data.

Table 3-2. Comparison of Delisting and Quantitation Limits for the COPCs.* (5 Sheets)

CAS #	Constituent	Method ID	Delisting Level	LAB PQL/EQL	Comments
7429-90-5	Aluminum	6010B		31	IDLSs
7440-36-0	*Antimony*	*6010B*	*6*	*43 (1.6)*	*IDLs - ("TRACE IDL)*
7440-38-2	*Arsenic*	*6010B*	*50*	*82 (1.3)*	*IDLs - ("TRACE IDL)*
7440-39-3	Barium	6010B	2000	0.4	IDLSs
7440-41-7	Beryllium	6010B	4	0.4	IDLSs
7440-43-9	Cadmium	6010B	5	3.3	IDLSs
7440-70-2	Calcium	6010B		16	IDLSs
7440-47-3	Chromium	6010B	100	2.7	IDLSs
7440-48-4	Cobalt	6010B	2100	4.3	IDLSs
7440-50-8	Copper	6010B	1300	4.1	IDLSs
7439-92-1	*Lead*	*6010B*	*15*	*30 (0.9)*	*IDLs - ("TRACE IDL)*
7439-96-5	Manganese	6010B		1	IDLSs
7440-02-0	Nickel	6010B	100	15	IDLSs
7440-09-7	Potassium	6010B		2200	IDLSs
7782-49-2	*Selenium*	*6010B*	*50*	*61 (2.2)*	*IDLs - ("TRACE IDL)*
7440-22-4	Silver	6010B	200	6	IDLSs
7440-23-5	Sodium	6010B		34	IDLSs
7440-28-0	*Thallium*	*6010B*	*2*	*44 (1.8)*	*IDLs - ("TRACE IDL)*
7440-31-5	Tin	6010B		35	IDLSs
7440-62-2	Vanadium	6010B	300	2.9	IDLSs
7440-66-6	Zinc	6010B	10000	2.3	IDLSs
7439-97-6	Mercury	7470A	2	0.03	IDLSs
319-84-6	alpha-BHC	8081A	0.01	0.006	
319-85-7	beta-BHC	8081A	0.05	0.019	
1024-57-3	Heptachlor Epoxide	8081A	0.2	0.005	
1336-36-3	Polychlorinated biphenyls (PCBs)	8082	0.5	0.5 – 9.0 depending on Aroclor	
71-55-6	1,1,1-Trichloroethane	8260B	200	0.89	
79-34-5	1,1,2,2-Tetrachloroethane	8260B	0.4	1.5	
127-18-4	1,1,2,2-Tetrachloroethene	8260B	5	0.92	
79-00-5	1,1,2-Trichloroethane	8260B	5	0.5	
79-01-6	1,1,2-Trichloroethylene	8260B	8	2	
75-34-3	*1,1-Dichloroethane*	*8260B*	*0.9*	*1*	
75-35-4	1,1-Dichloroethene	8260B	7	0.97	
76-13-1	1,2,2-Trichlorotrifluoroethane (Freon 113)	8260B	1000000	10	
1464-53-5	1,2,3,4-Diepoxybutane	8260B		NR	
156-59-2	1,2-cis-Dichloroethene	8260B	400	0.51	

Table 3-2. Comparison of Delisting and Quantitation Limits for the COPCs.* (5 Sheets)

CAS #	Constituent	Method ID	Delisting Level	LAB PQL/EQL	Comments
107-06-2	1,2-Dichloroethane	8260B	5	0.72	
78-87-5	1,2-Dichloropropane	8260B	5	1	
156-60-5	1,2-trans-Dichloroethene	8260B	700	NR	
542-75-6	1,3-Dichloropropene	8260B	0.5	AS ISOMERS	
10061-01-5	cis-1,3-Dichloropropene	8260B		0.51	
10061-02-6	trans-1,3-Dichloropropene	8260B		0.29	
123-91-1	*1,4-Dioxane*	*8260B*	*8*	*460*	
75-01-4	*1-Chloroethene (Vinyl Chloride)*	*8260B*	*2*	*3.4*	
78-93-3	2-Butanone (MEK)	8260B	20000	2.1	
4170-30-3	2-Butenaldehyde	8260B		NR	
110-75-8	2-Chloroethyl vinyl ether	8260B		3.1	
126-98-7	2-Methyl-2-propenenitrile (Methacrylonitrile)	8260B	4	2.2	
78-83-1	2-Methylpropyl alcohol (Isobutyl alcohol)	8260B	10000	380	
67-64-1	2-Propanone (Acetone)	8260B	4000	9.7	
107-18-6	2-Propen-1-ol (Allyl alcohol)	8260B		NR	
107-05-1	3-Chloropropene (Allyl chloride)	8260B	4	1.2	
542-76-7	3-Chloropropionitrile	8260B		NR	
108-10-1	4-Methyl-2-pentanone (MIBK)	8260B	2000	1	
141-78-6	Acetic acid ethyl ester (Ethyl acetate)	8260B	30000	10	
108-05-4	Acetic acid vinyl ester (Vinyl acetate)	8260B	40000	3.6	
75-05-8	*Acetonitrile*	*8260B*	*200*	*23.5*	
107-02-8	Acrolein	8260B	700	21.4	
107-13-1	Acrylonitrile	8260B	0.2	8.5	
71-43-2	Benzene	8260B	5	0.84	
598-31-2	Bromoacetone	8260B		NR	
75-27-4	Bromodichloromethane	8260B	1.4	0.5	
74-83-9	Bromomethane	8260B	50	1.4	
75-15-0	Carbon disulfide	8260B	4000	0.74	
56-23-5	Carbon tetrachloride	8260B	5	0.71	
108-90-7	Chlorobenzene	8260B	100	0.75	
75-00-3	Chloroethane	8260B		1	
67-66-3	Chloroform	8260B	100	0.86	
74-87-3	Chloromethane	8260B	0	2.3	
124-48-1	Dibromochloromethane	8260B	1	0.33	
75-71-8	Dichlorodifluoromethane	8260B	7000	2.3	

Table 3-2. Comparison of Delisting and Quantitation Limits for the COPCs.* (5 Sheets)

CAS #	Constituent	Method ID	Delisting Level	LAB PQL/EQL	Comments
75-09-2	Dichloromethane (Methylene Chloride)	8260B	5	3.8	
100-41-4	Ethyl benzene	8260B	70000	1.3	
60-29-7	Ethyl ether	8260B	7000	10	
106-93-4	Ethylene dibromide	8260B	0.05	0.34	
109-77-3	Malononitrile	8260B		NR	
71-36-3	n-Butyl alcohol	8260B	4000	12.6	
107-10-8	n-Propylamine	8260B		NR	
107-12-0	Propionitrile	8260B		4.8	
100-42-5	Styrene	8260B	100	0.64	
108-88-3	Toluene	8260B	1000	0.79	
75-25-2	Tribromomethane (Bromoform)	8260B	100	0.36	
75-69-4	Trichlorofluoromethane	8260B	10000	2	
1330-20-7	Xylene	8260B	10000	0.71	
120-82-1	1,2,4-Trichlorobenzene	8270C	70	1.1	
122-66-7	*1,2-Diphenylhydrazine*	*8270C*	*0.1*	*10*	
130-15-4	1,4-Naphthoquinone	8270C		1.9	
591-08-2	1-Acetyl-2-thiourea	8270C		NR	
95-95-4	2,4,5-Trichlorophenol	8270C	4000	0.76	
88-06-2	2,4,6-Trichlorophenol	8270C	8	1.2	
120-83-2	2,4-Dichlorophenol	8270C	100	1.2	
105-67-9	2,4-Dimethylphenol	8270C	700	0.79	
51-28-5	2,4-Dinitrophenol	8270C	70	2.3	
91-58-7	2-Chloronaphthalene	8270C	3000	1.4	
95-57-8	2-Chlorophenol	8270C	200	1.2	
131-89-5	2-Cyclohexyl-4,6-dinitrophenol	8270C		NR	
109-06-8	2-Methylpyridine (2-Picoline)	8270C		5.7	
91-59-8	*2-Naphthylamine*	*8270C*	*0.1*	*4.4*	
101-55-3	4-Bromophenylphenyl ether	8270C		1.9	
59-50-7	4-Chloro-3-methylphenol	8270C		1.1	
100-02-7	4-Nitrophenol	8270C		2.1	
57-97-6	7,12-Dimethylbenz[a]anthracene	8270C		4.4	
194-59-2	7H-Dibenzo[c,g]carbazole	8270C		NR	
83-32-9	Acenaphthene	8270C	2000	1.6	
98-86-2	Acetophenone	8270C	4000	3.4	
122-09-8	alpha,alpha-Dimethylphenethylamine	8270C		50	
134-32-7	alpha-Naphthylamine	8270C		4.4	
62-53-3	Aniline	8270C	10	2.7	

Table 3-2. Comparison of Delisting and Quantitation Limits for the COPCs.* (5 Sheets)

CAS #	Constituent	Method ID	Delisting Level	LAB PQL/EQL	Comments
120-12-7	Anthracene	8270C	10000	1.6	
56-55-3	*Benzo(a)anthracene*	*8270C*	*0.077*	*1.9*	
50-32-8	*Benzo(a)pyrene*	*8270C*	*0.2*	*2.2*	
205-99-2	*Benzo(b)fluoranthene*	*8270C*	*0.071*	*2*	
207-08-9	Benzo(k)fluoranthene	8270C	0	1.1	
100-51-6	Benzyl alcohol	8270C	10000	0.93	
111-91-1	Bis(2-Chloroethoxy)methane	8270C		1.6	
111-44-4	*Bis(2-chloroethyl) ether*	*8270C*	*0.08*	*1.5*	
108-60-1	Bis(2-Chloroisopropyl) ether	8270C		3.1	
117-81-7	Bis(2-ethylhexyl) phthalate	8270C	6	2.9	
85-68-7	Butylbenzylphthalate	8270C	7000	2.2	
218-01-9	Chrysene	8270C	2.7	2.1	
1319-77-3	Cresols, total	8270C	2000	10 PER ISOMER	
95-48-7	o-Cresol	8270C	2000	0.97	
108-39-4	m-Cresol	8270C	2000	10	
106-44-5	p-Cresol	8270C	200	0.69	
53-70-3	*Dibenz[a,h]anthracene*	*8270C*	*0.011*	*2.3*	
25321-22-6	Dichlorobenzene	8270C		AS ISOMERS	
95-50-1	1,2-Dichlorobenzene	8270C	600	1.2	
541-73-1	1,3-Dichlorobenzene	8270C		1.3	
106-46-7	1,4-Dichlorobenzene	8270C	4	1.4	
84-66-2	Diethyl phthalate	8270C	30000	1.6	
94-58-6	Dihydrosafrole	8270C		NR	
131-11-3	Dimethyl phthalate	8270C	400000	1.3	
84-74-2	Di-n-butylphthalate	8270C	4000	1.6	
25154-54-5	Dinitrobenzene	8270C		AS ISOMERS	
99-65-0	1,3-Dinitrobenzene	8270C	4	3.8	
100-25-4	1,4-Dinitrobenzene	8270C	10	NR	
117-84-0	Di-n-octylphthalate	8270C	700	1.8	
62-50-0	*Ethyl methanesulfonate*	*8270C*	*0.0003*	*3.3*	
206-44-0	Fluoranthene	8270C	1000	1.6	
86-73-7	Fluorene	8270C	1000	1.5	
87-68-3	Hexachlorobutadiene	8270C	1	0.89	
67-72-1	Hexachloroethane	8270C	6	0.98	
70-30-4	*Hexachlorophene*	*8270C*	*10*	*10*	
193-39-5	*Indeno(1,2,3-cd)pyrene*	*8270C*	*0.21*	*2.5*	

Table 3-2. Comparison of Delisting and Quantitation Limits for the COPCs.* (5 Sheets)

CAS #	Constituent	Method ID	Delisting Level	LAB PQL/EQL	Comments
78-59-1	Isophorone	8270C	90	1.4	
122-39-4	N,N-Diphenylamine	8270C	900	5	
91-20-3	Naphthalene	8270C	1000	1.4	
98-95-3	Nitrobenzene	8270C	20	1.2	
1116-54-7	N-Nitrosodiethanolamine	8270C		NR	
621-64-7	*N-Nitroso-di-n-propylamine*	*8270C*	*0.01*	*1.1*	
86-30-6	N-Nitrosodiphenylamine	8270C	20	1.5	
59-89-2	N-Nitrosomorpholine	8270C		10	
62-75-9	*N-Nitroso-N,N-dimethylamine*	*8270C*	*0.002*	*1.3*	
126-68-1	O,O,O-Triethyl phosphorothioate	8270C		5	
87-86-5	*Pentachlorophenol*	*8270C*	*0.7*	*1.6*	
108-95-2	Phenol	8270C	20000	0.42	
106-50-3	p-Phenylenediamine	8270C	7000	100	
129-00-0	Pyrene	8270C	1000	1.6	
110-86-1	Pyridine	8270C	40	0.96	
823-40-5	Toluene-2,6-diamine	8270C	7000	NR	
50-00-0	Formaldehyde	8315A		NR	
57-12-5	Cyanide	9010B	200	3.1	
	pH	9040		0.1 Ph unit	
	Specific Conductance	9050A		0.15umho/cm	
16887-00-6	Chloride	9056		64	
16984-48-8	Fluoride	9056	4000	19	
14797-55-8	Nitrate	9056		2	
14797-65-0	Nitrite	9056		2	
14265-44-2	Phosphate	9056		90	
14808-79-8	Sulfate	9056		120	
7664-41-7	Ammonia	350.2		30	
	Total Organic Carbon	9060		530	
	Oil & Grease	9070		500	
	Total Dissolved Solids	160.1		4700	
	Total Suspended Solids	160.2		1000	

*Shading and *italics* indicate analytes where PQL/EQL is above or equal to delisting limits.
Unless otherwise noted, all values are in µg/L.
IDL = instrument detection limit
NP = No detection limit value provided in the referenced method
NR = Analysis for this compound is not routinely requested at Hanford
PQL = practical quantitation limits

Table 3-3. Relationship Between Practical Quantitation Limits/Estimated Quantitation Limits and Delisting Limits Versus the Approach to Decision Making.

Relationship Between PQL/EQL and Delisting Limit	Approach to Decision Making
PQLs are below the delisting limit.	No further alteration to the limits or the method is required. Decisions can be made by direct comparison to the analytical result provided no matrix effects degrade PQL/EQLs.
EQL and PQLs are equal to or above the delisting limit.	Use the PQL as the delisting limit provided it is ≤EQL in SW-846.
Delisting limits are present and no PQL or EQL is available.	Ask the laboratory to generate a MDL and PQL. Evaluate whether the PQL is above or below the delisting value.

EQL = estimated quantitation limit
MDL = minimum detection limit
PQL = practical quantitation limit

3.6.3 Laboratory Quality Assurance and Control

For samples analyzed according to SW-846 procedures, all of the QC requirements outlined in that document and in the applicable method will apply. At a minimum, the following QC shall be performed:

- One method blank for every 20 samples, analytical batch, or sample delivery group (whichever is most frequent) will be used to monitor contamination resulting from the sample preparation process for each analytical method.

- One laboratory control sample or blank spike will be performed for every 20 samples, analytical batch, or sample delivery group (whichever is most frequent) of samples for each analytical method criteria to monitor the effectiveness of the sample preparation process. The results from the analysis are used to assess laboratory performance.

- As appropriate to the method, a combination of either (1) a matrix spike and matrix spike duplicate, or (2) a matrix spike and duplicate sample will be prepared and analyzed for each 20 samples, analytical batch, or delivery group (whichever is most frequent). This QC step will be performed on an ERDF leachate sample. The matrix spike results are a measure of the accuracy of the analytes of interest that are measured in the sample matrix. Laboratory duplicates or matrix spike duplicates are used to assess precision and will be analyzed at the same frequency as the matrix spikes.

3.6.4 Laboratory QC Acceptance Criteria

The definitions of matrix spikes, matrix spike duplicates, and sample duplicates found in Chapter 1 of SW-846 are used for this project. Matrix spikes will measure accuracy via percent recovery, as defined in Chapter 1 of SW-846. Relative percent difference and relative standard deviation, as defined in Chapter 1 of SW-846, will be used to assess precision. The accuracy and precision limits that are listed in the SW-846 methods will be applied to the results from the

leachate for each sampling round. Analytes without accuracy and precision limits in SW-846 will be assessed based on statistical evaluation of laboratory control sample results using the same formulas presented for the compounds with limits. Because the leachate will be aqueous with low probability of interferences, this is a reasonable approach.

3.7 DATA MANAGEMENT

3.7.1 Data Reporting

The laboratory must prepare a report summarizing the results of analysis, including associated laboratory QC. Data summaries shall include, at a minimum, sample identity, sampling and analysis dates, reduced data results, analytical detections limits for non-detect results, and a detailed case narrative for the following investigative and QC samples (as appropriate to the method):

- ERDF samples
- All associated laboratory method blanks
- Associated batch matrix spike/surrogate recoveries
- Associated batch duplicate/matrix spike duplicate relative percent differences
- Associated batch laboratory control sample recoveries.

3.7.2 Data Validation

Level C data validation has been selected for leachate data per ERC procedures (WHC 1993a, 1993b). This approach allows the review of all QC data, transcription error verification, and holding time review. This level is the middle validation level and does not require review of raw data and recalculation of data. The basic elements of this validation level include evaluation of the following parameters (as appropriate to the method):

- Required analysis hold times
- Associated batch method blank results
- Associated batch matrix spike/surrogate recoveries
- Associated batch duplicate/matrix spike duplicate relative percent differences
- Associated batch laboratory control sample recoveries
- Reported analytical detection limits for non-detect results.

Should problems arise from the level C review, the project will perform recalculation and review of raw data. Level C validation will be performed by qualified Sample Management personnel or by a qualified subcontractor. Subcontract validation requirements will be defined in procurement documentation or work orders, as appropriate.

3.7.3 Data Management

Data generated as a result of laboratory analysis will be managed and stored by the Sample Management organization, as outlined in BHI-EE-01, Section 2.0, "Sample Management."

All validated reports and supporting analytical data packages shall be subject to final technical review by qualified reviewers before their final submittal to regulatory agencies or inclusion in reports or technical memoranda, at the direction of the ERDF STR. Electronic data access, when appropriate, is through computerized databases (such as HEIS). Where electronic data are not available, hard copies will be provided in accordance with Section 9.6 of the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) (Ecology et al. 1994).

3.8 AUDITING AND ASSESSMENT

The ERC Quality Programs Department may conduct random surveillance and assessments to verify compliance with the requirements outlined in this SAP, the ERC Quality Management Plan (Section 2.0, BHI-QA-01), and the ERC procedures and regulatory requirements. Collectively, the surveillance and assessments will address quality-affecting activities that include, but are not limited to, measurement system accuracy, field activities, data collection, processing, validation, management, and QA programs.

Random surveillance and assessments will be structured to meet the following system and performance audit classification. System audits consist of the evaluation of the measurement system components to determine their proper selection and use. Performance audits ensure the accuracy of the total system and its individual parts.

3.9 DATA QUALITY ASSESSMENT

Once the monitoring data have been verified and validated by a chemist, the results will be evaluated by means of formal process and statistical tests that result in conclusions and recommendations for the sampling and analysis of leachate. This evaluation is commonly called a data quality assessment (DQA).

The DQA will be ongoing to coincide with the collection of monitoring data. In general, DQA activities include the following:

1. Review project objectives and sampling design
2. Conduct a preliminary data review
3. Perform statistical analysis of the data
4. Draw conclusions from the data and make recommendations.

Project objectives will be reviewed when sufficient data have been generated to allow a reevaluation of the project objectives to ensure that they are still valid. The preliminary data review includes reviewing the QA and QC reports, tabulating the data in different forms, and graphically exploring the data. A preliminary data review can identify patterns, relationships, and potential anomalies that may need to be further explored. Statistical analysis may include the examination of time plots and performance of statistical tests to determine the significance of trends. Once graphical and quantitative analyses are performed, the results will be interpreted and conclusions and recommendations documented.

Moving average statistics may be used to determine compliance with delisting limits, in accordance with the sampling design specified in Section 3.2 of this document. Until enough data are collected to adequately identify cycles or trends, single concentrations will be used. Statistical estimates may be used once adequate data are collected. Either a single concentration or a statistical value will be compared with five times the docket values to determine whether an analyte should be monitored on a semiannual or biennial basis. Each time new data are collected, the same DQA procedure will take place to ensure ongoing compliance with delisting criteria.

Recommendations about the status of each analyte being monitored will be made on the same schedule that data are being collected to ensure that the monitoring status of each analyte remains up to date. Recommendations should be made in the context of the historical data and with respect to the waste management processes being performed at the site. The addition of new or different waste streams and the management processes at the facility will be considered each time that data are assessed.

Over time, enough data may be collected to perform more involved statistical analyses, such as trend analysis, control chart analysis, time series modeling, and correlation analyses between analytes. These analyses may provide better estimates of uncertainty than a moving standard deviation, and their use should be considered for incorporation into the overall data assessment program.

4.0 REFERENCES

10 CFR 835, "Occupational Radiation Protection," *Code of Federal Regulations*, as amended.

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APPENDIX A

SUPPORTING DATA FOR COC SELECTION

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
100-01-6	4-Nitroaniline	96-103	50	ug/L			ND		SVOA
100-01-6	4-Nitroaniline	97-200	50	ug/L			ND		SVOA
100-01-6	4-Nitroaniline	97-210	50	ug/L			ND		SVOA
100-01-6	4-Nitroaniline	97-220	50	ug/L			ND		SVOA
100-01-6	4-Nitroaniline	97-230	50	ug/L			ND		SVOA
100-01-6	4-Nitroaniline	97-240	50	ug/L			ND		SVOA
100-01-6	4-Nitroaniline	97-250	50	ug/L			ND		SVOA
100-01-6	4-Nitroaniline	97-260	50	ug/L			ND		SVOA
100-01-6	4-Nitroaniline	97-270	50	ug/L			ND		SVOA
100-01-6	4-Nitroaniline	97-280	50	ug/L			ND		SVOA
100-01-6	4-Nitroaniline	97-290	50	ug/L			ND		SVOA
100-02-7	4-Nitrophenol	96-103	50	ug/L			ND		SVOA
100-02-7	4-Nitrophenol	97-200	50	ug/L			ND		SVOA
100-02-7	4-Nitrophenol	97-210	50	ug/L			ND		SVOA
100-02-7	4-Nitrophenol	97-220	50	ug/L			ND		SVOA
100-02-7	4-Nitrophenol	97-230	50	ug/L			ND		SVOA
100-02-7	4-Nitrophenol	97-240	50	ug/L			ND		SVOA
100-02-7	4-Nitrophenol	97-250	50	ug/L			ND		SVOA
100-02-7	4-Nitrophenol	97-260	50	ug/L			ND		SVOA
100-02-7	4-Nitrophenol	97-270	50	ug/L			ND		SVOA
100-02-7	4-Nitrophenol	97-280	50	ug/L			ND		SVOA
100-02-7	4-Nitrophenol	97-290	50	ug/L			ND		SVOA
100-41-4	Ethyl benzene	96-101A	5	ug/L			ND		VOA
100-41-4	Ethyl benzene	97-200	5	ug/L			ND		VOA
100-41-4	Ethyl benzene	97-210	5	ug/L			ND		VOA
100-41-4	Ethyl benzene	97-220	5	ug/L			ND		VOA
100-41-4	Ethyl benzene	97-230	5	ug/L			ND		VOA
100-41-4	Ethyl benzene	97-240	5	ug/L			ND		VOA
100-41-4	Ethyl benzene	97-250	5	ug/L			ND		VOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
100-41-4	Ethyl benzene	97-260	5	ug/L			ND		VOA
100-41-4	Ethyl benzene	97-270	5	ug/L			ND		VOA
100-41-4	Ethyl benzene	97-280	5	ug/L			ND		VOA
100-41-4	Ethyl benzene	97-290	5	ug/L			ND		VOA
100-42-5	Styrene	96-101A	5	ug/L			ND		VOA
100-42-5	Styrene	97-200	5	ug/L			ND		VOA
100-42-5	Styrene	97-210	5	ug/L			ND		VOA
100-42-5	Styrene	97-220	5	ug/L			ND		VOA
100-42-5	Styrene	97-230	5	ug/L			ND		VOA
100-42-5	Styrene	97-240	5	ug/L			ND		VOA
100-42-5	Styrene	97-250	5	ug/L			ND		VOA
100-42-5	Styrene	97-260	5	ug/L			ND		VOA
100-42-5	Styrene	97-270	5	ug/L			ND		VOA
100-42-5	Styrene	97-280	5	ug/L			NR		VOA
100-42-5	Styrene	97-290	5	ug/L			ND		VOA
10045-97-3	Cs-137	96-100		pCi/L			ND		Rad
10045-97-3	Cs-137	97-200		pCi/L			ND		Rad
10045-97-3	Cs-137	97-210		pCi/L			ND		Rad
10045-97-3	Cs-137	97-220		pCi/L			ND		Rad
10045-97-3	Cs-137	97-230		pCi/L			ND		Rad
10045-97-3	Cs-137	97-240		pCi/L			ND		Rad
10045-97-3	Cs-137	97-250		pCi/L			ND		Rad
10045-97-3	Cs-137	97-260		pCi/L			ND		Rad
10045-97-3	Cs-137	97-290		pCi/L			ND		Rad
10061-01-5	cis-1,3-Dichloropropene	96-101A	5	ug/L			ND		VOA
10061-01-5	cis-1,3-Dichloropropene	97-200	5	ug/L			ND		VOA
10061-01-5	cis-1,3-Dichloropropene	97-210	5	ug/L			ND		VOA
10061-01-5	cis-1,3-Dichloropropene	97-220	5	ug/L			ND		VOA
10061-01-5	cis-1,3-Dichloropropene	97-230	5	ug/L			ND		VOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
10061-01-5	cis-1,3-Dichloropropene	97-240	5	ug/L			ND		VOA
10061-01-5	cis-1,3-Dichloropropene	97-250	5	ug/L			ND		VOA
10061-01-5	cis-1,3-Dichloropropene	97-260	5	ug/L			ND		VOA
10061-01-5	cis-1,3-Dichloropropene	97-270	5	ug/L			ND		VOA
10061-01-5	cis-1,3-Dichloropropene	97-280	5	ug/L			NR		VOA
10061-01-5	cis-1,3-Dichloropropene	97-290	5	ug/L			ND		VOA
10061-02-6	trans-1,3-Dichloropropene	96-101A	5	ug/L			ND		VOA
10061-02-6	trans-1,3-Dichloropropene	97-200	5	ug/L			ND		VOA
10061-02-6	trans-1,3-Dichloropropene	97-210	5	ug/L			ND		VOA
10061-02-6	trans-1,3-Dichloropropene	97-220	5	ug/L			ND		VOA
10061-02-6	trans-1,3-Dichloropropene	97-230	5	ug/L			ND		VOA
10061-02-6	trans-1,3-Dichloropropene	97-240	5	ug/L			ND		VOA
10061-02-6	trans-1,3-Dichloropropene	97-250	5	ug/L			ND		VOA
10061-02-6	trans-1,3-Dichloropropene	97-260	5	ug/L			ND		VOA
10061-02-6	trans-1,3-Dichloropropene	97-270	5	ug/L			ND		VOA
10061-02-6	trans-1,3-Dichloropropene	97-280	5	ug/L			NR		VOA
10061-02-6	trans-1,3-Dichloropropene	97-290	5	ug/L			ND		VOA
101-55-3	4-Bromophenylphenyl ether	96-103	10	ug/L			ND		SVOA
101-55-3	4-Bromophenylphenyl ether	97-200	10	ug/L			ND		SVOA
101-55-3	4-Bromophenylphenyl ether	97-210	10	ug/L			ND		SVOA
101-55-3	4-Bromophenylphenyl ether	97-220	10	ug/L			ND		SVOA
101-55-3	4-Bromophenylphenyl ether	97-230	10	ug/L			ND		SVOA
101-55-3	4-Bromophenylphenyl ether	97-240	10	ug/L			ND		SVOA
101-55-3	4-Bromophenylphenyl ether	97-250	10	ug/L			ND		SVOA
101-55-3	4-Bromophenylphenyl ether	97-260	10	ug/L			ND		SVOA
101-55-3	4-Bromophenylphenyl ether	97-270	10	ug/L			ND		SVOA
101-55-3	4-Bromophenylphenyl ether	97-280	10	ug/L			ND		SVOA
101-55-3	4-Bromophenylphenyl ether	97-290	10	ug/L			ND		SVOA
10198-40-0	Co-60	96-100		pCi/L			ND		Rad

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
10198-40-0	Co-60	97-200		pCi/L			ND		Rad
10198-40-0	Co-60	97-210		pCi/L			ND		Rad
10198-40-0	Co-60	97-220		pCi/L			ND		Rad
10198-40-0	Co-60	97-230		pCi/L			ND		Rad
10198-40-0	Co-60	97-240		pCi/L			ND		Rad
10198-40-0	Co-60	97-250		pCi/L			ND		Rad
10198-40-0	Co-60	97-260		pCi/L			ND		Rad
10198-40-0	Co-60	97-290		pCi/L			ND		Rad
103-65-1	Propylbenzene					X			
104-76-7	2-Ethyl-1-hexanol					X			
105-67-9	2,4-Dimethylphenol	96-103	10	ug/L			ND		SVOA
105-67-9	2,4-Dimethylphenol	97-200	10	ug/L			ND		SVOA
105-67-9	2,4-Dimethylphenol	97-210	10	ug/L			ND		SVOA
105-67-9	2,4-Dimethylphenol	97-220	10	ug/L			ND		SVOA
105-67-9	2,4-Dimethylphenol	97-230	10	ug/L			ND		SVOA
105-67-9	2,4-Dimethylphenol	97-240	10	ug/L			ND		SVOA
105-67-9	2,4-Dimethylphenol	97-250	10	ug/L			ND		SVOA
105-67-9	2,4-Dimethylphenol	97-260	10	ug/L			ND		SVOA
105-67-9	2,4-Dimethylphenol	97-270	10	ug/L			ND		SVOA
105-67-9	2,4-Dimethylphenol	97-280	10	ug/L			ND		SVOA
105-67-9	2,4-Dimethylphenol	97-290	10	ug/L			ND		SVOA
106-44-5	4-Methylphenol	96-103	10	ug/L			ND		SVOA
106-44-5	4-Methylphenol	97-200	10	ug/L			ND		SVOA
106-44-5	4-Methylphenol	97-210	10	ug/L			ND		SVOA
106-44-5	4-Methylphenol	97-220	10	ug/L			ND		SVOA
106-44-5	4-Methylphenol	97-230	10	ug/L			ND		SVOA
106-44-5	4-Methylphenol	97-240	10	ug/L			ND		SVOA
106-44-5	4-Methylphenol	97-250	10	ug/L			ND		SVOA
106-44-5	4-Methylphenol	97-260	10	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
106-44-5	4-Methylphenol	97-270	10	ug/L			ND		SVOA
106-44-5	4-Methylphenol	97-280	10	ug/L			ND		SVOA
106-44-5	4-Methylphenol	97-290	10	ug/L			ND		SVOA
106-46-7	1,4-Dichlorobenzene	96-103	10	ug/L			ND		SVOA
106-46-7	1,4-Dichlorobenzene	97-200	10	ug/L			ND		SVOA
106-46-7	1,4-Dichlorobenzene	97-210	10	ug/L			ND		SVOA
106-46-7	1,4-Dichlorobenzene	97-220	10	ug/L			ND		SVOA
106-46-7	1,4-Dichlorobenzene	97-230	10	ug/L			ND		SVOA
106-46-7	1,4-Dichlorobenzene	97-240	10	ug/L			ND		SVOA
106-46-7	1,4-Dichlorobenzene	97-250	10	ug/L			ND		SVOA
106-46-7	1,4-Dichlorobenzene	97-260	10	ug/L			ND		SVOA
106-46-7	1,4-Dichlorobenzene	97-270	10	ug/L			ND		SVOA
106-46-7	1,4-Dichlorobenzene	97-280	10	ug/L			ND		SVOA
106-46-7	1,4-Dichlorobenzene	97-290	10	ug/L			ND		SVOA
106-47-8	4-Chloroaniline	96-103	10	ug/L			ND		SVOA
106-47-8	4-Chloroaniline	97-200	10	ug/L			ND		SVOA
106-47-8	4-Chloroaniline	97-210	10	ug/L			ND		SVOA
106-47-8	4-Chloroaniline	97-220	10	ug/L			ND		SVOA
106-47-8	4-Chloroaniline	97-230	10	ug/L			ND		SVOA
106-47-8	4-Chloroaniline	97-240	10	ug/L			ND		SVOA
106-47-8	4-Chloroaniline	97-250	10	ug/L			ND		SVOA
106-47-8	4-Chloroaniline	97-260	10	ug/L			ND		SVOA
106-47-8	4-Chloroaniline	97-270	10	ug/L			ND		SVOA
106-47-8	4-Chloroaniline	97-280	10	ug/L			ND		SVOA
106-47-8	4-Chloroaniline	97-290	10	ug/L			ND		SVOA
1066-40-6	Trimethylsilanol					X			
107-06-2	1,2-Dichloroethane	96-101A	5	ug/L			ND		VOA
107-06-2	1,2-Dichloroethane	97-200	5	ug/L			ND		VOA
107-06-2	1,2-Dichloroethane	97-210	5	ug/L			ND		VOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
107-06-2	1,2-Dichloroethane	97-220	5	ug/L			ND		VOA
107-06-2	1,2-Dichloroethane	97-230	5	ug/L			ND		VOA
107-06-2	1,2-Dichloroethane	97-240	5	ug/L			ND		VOA
107-06-2	1,2-Dichloroethane	97-250	5	ug/L			ND		VOA
107-06-2	1,2-Dichloroethane	97-260	5	ug/L			ND		VOA
107-06-2	1,2-Dichloroethane	97-270	5	ug/L			ND		VOA
107-06-2	1,2-Dichloroethane	97-280	5	ug/L			ND		VOA
107-06-2	1,2-Dichloroethane	97-290	5	ug/L			ND		VOA
108-10-1	4-Methyl-2-pentanone	96-101A	20	ug/L			ND		VOA
108-10-1	4-Methyl-2-pentanone	97-200	20	ug/L			ND		VOA
108-10-1	4-Methyl-2-pentanone	97-210	20	ug/L			ND		VOA
108-10-1	4-Methyl-2-pentanone	97-220	20	ug/L			ND		VOA
108-10-1	4-Methyl-2-pentanone	97-230	20	ug/L			ND		VOA
108-10-1	4-Methyl-2-pentanone	97-240	20	ug/L			ND		VOA
108-10-1	4-Methyl-2-pentanone	97-250	20	ug/L			ND		VOA
108-10-1	4-Methyl-2-pentanone	97-260	20	ug/L			ND		VOA
108-10-1	4-Methyl-2-pentanone	97-270	20	ug/L			ND		VOA
108-10-1	4-Methyl-2-pentanone	97-280	20	ug/L			NR		VOA
108-10-1	4-Methyl-2-pentanone	97-290	20	ug/L			ND		VOA
108-60-1	Bis(2-Chloroisopropyl) ether	96-103	10	ug/L			ND		SVOA
108-60-1	Bis(2-Chloroisopropyl) ether	97-200	10	ug/L			ND		SVOA
108-60-1	Bis(2-Chloroisopropyl) ether	97-210	10	ug/L			ND		SVOA
108-60-1	Bis(2-Chloroisopropyl) ether	97-220	10	ug/L			ND		SVOA
108-60-1	Bis(2-Chloroisopropyl) ether	97-230	10	ug/L			ND		SVOA
108-60-1	Bis(2-Chloroisopropyl) ether	97-240	10	ug/L			ND		SVOA
108-60-1	Bis(2-Chloroisopropyl) ether	97-250	10	ug/L			ND		SVOA
108-60-1	Bis(2-Chloroisopropyl) ether	97-260	10	ug/L			ND		SVOA
108-60-1	Bis(2-Chloroisopropyl) ether	97-270	10	ug/L			ND		SVOA
108-60-1	Bis(2-Chloroisopropyl) ether	97-280	10	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
108-60-1	Bis(2-Chloroisopropyl) ether	97-290	10	ug/L			ND		SVOA
108-88-3	Toluene	96-101A	5	ug/L			ND		VOA
108-88-3	Toluene	97-200	5	ug/L			ND		VOA
108-88-3	Toluene	97-210	5	ug/L			ND		VOA
108-88-3	Toluene	97-220	5	ug/L			ND		VOA
108-88-3	Toluene	97-230	5	ug/L			ND		VOA
108-88-3	Toluene	97-240	5	ug/L			ND		VOA
108-88-3	Toluene	97-250	5	ug/L			ND		VOA
108-88-3	Toluene	97-260	5	ug/L			ND		VOA
108-88-3	Toluene	97-270	10	ug/L	2			J	VOA
108-88-3	Toluene	97-280	5	ug/L			ND		VOA
108-88-3	Toluene	97-290	5	ug/L			ND		VOA
108-90-7	Chlorobenzene	96-101A	5	ug/L			ND		VOA
108-90-7	Chlorobenzene	97-200	5	ug/L			ND		VOA
108-90-7	Chlorobenzene	97-210	5	ug/L			ND		VOA
108-90-7	Chlorobenzene	97-220	5	ug/L			ND		VOA
108-90-7	Chlorobenzene	97-230	5	ug/L			ND		VOA
108-90-7	Chlorobenzene	97-240	5	ug/L			ND		VOA
108-90-7	Chlorobenzene	97-250	5	ug/L			ND		VOA
108-90-7	Chlorobenzene	97-260	5	ug/L			ND		VOA
108-90-7	Chlorobenzene	97-270	5	ug/L			ND		VOA
108-90-7	Chlorobenzene	97-280	5	ug/L			ND		VOA
108-90-7	Chlorobenzene	97-290	5	ug/L			ND		VOA
108-95-2	Phenol	96-103	10	ug/L			ND		SVOA
108-95-2	Phenol	97-200	10	ug/L			ND		SVOA
108-95-2	Phenol	97-210	10	ug/L			ND		SVOA
108-95-2	Phenol	97-220	10	ug/L			ND		SVOA
108-95-2	Phenol	97-230	10	ug/L			ND		SVOA
108-95-2	Phenol	97-240	10	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
108-95-2	Phenol	97-250	10	ug/L			ND		SVOA
108-95-2	Phenol	97-260	10	ug/L			ND		SVOA
108-95-2	Phenol	97-270	10	ug/L			ND		SVOA
108-95-2	Phenol	97-280	10	ug/L			ND		SVOA
108-95-2	Phenol	97-290	10	ug/L			ND		SVOA
111-44-4	Bis(2-chloroethyl) ether	96-103	10	ug/L			ND		SVOA
111-44-4	Bis(2-chloroethyl) ether	97-200	10	ug/L			ND		SVOA
111-44-4	Bis(2-chloroethyl) ether	97-210	10	ug/L			ND		SVOA
111-44-4	Bis(2-chloroethyl) ether	97-220	10	ug/L			ND		SVOA
111-44-4	Bis(2-chloroethyl) ether	97-230	10	ug/L			ND		SVOA
111-44-4	Bis(2-chloroethyl) ether	97-240	10	ug/L			ND		SVOA
111-44-4	Bis(2-chloroethyl) ether	97-250	10	ug/L			ND		SVOA
111-44-4	Bis(2-chloroethyl) ether	97-260	10	ug/L			ND		SVOA
111-44-4	Bis(2-chloroethyl) ether	97-270	10	ug/L			ND		SVOA
111-44-4	Bis(2-chloroethyl) ether	97-280	10	ug/L			ND		SVOA
111-44-4	Bis(2-chloroethyl) ether	97-290	10	ug/L			ND		SVOA
111-91-1	Bis(2-Chloroethoxy)methane	96-103	10	ug/L			ND		SVOA
111-91-1	Bis(2-Chloroethoxy)methane	97-200	10	ug/L			ND		SVOA
111-91-1	Bis(2-Chloroethoxy)methane	97-210	10	ug/L			ND		SVOA
111-91-1	Bis(2-Chloroethoxy)methane	97-220	10	ug/L			ND		SVOA
111-91-1	Bis(2-Chloroethoxy)methane	97-230	10	ug/L			ND		SVOA
111-91-1	Bis(2-Chloroethoxy)methane	97-240	10	ug/L			ND		SVOA
111-91-1	Bis(2-Chloroethoxy)methane	97-250	10	ug/L			ND		SVOA
111-91-1	Bis(2-Chloroethoxy)methane	97-260	10	ug/L			ND		SVOA
111-91-1	Bis(2-Chloroethoxy)methane	97-270	10	ug/L			ND		SVOA
111-91-1	Bis(2-Chloroethoxy)methane	97-280	10	ug/L			ND		SVOA
111-91-1	Bis(2-Chloroethoxy)methane	97-290	10	ug/L			ND		SVOA
112-40-3	n-Dodecane					X			
117-81-7	Bis(2-ethylhexyl) phthalate	96-103	10	ug/L			U	U	SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
117-81-7	Bis(2-ethylhexyl) phthalate	97-200	10	ug/L			ND		SVOA
117-81-7	Bis(2-ethylhexyl) phthalate	97-210	10	ug/L			ND		SVOA
117-81-7	Bis(2-ethylhexyl) phthalate	97-220	10	ug/L	1			J	SVOA
117-81-7	Bis(2-ethylhexyl) phthalate	97-230	10	ug/L			ND		SVOA
117-81-7	Bis(2-ethylhexyl) phthalate	97-240	10	ug/L			U	U	SVOA
117-81-7	Bis(2-ethylhexyl) phthalate	97-250	10	ug/L	6			J	SVOA
117-81-7	Bis(2-ethylhexyl) phthalate	97-260	10	ug/L	1			J	SVOA
117-81-7	Bis(2-ethylhexyl) phthalate	97-270	10	ug/L	6			J	SVOA
117-81-7	Bis(2-ethylhexyl) phthalate	97-280	10	ug/L			U	U	SVOA
117-81-7	Bis(2-ethylhexyl) phthalate	97-290	10	ug/L	14				SVOA
117-84-0	Di-n-octylphthalate	96-103	10	ug/L			ND		SVOA
117-84-0	Di-n-octylphthalate	97-200	10	ug/L			ND		SVOA
117-84-0	Di-n-octylphthalate	97-210	10	ug/L			ND		SVOA
117-84-0	Di-n-octylphthalate	97-220	10	ug/L			ND		SVOA
117-84-0	Di-n-octylphthalate	97-230	10	ug/L			ND		SVOA
117-84-0	Di-n-octylphthalate	97-240	10	ug/L			ND		SVOA
117-84-0	Di-n-octylphthalate	97-250	10	ug/L			ND		SVOA
117-84-0	Di-n-octylphthalate	97-260	10	ug/L			ND		SVOA
117-84-0	Di-n-octylphthalate	97-270	10	ug/L			ND		SVOA
117-84-0	Di-n-octylphthalate	97-280	10	ug/L			ND		SVOA
117-84-0	Di-n-octylphthalate	97-290	10	ug/L			ND		SVOA
118-74-1	Hexachlorobenzene	96-103	10	ug/L			ND		SVOA
118-74-1	Hexachlorobenzene	97-200	10	ug/L			ND		SVOA
118-74-1	Hexachlorobenzene	97-210	10	ug/L			ND		SVOA
118-74-1	Hexachlorobenzene	97-220	10	ug/L			ND		SVOA
118-74-1	Hexachlorobenzene	97-230	10	ug/L			ND		SVOA
118-74-1	Hexachlorobenzene	97-240	10	ug/L			ND		SVOA
118-74-1	Hexachlorobenzene	97-250	10	ug/L			ND		SVOA
118-74-1	Hexachlorobenzene	97-260	10	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
118-74-1	Hexachlorobenzene	97-270	10	ug/L			ND		SVOA
118-74-1	Hexachlorobenzene	97-280	10	ug/L			ND		SVOA
118-74-1	Hexachlorobenzene	97-290	10	ug/L			ND		SVOA
120-12-7	Anthracene	96-103	10	ug/L			ND		SVOA
120-12-7	Anthracene	97-200	10	ug/L			ND		SVOA
120-12-7	Anthracene	97-210	10	ug/L			ND		SVOA
120-12-7	Anthracene	97-220	10	ug/L			ND		SVOA
120-12-7	Anthracene	97-230	10	ug/L			ND		SVOA
120-12-7	Anthracene	97-240	10	ug/L			ND		SVOA
120-12-7	Anthracene	97-250	10	ug/L			ND		SVOA
120-12-7	Anthracene	97-260	10	ug/L			ND		SVOA
120-12-7	Anthracene	97-270	10	ug/L			ND		SVOA
120-12-7	Anthracene	97-280	10	ug/L			ND		SVOA
120-12-7	Anthracene	97-290	10	ug/L			ND		SVOA
120-82-1	1,2,4-Trichlorobenzene	96-103	10	ug/L			ND		SVOA
120-82-1	1,2,4-Trichlorobenzene	97-200	10	ug/L			ND		SVOA
120-82-1	1,2,4-Trichlorobenzene	97-210	10	ug/L			ND		SVOA
120-82-1	1,2,4-Trichlorobenzene	97-220	10	ug/L			ND		SVOA
120-82-1	1,2,4-Trichlorobenzene	97-230	10	ug/L			ND		SVOA
120-82-1	1,2,4-Trichlorobenzene	97-240	10	ug/L			ND		SVOA
120-82-1	1,2,4-Trichlorobenzene	97-250	10	ug/L			ND		SVOA
120-82-1	1,2,4-Trichlorobenzene	97-260	10	ug/L			ND		SVOA
120-82-1	1,2,4-Trichlorobenzene	97-270	10	ug/L			ND		SVOA
120-82-1	1,2,4-Trichlorobenzene	97-280	10	ug/L			ND		SVOA
120-82-1	1,2,4-Trichlorobenzene	97-290	10	ug/L			ND		SVOA
120-83-2	2,4-Dichlorophenol	96-103	10	ug/L			ND		SVOA
120-83-2	2,4-Dichlorophenol	97-200	10	ug/L			ND		SVOA
120-83-2	2,4-Dichlorophenol	97-210	10	ug/L			ND		SVOA
120-83-2	2,4-Dichlorophenol	97-220	10	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
120-83-2	2,4-Dichlorophenol	97-230	10	ug/L			ND		SVOA
120-83-2	2,4-Dichlorophenol	97-240	10	ug/L			ND		SVOA
120-83-2	2,4-Dichlorophenol	97-250	10	ug/L			ND		SVOA
120-83-2	2,4-Dichlorophenol	97-260	10	ug/L			ND		SVOA
120-83-2	2,4-Dichlorophenol	97-270	10	ug/L			ND		SVOA
120-83-2	2,4-Dichlorophenol	97-280	10	ug/L			ND		SVOA
120-83-2	2,4-Dichlorophenol	97-290	10	ug/L			ND		SVOA
121-14-2	2,4-Dinitrotoluene	96-103	10	ug/L			ND		SVOA
121-14-2	2,4-Dinitrotoluene	97-200	10	ug/L			ND		SVOA
121-14-2	2,4-Dinitrotoluene	97-210	10	ug/L			ND		SVOA
121-14-2	2,4-Dinitrotoluene	97-220	10	ug/L			ND		SVOA
121-14-2	2,4-Dinitrotoluene	97-230	10	ug/L			ND		SVOA
121-14-2	2,4-Dinitrotoluene	97-240	10	ug/L			ND		SVOA
121-14-2	2,4-Dinitrotoluene	97-250	10	ug/L			ND		SVOA
121-14-2	2,4-Dinitrotoluene	97-260	10	ug/L			ND		SVOA
121-14-2	2,4-Dinitrotoluene	97-270	10	ug/L			ND		SVOA
121-14-2	2,4-Dinitrotoluene	97-280	10	ug/L			ND		SVOA
121-14-2	2,4-Dinitrotoluene	97-290	10	ug/L			ND		SVOA
124-48-1	Dibromochloromethane	96-101A	5	ug/L			ND		VOA
124-48-1	Dibromochloromethane	97-200	5	ug/L			ND		VOA
124-48-1	Dibromochloromethane	97-210	5	ug/L			ND		VOA
124-48-1	Dibromochloromethane	97-220	5	ug/L			ND		VOA
124-48-1	Dibromochloromethane	97-230	5	ug/L			ND		VOA
124-48-1	Dibromochloromethane	97-240	5	ug/L			ND		VOA
124-48-1	Dibromochloromethane	97-250	5	ug/L			ND		VOA
124-48-1	Dibromochloromethane	97-260	5	ug/L			ND		VOA
124-48-1	Dibromochloromethane	97-270	5	ug/L			ND		VOA
124-48-1	Dibromochloromethane	97-280	5	ug/L			NR		VOA
124-48-1	Dibromochloromethane	97-290	5	ug/L			ND		VOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
12587-46-1	Gross alpha	96-100		pCi/L	12.8				Rad
12587-46-1	Gross alpha	97-200		pCi/L	3.46				Rad
12587-46-1	Gross alpha	97-210		pCi/L	7.79				Rad
12587-46-1	Gross alpha	97-220		pCi/L	11.6				Rad
12587-46-1	Gross alpha	97-230		pCi/L	8.51				Rad
12587-46-1	Gross alpha	97-240		pCi/L	8.44				Rad
12587-46-1	Gross alpha	97-250		pCi/L	10.3				Rad
12587-46-1	Gross alpha	97-260		pCi/L	11.8				Rad
12587-46-1	Gross alpha	97-290		pCi/L	27.2				Rad
12587-47-2	Gross beta	96-100		pCi/L	26.7				Rad
12587-47-2	Gross beta	97-200		pCi/L	24.2				Rad
12587-47-2	Gross beta	97-210		pCi/L	20.3				Rad
12587-47-2	Gross beta	97-220		pCi/L	18.5				Rad
12587-47-2	Gross beta	97-230		pCi/L	15.6				Rad
12587-47-2	Gross beta	97-240		pCi/L	15.4				Rad
12587-47-2	Gross beta	97-250		pCi/L	15.6				Rad
12587-47-2	Gross beta	97-260		pCi/L	18.3				Rad
12587-47-2	Gross beta	97-290		pCi/L	26.8				Rad
127-18-4	1,1,2,2-Tetrachloroethene	96-101A	5	ug/L			ND		VOA
127-18-4	1,1,2,2-Tetrachloroethene	97-200	5	ug/L			ND		VOA
127-18-4	1,1,2,2-Tetrachloroethene	97-210	5	ug/L			ND		VOA
127-18-4	1,1,2,2-Tetrachloroethene	97-220	5	ug/L			ND		VOA
127-18-4	1,1,2,2-Tetrachloroethene	97-230	5	ug/L			ND		VOA
127-18-4	1,1,2,2-Tetrachloroethene	97-240	5	ug/L			ND		VOA
127-18-4	1,1,2,2-Tetrachloroethene	97-250	5	ug/L			ND		VOA
127-18-4	1,1,2,2-Tetrachloroethene	97-260	5	ug/L			ND		VOA
127-18-4	1,1,2,2-Tetrachloroethene	97-270	5	ug/L			ND		VOA
127-18-4	1,1,2,2-Tetrachloroethene	97-280	5	ug/L			ND		VOA
127-18-4	1,1,2,2-Tetrachloroethene	97-290	5	ug/L			ND		VOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
129-00-0	Pyrene					X			
129-00-0	Pyrene	96-103	10	ug/L			ND		SVOA
129-00-0	Pyrene	97-200	10	ug/L			ND		SVOA
129-00-0	Pyrene	97-210	10	ug/L			ND		SVOA
129-00-0	Pyrene	97-220	10	ug/L			ND		SVOA
129-00-0	Pyrene	97-230	10	ug/L			ND		SVOA
129-00-0	Pyrene	97-240	10	ug/L			ND		SVOA
129-00-0	Pyrene	97-250	10	ug/L			ND		SVOA
129-00-0	Pyrene	97-260	10	ug/L			ND		SVOA
129-00-0	Pyrene	97-270	10	ug/L			ND		SVOA
129-00-0	Pyrene	97-280	10	ug/L			ND		SVOA
129-00-0	Pyrene	97-290	10	ug/L			ND		SVOA
131-11-3	Dimethyl phthalate	96-103	10	ug/L			ND		SVOA
131-11-3	Dimethyl phthalate	97-200	10	ug/L			ND		SVOA
131-11-3	Dimethyl phthalate	97-210	10	ug/L			ND		SVOA
131-11-3	Dimethyl phthalate	97-220	10	ug/L			ND		SVOA
131-11-3	Dimethyl phthalate	97-230	10	ug/L			ND		SVOA
131-11-3	Dimethyl phthalate	97-240	10	ug/L			ND		SVOA
131-11-3	Dimethyl phthalate	97-250	10	ug/L			ND		SVOA
131-11-3	Dimethyl phthalate	97-260	10	ug/L			ND		SVOA
131-11-3	Dimethyl phthalate	97-270	10	ug/L			ND		SVOA
131-11-3	Dimethyl phthalate	97-280	10	ug/L			ND		SVOA
131-11-3	Dimethyl phthalate	97-290	10	ug/L			ND		SVOA
132-64-9	Dibenzofuran	96-103	10	ug/L			ND		SVOA
132-64-9	Dibenzofuran	97-200	10	ug/L			ND		SVOA
132-64-9	Dibenzofuran	97-210	10	ug/L			ND		SVOA
132-64-9	Dibenzofuran	97-220	10	ug/L			ND		SVOA
132-64-9	Dibenzofuran	97-230	10	ug/L			ND		SVOA
132-64-9	Dibenzofuran	97-240	10	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
132-64-9	Dibenzofuran	97-250	10	ug/L			ND		SVOA
132-64-9	Dibenzofuran	97-260	10	ug/L			ND		SVOA
132-64-9	Dibenzofuran	97-270	10	ug/L			ND		SVOA
132-64-9	Dibenzofuran	97-280	10	ug/L			ND		SVOA
132-64-9	Dibenzofuran	97-290	10	ug/L			ND		SVOA
1330-20-7	Xylene	97-200	5	ug/L			ND		VOA
1330-20-7	Xylene	97-210	5	ug/L			ND		VOA
1330-20-7	Xylene	97-220	5	ug/L			ND		VOA
1330-20-7	Xylene	97-230	5	ug/L			ND		VOA
1330-20-7	Xylene	97-240	5	ug/L			ND		VOA
1330-20-7	Xylene	97-250	5	ug/L			ND		VOA
1330-20-7	Xylene	97-260	5	ug/L			ND		VOA
1330-20-7	Xylene	97-270	5	ug/L			ND		VOA
1330-20-7	Xylene	97-280	5	ug/L			NR		VOA
1330-20-7	Xylene	97-290	5	ug/L			ND		VOA
13966-00-2	K-40	96-100		pCi/L			ND		Rad
13966-00-2	K-40	97-200		pCi/L			ND		Rad
13966-00-2	K-40	97-210		pCi/L			ND		Rad
13966-00-2	K-40	97-220		pCi/L			ND		Rad
13966-00-2	K-40	97-230		pCi/L			ND		Rad
13966-00-2	K-40	97-240		pCi/L			ND		Rad
13966-00-2	K-40	97-250		pCi/L			ND		Rad
13966-00-2	K-40	97-260		pCi/L			ND		Rad
13966-00-2	K-40	97-290		pCi/L			ND		Rad
13966-02-4	Be-7	96-100		pCi/L			ND		Rad
13966-02-4	Be-7	97-200		pCi/L			ND		Rad
13966-02-4	Be-7	97-210		pCi/L			ND		Rad
13966-02-4	Be-7	97-220		pCi/L			ND		Rad
13966-02-4	Be-7	97-230		pCi/L			ND		Rad

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
13966-02-4	Be-7	97-240		pCi/L			ND		Rad
13966-02-4	Be-7	97-250		pCi/L			ND		Rad
13966-02-4	Be-7	97-260		pCi/L			ND		Rad
13966-02-4	Be-7	97-290		pCi/L			ND		Rad
13967-48-1	Ru-106	96-100		pCi/L			ND		Rad
13967-48-1	Ru-106	97-200		pCi/L			ND		Rad
13967-48-1	Ru-106	97-210		pCi/L			ND		Rad
13967-48-1	Ru-106	97-220		pCi/L			ND		Rad
13967-48-1	Ru-106	97-230		pCi/L			ND		Rad
13967-48-1	Ru-106	97-240		pCi/L			ND		Rad
13967-48-1	Ru-106	97-250		pCi/L			ND		Rad
13967-48-1	Ru-106	97-260		pCi/L			ND		Rad
13967-48-1	Ru-106	97-290		pCi/L			ND		Rad
13967-70-9	Cs-134	96-100		pCi/L			ND		Rad
13967-70-9	Cs-134	97-200		pCi/L			ND		Rad
13967-70-9	Cs-134	97-210		pCi/L			ND		Rad
13967-70-9	Cs-134	97-220		pCi/L			ND		Rad
13967-70-9	Cs-134	97-230		pCi/L			ND		Rad
13967-70-9	Cs-134	97-240		pCi/L			ND		Rad
13967-70-9	Cs-134	97-250		pCi/L			ND		Rad
13967-70-9	Cs-134	97-260		pCi/L			ND		Rad
13967-70-9	Cs-134	97-290		pCi/L			ND		Rad
14234-35-6	Sb-125	96-100		pCi/L			ND		Rad
14234-35-6	Sb-125	97-200		pCi/L			ND		Rad
14234-35-6	Sb-125	97-210		pCi/L			ND		Rad
14234-35-6	Sb-125	97-220		pCi/L			ND		Rad
14234-35-6	Sb-125	97-230		pCi/L			ND		Rad
14234-35-6	Sb-125	97-240		pCi/L			ND		Rad
14234-35-6	Sb-125	97-250		pCi/L			ND		Rad

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
14234-35-6	Sb-125	97-260		pCi/L			ND		Rad
14234-35-6	Sb-125	97-290		pCi/L			ND		Rad
14265-44-2	Phosphate	96-109		mg/L					WetChem
14265-44-2	Phosphate	96-111		mg/L			ND		WetChem
14265-44-2	Phosphate	96-113		mg/L					WetChem
14265-44-2	Phosphate	97-200		mg/L			ND		WetChem
14265-44-2	Phosphate	97-210		mg/L			ND		WetChem
14265-44-2	Phosphate	97-220		mg/L			ND		WetChem
14265-44-2	Phosphate	97-230		mg/L	0.84				WetChem
14265-44-2	Phosphate	97-240		mg/L			ND		WetChem
14265-44-2	Phosphate	97-250		mg/L			ND		WetChem
14265-44-2	Phosphate	97-260		mg/L	0.551				WetChem
14265-44-2	Phosphate	97-270		mg/L	0.41				WetChem
14265-44-2	Phosphate	97-280		mg/L	0.54				WetChem
14265-44-2	Phosphate	97-290		mg/L	0.72				WetChem
14391-16-3	Eu-155	96-100		pCi/L			ND		Rad
14391-16-3	Eu-155	97-200		pCi/L			ND		Rad
14391-16-3	Eu-155	97-210		pCi/L			ND		Rad
14391-16-3	Eu-155	97-220		pCi/L			ND		Rad
14391-16-3	Eu-155	97-230		pCi/L			ND		Rad
14391-16-3	Eu-155	97-240		pCi/L			ND		Rad
14391-16-3	Eu-155	97-250		pCi/L			ND		Rad
14391-16-3	Eu-155	97-260		pCi/L			ND		Rad
14391-16-3	Eu-155	97-290		pCi/L			ND		Rad
14797-55-8	Nitrate	96-109		mg/L					WetChem
14797-55-8	Nitrate	96-111		mg/L	3.42				WetChem
14797-55-8	Nitrate	96-113		mg/L					WetChem
14797-55-8	Nitrate	97-200		mg/L	10.8				WetChem
14797-55-8	Nitrate	97-210		mg/L	19.3				WetChem

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
14797-55-8	Nitrate	97-220		mg/L	11.8				WetChem
14797-55-8	Nitrate	97-230		mg/L	11.4				WetChem
14797-55-8	Nitrate	97-240		mg/L	8.36				WetChem
14797-55-8	Nitrate	97-250		mg/L	9.39				WetChem
14797-55-8	Nitrate	97-260		mg/L	8.34				WetChem
14797-55-8	Nitrate	97-270		mg/L	9.43				WetChem
14797-55-8	Nitrate	97-280		mg/L	15.7				WetChem
14797-55-8	Nitrate	97-290		mg/L	12.2				WetChem
14797-65-0	Nitrite	96-109		mg/L					WetChem
14797-65-0	Nitrite	96-111		mg/L			ND		WetChem
14797-65-0	Nitrite	96-113		mg/L					WetChem
14797-65-0	Nitrite	97-200		mg/L			ND		WetChem
14797-65-0	Nitrite	97-210		mg/L			ND		WetChem
14797-65-0	Nitrite	97-220		mg/L			ND		WetChem
14797-65-0	Nitrite	97-230		mg/L			ND		WetChem
14797-65-0	Nitrite	97-240		mg/L			ND		WetChem
14797-65-0	Nitrite	97-250		mg/L			ND		WetChem
14797-65-0	Nitrite	97-260		mg/L			ND		WetChem
14797-65-0	Nitrite	97-270		mg/L			ND		WetChem
14797-65-0	Nitrite	97-280		mg/L			ND		WetChem
14797-65-0	Nitrite	97-290		mg/L			ND		WetChem
14808-79-8	Sulfate	96-109		mg/L					WetChem
14808-79-8	Sulfate	96-111		mg/L	247				WetChem
14808-79-8	Sulfate	96-113		mg/L					WetChem
14808-79-8	Sulfate	97-200		mg/L	373				WetChem
14808-79-8	Sulfate	97-210		mg/L	534				WetChem
14808-79-8	Sulfate	97-220		mg/L	395				WetChem
14808-79-8	Sulfate	97-230		mg/L	326				WetChem
14808-79-8	Sulfate	97-240		mg/L	250				WetChem

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
14808-79-8	Sulfate	97-250		mg/L	330				WetChem
14808-79-8	Sulfate	97-260		mg/L	291				WetChem
14808-79-8	Sulfate	97-270		mg/L	270				WetChem
14808-79-8	Sulfate	97-280		mg/L	249				WetChem
14808-79-8	Sulfate	97-290		mg/L	251				WetChem
15585-10-1	Eu-154	96-100		pCi/L			ND		Rad
15585-10-1	Eu-154	97-200		pCi/L			ND		Rad
15585-10-1	Eu-154	97-210		pCi/L			ND		Rad
15585-10-1	Eu-154	97-220		pCi/L			ND		Rad
15585-10-1	Eu-154	97-230		pCi/L			ND		Rad
15585-10-1	Eu-154	97-240		pCi/L			ND		Rad
15585-10-1	Eu-154	97-250		pCi/L			ND		Rad
15585-10-1	Eu-154	97-260		pCi/L			ND		Rad
15585-10-1	Eu-154	97-290		pCi/L			ND		Rad
16887-00-6	Chloride	96-109		mg/L					WetChem
16887-00-6	Chloride	96-111		mg/L	154				WetChem
16887-00-6	Chloride	96-113		mg/L					WetChem
16887-00-6	Chloride	97-200		mg/L	388				WetChem
16887-00-6	Chloride	97-210		mg/L	443				WetChem
16887-00-6	Chloride	97-220		mg/L	367				WetChem
16887-00-6	Chloride	97-230		mg/L	164				WetChem
16887-00-6	Chloride	97-240		mg/L	287				WetChem
16887-00-6	Chloride	97-250		mg/L	273				WetChem
16887-00-6	Chloride	97-260		mg/L	225				WetChem
16887-00-6	Chloride	97-270		mg/L	198				WetChem
16887-00-6	Chloride	97-280		mg/L	177				WetChem
16887-00-6	Chloride	97-290		mg/L	193				WetChem
16984-48-8	Fluoride	96-109		mg/L					WetChem
16984-48-8	Fluoride	96-111		mg/L	1.18				WetChem

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
16984-48-8	Fluoride	96-113		mg/L					WetChem
16984-48-8	Fluoride	97-200		mg/L	0.94				WetChem
16984-48-8	Fluoride	97-210		mg/L	0.93				WetChem
16984-48-8	Fluoride	97-220		mg/L	1.05				WetChem
16984-48-8	Fluoride	97-230		mg/L	1				WetChem
16984-48-8	Fluoride	97-240		mg/L	0.73				WetChem
16984-48-8	Fluoride	97-250		mg/L	1.17				WetChem
16984-48-8	Fluoride	97-260		mg/L	0.9				WetChem
16984-48-8	Fluoride	97-270		mg/L	0.94				WetChem
16984-48-8	Fluoride	97-280		mg/L	0.87				WetChem
16984-48-8	Fluoride	97-290		mg/L	1.1				WetChem
1825-61-2	Methoxytrimethylsilane					X			
191-24-2	Benzo(ghi)perylene	96-103	10	ug/L			ND		SVOA
191-24-2	Benzo(ghi)perylene	97-200	10	ug/L			ND		SVOA
191-24-2	Benzo(ghi)perylene	97-210	10	ug/L			ND		SVOA
191-24-2	Benzo(ghi)perylene	97-220	10	ug/L			ND		SVOA
191-24-2	Benzo(ghi)perylene	97-230	10	ug/L			ND		SVOA
191-24-2	Benzo(ghi)perylene	97-240	10	ug/L			ND		SVOA
191-24-2	Benzo(ghi)perylene	97-250	10	ug/L			ND		SVOA
191-24-2	Benzo(ghi)perylene	97-260	10	ug/L			ND		SVOA
191-24-2	Benzo(ghi)perylene	97-270	10	ug/L			ND		SVOA
191-24-2	Benzo(ghi)perylene	97-280	10	ug/L			ND		SVOA
191-24-2	Benzo(ghi)perylene	97-290	10	ug/L			ND		SVOA
193-39-5	Indeno(1,2,3-cd)pyrene	96-103	10	ug/L			ND		SVOA
193-39-5	Indeno(1,2,3-cd)pyrene	97-200	10	ug/L			ND		SVOA
193-39-5	Indeno(1,2,3-cd)pyrene	97-210	10	ug/L			ND		SVOA
193-39-5	Indeno(1,2,3-cd)pyrene	97-220	10	ug/L			ND		SVOA
193-39-5	Indeno(1,2,3-cd)pyrene	97-230	10	ug/L			ND		SVOA
193-39-5	Indeno(1,2,3-cd)pyrene	97-240	10	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
193-39-5	Indeno(1,2,3-cd)pyrene	97-250	10	ug/L			ND		SVOA
193-39-5	Indeno(1,2,3-cd)pyrene	97-260	10	ug/L			ND		SVOA
193-39-5	Indeno(1,2,3-cd)pyrene	97-270	10	ug/L			ND		SVOA
193-39-5	Indeno(1,2,3-cd)pyrene	97-280	10	ug/L			ND		SVOA
193-39-5	Indeno(1,2,3-cd)pyrene	97-290	10	ug/L			ND		SVOA
205-99-2	Benzo(b)fluoranthene	96-103	10	ug/L			ND		SVOA
205-99-2	Benzo(b)fluoranthene	97-200	10	ug/L			ND		SVOA
205-99-2	Benzo(b)fluoranthene	97-210	10	ug/L			ND		SVOA
205-99-2	Benzo(b)fluoranthene	97-220	10	ug/L			ND		SVOA
205-99-2	Benzo(b)fluoranthene	97-230	10	ug/L			ND		SVOA
205-99-2	Benzo(b)fluoranthene	97-240	10	ug/L			ND		SVOA
205-99-2	Benzo(b)fluoranthene	97-250	10	ug/L			ND		SVOA
205-99-2	Benzo(b)fluoranthene	97-260	10	ug/L			ND		SVOA
205-99-2	Benzo(b)fluoranthene	97-270	10	ug/L			ND		SVOA
205-99-2	Benzo(b)fluoranthene	97-280	10	ug/L			ND		SVOA
205-99-2	Benzo(b)fluoranthene	97-290	10	ug/L			ND		SVOA
206-44-0	Fluoranthene					X			
206-44-0	Fluoranthene	96-103	10	ug/L			ND		SVOA
206-44-0	Fluoranthene	97-200	10	ug/L			ND		SVOA
206-44-0	Fluoranthene	97-210	10	ug/L			ND		SVOA
206-44-0	Fluoranthene	97-220	10	ug/L			ND		SVOA
206-44-0	Fluoranthene	97-230	10	ug/L			ND		SVOA
206-44-0	Fluoranthene	97-240	10	ug/L			ND		SVOA
206-44-0	Fluoranthene	97-250	10	ug/L			ND		SVOA
206-44-0	Fluoranthene	97-260	10	ug/L			ND		SVOA
206-44-0	Fluoranthene	97-270	10	ug/L			ND		SVOA
206-44-0	Fluoranthene	97-280	10	ug/L			ND		SVOA
206-44-0	Fluoranthene	97-290	10	ug/L			ND		SVOA
207-08-9	Benzo(k)fluoranthene	96-103	10	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
207-08-9	Benzo(k)fluoranthene	97-200	10	ug/L			ND		SVOA
207-08-9	Benzo(k)fluoranthene	97-210	10	ug/L			ND		SVOA
207-08-9	Benzo(k)fluoranthene	97-220	10	ug/L			ND		SVOA
207-08-9	Benzo(k)fluoranthene	97-230	10	ug/L			ND		SVOA
207-08-9	Benzo(k)fluoranthene	97-240	10	ug/L			ND		SVOA
207-08-9	Benzo(k)fluoranthene	97-250	10	ug/L			ND		SVOA
207-08-9	Benzo(k)fluoranthene	97-260	10	ug/L			ND		SVOA
207-08-9	Benzo(k)fluoranthene	97-270	10	ug/L			ND		SVOA
207-08-9	Benzo(k)fluoranthene	97-280	10	ug/L			ND		SVOA
207-08-9	Benzo(k)fluoranthene	97-290	10	ug/L			ND		SVOA
208-96-8	Acenaphthylene	96-103	10	ug/L			ND		SVOA
208-96-8	Acenaphthylene	97-200	10	ug/L			ND		SVOA
208-96-8	Acenaphthylene	97-210	10	ug/L			ND		SVOA
208-96-8	Acenaphthylene	97-220	10	ug/L			ND		SVOA
208-96-8	Acenaphthylene	97-230	10	ug/L			ND		SVOA
208-96-8	Acenaphthylene	97-240	10	ug/L			ND		SVOA
208-96-8	Acenaphthylene	97-250	10	ug/L			ND		SVOA
208-96-8	Acenaphthylene	97-260	10	ug/L			ND		SVOA
208-96-8	Acenaphthylene	97-270	10	ug/L			ND		SVOA
208-96-8	Acenaphthylene	97-280	10	ug/L			ND		SVOA
208-96-8	Acenaphthylene	97-290	10	ug/L			ND		SVOA
218-01-9	Chrysene	96-103	10	ug/L			ND		SVOA
218-01-9	Chrysene	97-200	10	ug/L			ND		SVOA
218-01-9	Chrysene	97-210	10	ug/L			ND		SVOA
218-01-9	Chrysene	97-220	10	ug/L			ND		SVOA
218-01-9	Chrysene	97-230	10	ug/L			ND		SVOA
218-01-9	Chrysene	97-240	10	ug/L			ND		SVOA
218-01-9	Chrysene	97-250	10	ug/L			ND		SVOA
218-01-9	Chrysene	97-260	10	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
218-01-9	Chrysene	97-270	10	ug/L			ND		SVOA
218-01-9	Chrysene	97-280	10	ug/L			ND		SVOA
218-01-9	Chrysene	97-290	10	ug/L			ND		SVOA
26601-64-9	1,1'-Biphenyl, hexachloro					X			
35065-27-1	2,2',4,4',5,5'-hexachloro-1,1'-Biphenyl					X			
35065-29-3	2,2',3,4,4',5,5'-Heptachlorobiphenyl					X			
355-02-2	Perfluoro(methylcyclohexane)					X			
38380-01-7	1,1'-Biphenyl, 2,2',4,4',5-pentachloro					X			
38380-04-0	1,1'-Biphenyl, 2,2',3,4',5',?-hexachloro					X			
50-32-8	Benzo(a)pyrene	96-103	10	ug/L			ND		SVOA
50-32-8	Benzo(a)pyrene	97-200	10	ug/L			ND		SVOA
50-32-8	Benzo(a)pyrene	97-210	10	ug/L			ND		SVOA
50-32-8	Benzo(a)pyrene	97-220	10	ug/L			ND		SVOA
50-32-8	Benzo(a)pyrene	97-230	10	ug/L			ND		SVOA
50-32-8	Benzo(a)pyrene	97-240	10	ug/L			ND		SVOA
50-32-8	Benzo(a)pyrene	97-250	10	ug/L			ND		SVOA
50-32-8	Benzo(a)pyrene	97-260	10	ug/L			ND		SVOA
50-32-8	Benzo(a)pyrene	97-270	10	ug/L			ND		SVOA
50-32-8	Benzo(a)pyrene	97-280	10	ug/L			ND		SVOA
50-32-8	Benzo(a)pyrene	97-290	10	ug/L			ND		SVOA
51-28-5	2,4-Dinitrophenol	96-103	50	ug/L			ND		SVOA
51-28-5	2,4-Dinitrophenol	97-200	50	ug/L			ND		SVOA
51-28-5	2,4-Dinitrophenol	97-210	50	ug/L			ND		SVOA
51-28-5	2,4-Dinitrophenol	97-220	50	ug/L			ND		SVOA
51-28-5	2,4-Dinitrophenol	97-230	50	ug/L			ND		SVOA
51-28-5	2,4-Dinitrophenol	97-240	50	ug/L			ND		SVOA
51-28-5	2,4-Dinitrophenol	97-250	50	ug/L			ND		SVOA
51-28-5	2,4-Dinitrophenol	97-260	50	ug/L			ND		SVOA
51-28-5	2,4-Dinitrophenol	97-270	50	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
51-28-5	2,4-Dinitrophenol	97-280	50	ug/L			ND		SVOA
51-28-5	2,4-Dinitrophenol	97-290	50	ug/L			ND		SVOA
52663-67-9	1,1'-Biphenyl, 2,2',3,3',5,5'-hexachloro					X			
53-70-3	Dibenz[a,h]anthracene	96-103	10	ug/L			ND		SVOA
53-70-3	Dibenz[a,h]anthracene	97-200	10	ug/L			ND		SVOA
53-70-3	Dibenz[a,h]anthracene	97-210	10	ug/L			ND		SVOA
53-70-3	Dibenz[a,h]anthracene	97-220	10	ug/L			ND		SVOA
53-70-3	Dibenz[a,h]anthracene	97-230	10	ug/L			ND		SVOA
53-70-3	Dibenz[a,h]anthracene	97-240	10	ug/L			ND		SVOA
53-70-3	Dibenz[a,h]anthracene	97-250	10	ug/L			ND		SVOA
53-70-3	Dibenz[a,h]anthracene	97-260	10	ug/L			ND		SVOA
53-70-3	Dibenz[a,h]anthracene	97-270	10	ug/L			ND		SVOA
53-70-3	Dibenz[a,h]anthracene	97-280	10	ug/L			ND		SVOA
53-70-3	Dibenz[a,h]anthracene	97-290	10	ug/L			ND		SVOA
534-52-1	4,6-Dinitro-o-cresol	96-103	50	ug/L			ND		SVOA
534-52-1	4,6-Dinitro-o-cresol	97-200	50	ug/L			ND		SVOA
534-52-1	4,6-Dinitro-o-cresol	97-210	50	ug/L			ND		SVOA
534-52-1	4,6-Dinitro-o-cresol	97-220	50	ug/L			ND		SVOA
534-52-1	4,6-Dinitro-o-cresol	97-230	50	ug/L			ND		SVOA
534-52-1	4,6-Dinitro-o-cresol	97-240	50	ug/L			ND		SVOA
534-52-1	4,6-Dinitro-o-cresol	97-250	50	ug/L			ND		SVOA
534-52-1	4,6-Dinitro-o-cresol	97-260	50	ug/L			ND		SVOA
534-52-1	4,6-Dinitro-o-cresol	97-270	50	ug/L			ND		SVOA
534-52-1	4,6-Dinitro-o-cresol	97-280	50	ug/L			ND		SVOA
534-52-1	4,6-Dinitro-o-cresol	97-290	50	ug/L			ND		SVOA
540-59-0	1,2-Dichloroethylene	96-101A	5	ug/L			ND		VOA
540-59-0	1,2-Dichloroethylene	97-200	5	ug/L			ND		VOA
540-59-0	1,2-Dichloroethylene	97-210	5	ug/L			ND		VOA
540-59-0	1,2-Dichloroethylene	97-220	5	ug/L			ND		VOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
540-59-0	1,2-Dichloroethylene	97-230	5	ug/L			ND		VOA
540-59-0	1,2-Dichloroethylene	97-240	5	ug/L			ND		VOA
540-59-0	1,2-Dichloroethylene	97-250	5	ug/L			ND		VOA
540-59-0	1,2-Dichloroethylene	97-260	5	ug/L			ND		VOA
540-59-0	1,2-Dichloroethylene	97-270	5	ug/L			ND		VOA
540-59-0	1,2-Dichloroethylene	97-280	5	ug/L			NR		VOA
540-59-0	1,2-Dichloroethylene	97-290	5	ug/L			ND		VOA
541-73-1	1,3-Dichlorobenzene	96-103	10	ug/L			ND		SVOA
541-73-1	1,3-Dichlorobenzene	97-200	10	ug/L			ND		SVOA
541-73-1	1,3-Dichlorobenzene	97-210	10	ug/L			ND		SVOA
541-73-1	1,3-Dichlorobenzene	97-220	10	ug/L			ND		SVOA
541-73-1	1,3-Dichlorobenzene	97-230	10	ug/L			ND		SVOA
541-73-1	1,3-Dichlorobenzene	97-240	10	ug/L			ND		SVOA
541-73-1	1,3-Dichlorobenzene	97-250	10	ug/L			ND		SVOA
541-73-1	1,3-Dichlorobenzene	97-260	10	ug/L			ND		SVOA
541-73-1	1,3-Dichlorobenzene	97-270	10	ug/L			ND		SVOA
541-73-1	1,3-Dichlorobenzene	97-280	10	ug/L			ND		SVOA
541-73-1	1,3-Dichlorobenzene	97-290	10	ug/L			ND		SVOA
56-23-5	Carbon tetrachloride	96-101A	5	ug/L			ND		VOA
56-23-5	Carbon tetrachloride	97-200	5	ug/L			ND		VOA
56-23-5	Carbon tetrachloride	97-210	5	ug/L			ND		VOA
56-23-5	Carbon tetrachloride	97-220	5	ug/L			ND		VOA
56-23-5	Carbon tetrachloride	97-230	5	ug/L			ND		VOA
56-23-5	Carbon tetrachloride	97-240	5	ug/L			ND		VOA
56-23-5	Carbon tetrachloride	97-250	5	ug/L			ND		VOA
56-23-5	Carbon tetrachloride	97-260	5	ug/L			ND		VOA
56-23-5	Carbon tetrachloride	97-270	5	ug/L			ND		VOA
56-23-5	Carbon tetrachloride	97-280	5	ug/L			ND		VOA
56-23-5	Carbon tetrachloride	97-290	5	ug/L			ND		VOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
56-55-3	Benzo(a)anthracene	96-103	10	ug/L			ND		SVOA
56-55-3	Benzo(a)anthracene	97-200	10	ug/L			ND		SVOA
56-55-3	Benzo(a)anthracene	97-210	10	ug/L			ND		SVOA
56-55-3	Benzo(a)anthracene	97-220	10	ug/L			ND		SVOA
56-55-3	Benzo(a)anthracene	97-230	10	ug/L			ND		SVOA
56-55-3	Benzo(a)anthracene	97-240	10	ug/L			ND		SVOA
56-55-3	Benzo(a)anthracene	97-250	10	ug/L			ND		SVOA
56-55-3	Benzo(a)anthracene	97-260	10	ug/L			ND		SVOA
56-55-3	Benzo(a)anthracene	97-270	10	ug/L			ND		SVOA
56-55-3	Benzo(a)anthracene	97-280	10	ug/L			ND		SVOA
56-55-3	Benzo(a)anthracene	97-290	10	ug/L			ND		SVOA
57-10-3	n-Hexadecanoic acid					X			
57-11-4	n-Octadecanoic acid					X			
59-50-7	4-Chloro-3-methylphenol	96-103	10	ug/L			ND		SVOA
59-50-7	4-Chloro-3-methylphenol	97-200	10	ug/L			ND		SVOA
59-50-7	4-Chloro-3-methylphenol	97-210	10	ug/L			ND		SVOA
59-50-7	4-Chloro-3-methylphenol	97-220	10	ug/L			ND		SVOA
59-50-7	4-Chloro-3-methylphenol	97-230	10	ug/L			ND		SVOA
59-50-7	4-Chloro-3-methylphenol	97-240	10	ug/L			ND		SVOA
59-50-7	4-Chloro-3-methylphenol	97-250	10	ug/L			ND		SVOA
59-50-7	4-Chloro-3-methylphenol	97-260	10	ug/L			ND		SVOA
59-50-7	4-Chloro-3-methylphenol	97-270	10	ug/L			ND		SVOA
59-50-7	4-Chloro-3-methylphenol	97-280	10	ug/L			ND		SVOA
59-50-7	4-Chloro-3-methylphenol	97-290	10	ug/L			ND		SVOA
591-78-6	2-Hexanone	96-101A	20	ug/L			ND		VOA
591-78-6	2-Hexanone	97-200	20	ug/L			ND		VOA
591-78-6	2-Hexanone	97-210	20	ug/L			ND		VOA
591-78-6	2-Hexanone	97-220	20	ug/L			ND		VOA
591-78-6	2-Hexanone	97-230	20	ug/L			ND		VOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
591-78-6	2-Hexanone	97-240	20	ug/L			ND		VOA
591-78-6	2-Hexanone	97-250	20	ug/L			ND		VOA
591-78-6	2-Hexanone	97-260	20	ug/L			ND		VOA
591-78-6	2-Hexanone	97-270	20	ug/L			ND		VOA
591-78-6	2-Hexanone	97-280	20	ug/L			NR		VOA
591-78-6	2-Hexanone	97-290	20	ug/L			ND		VOA
606-20-2	2,6-Dinitrotoluene	96-103	10	ug/L			ND		SVOA
606-20-2	2,6-Dinitrotoluene	97-200	10	ug/L			ND		SVOA
606-20-2	2,6-Dinitrotoluene	97-210	10	ug/L			ND		SVOA
606-20-2	2,6-Dinitrotoluene	97-220	10	ug/L			ND		SVOA
606-20-2	2,6-Dinitrotoluene	97-230	10	ug/L			ND		SVOA
606-20-2	2,6-Dinitrotoluene	97-240	10	ug/L			ND		SVOA
606-20-2	2,6-Dinitrotoluene	97-250	10	ug/L			ND		SVOA
606-20-2	2,6-Dinitrotoluene	97-260	10	ug/L			ND		SVOA
606-20-2	2,6-Dinitrotoluene	97-270	10	ug/L			ND		SVOA
606-20-2	2,6-Dinitrotoluene	97-280	10	ug/L			ND		SVOA
606-20-2	2,6-Dinitrotoluene	97-290	10	ug/L			ND		SVOA
611-14-3	2-Ethyltoluene					X			
620-14-4	3-Ethyltoluene					X			
621-64-7	N-Nitroso-di-n-propylamine	96-103	10	ug/L			ND		SVOA
621-64-7	N-Nitroso-di-n-propylamine	97-200	10	ug/L			ND		SVOA
621-64-7	N-Nitroso-di-n-propylamine	97-210	10	ug/L			ND		SVOA
621-64-7	N-Nitroso-di-n-propylamine	97-220	10	ug/L			ND		SVOA
621-64-7	N-Nitroso-di-n-propylamine	97-230	10	ug/L			ND		SVOA
621-64-7	N-Nitroso-di-n-propylamine	97-240	10	ug/L			ND		SVOA
621-64-7	N-Nitroso-di-n-propylamine	97-250	10	ug/L			ND		SVOA
621-64-7	N-Nitroso-di-n-propylamine	97-260	10	ug/L			ND		SVOA
621-64-7	N-Nitroso-di-n-propylamine	97-270	10	ug/L			ND		SVOA
621-64-7	N-Nitroso-di-n-propylamine	97-280	10	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
621-64-7	N-Nitroso-di-n-propylamine	97-290	10	ug/L			ND		SVOA
67-64-1	2-Propanone (Acetone)	96-101A	20	ug/L			ND		VOA
67-64-1	2-Propanone (Acetone)	97-200	20	ug/L			ND		VOA
67-64-1	2-Propanone (Acetone)	97-210	20	ug/L			ND		VOA
67-64-1	2-Propanone (Acetone)	97-220	20	ug/L			ND		VOA
67-64-1	2-Propanone (Acetone)	97-230	20	ug/L			ND		VOA
67-64-1	2-Propanone (Acetone)	97-240	20	ug/L			ND		VOA
67-64-1	2-Propanone (Acetone)	97-250	10	ug/L	14			U	VOA
67-64-1	2-Propanone (Acetone)	97-260	20	ug/L			ND		VOA
67-64-1	2-Propanone (Acetone)	97-270	20	ug/L			ND		VOA
67-64-1	2-Propanone (Acetone)	97-280	20	ug/L			NR		VOA
67-64-1	2-Propanone (Acetone)	97-290	20	ug/L	17			J	VOA
67-66-3	Chloroform	96-101A	5	ug/L			ND		VOA
67-66-3	Chloroform	97-200	5	ug/L			ND		VOA
67-66-3	Chloroform	97-210	5	ug/L			ND		VOA
67-66-3	Chloroform	97-220	5	ug/L			ND		VOA
67-66-3	Chloroform	97-230	5	ug/L			ND		VOA
67-66-3	Chloroform	97-240	5	ug/L			ND		VOA
67-66-3	Chloroform	97-250	5	ug/L			ND		VOA
67-66-3	Chloroform	97-260	5	ug/L			ND		VOA
67-66-3	Chloroform	97-270	5	ug/L			ND		VOA
67-66-3	Chloroform	97-280	5	ug/L			ND		VOA
67-66-3	Chloroform	97-290	5	ug/L			ND		VOA
67-72-1	Hexachloroethane	96-103	10	ug/L			ND		SVOA
67-72-1	Hexachloroethane	97-200	10	ug/L			ND		SVOA
67-72-1	Hexachloroethane	97-210	10	ug/L			ND		SVOA
67-72-1	Hexachloroethane	97-220	10	ug/L			ND		SVOA
67-72-1	Hexachloroethane	97-230	10	ug/L			ND		SVOA
67-72-1	Hexachloroethane	97-240	10	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
67-72-1	Hexachloroethane	97-250	10	ug/L			ND		SVOA
67-72-1	Hexachloroethane	97-260	10	ug/L			ND		SVOA
67-72-1	Hexachloroethane	97-270	10	ug/L			ND		SVOA
67-72-1	Hexachloroethane	97-280	10	ug/L			ND		SVOA
67-72-1	Hexachloroethane	97-290	10	ug/L			ND		SVOA
7005-72-3	4-Chlorophenylphenyl ether	96-103	10	ug/L			ND		SVOA
7005-72-3	4-Chlorophenylphenyl ether	97-200	10	ug/L			ND		SVOA
7005-72-3	4-Chlorophenylphenyl ether	97-210	10	ug/L			ND		SVOA
7005-72-3	4-Chlorophenylphenyl ether	97-220	10	ug/L			ND		SVOA
7005-72-3	4-Chlorophenylphenyl ether	97-230	10	ug/L			ND		SVOA
7005-72-3	4-Chlorophenylphenyl ether	97-240	10	ug/L			ND		SVOA
7005-72-3	4-Chlorophenylphenyl ether	97-250	10	ug/L			ND		SVOA
7005-72-3	4-Chlorophenylphenyl ether	97-260	10	ug/L			ND		SVOA
7005-72-3	4-Chlorophenylphenyl ether	97-270	10	ug/L			ND		SVOA
7005-72-3	4-Chlorophenylphenyl ether	97-280	10	ug/L			ND		SVOA
7005-72-3	4-Chlorophenylphenyl ether	97-290	10	ug/L			ND		SVOA
71-43-2	Benzene	96-101A	5	ug/L			ND		VOA
71-43-2	Benzene	97-200	5	ug/L			ND		VOA
71-43-2	Benzene	97-210	5	ug/L			ND		VOA
71-43-2	Benzene	97-220	5	ug/L			ND		VOA
71-43-2	Benzene	97-230	5	ug/L			ND		VOA
71-43-2	Benzene	97-240	5	ug/L			ND		VOA
71-43-2	Benzene	97-250	5	ug/L			ND		VOA
71-43-2	Benzene	97-260	5	ug/L			ND		VOA
71-43-2	Benzene	97-270	5	ug/L			ND		VOA
71-43-2	Benzene	97-280	5	ug/L			ND		VOA
71-43-2	Benzene	97-290	5	ug/L			ND		VOA
71-55-6	1,1,1-Trichloroethane	96-101A	5	ug/L			ND		VOA
71-55-6	1,1,1-Trichloroethane	97-200	5	ug/L			ND		VOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
71-55-6	1,1,1-Trichloroethane	97-210	5	ug/L			ND		VOA
71-55-6	1,1,1-Trichloroethane	97-230	5	ug/L			ND		VOA
71-55-6	1,1,1-Trichloroethane	97-240	5	ug/L			ND		VOA
71-55-6	1,1,1-Trichloroethane	97-250	5	ug/L			ND		VOA
71-55-6	1,1,1-Trichloroethane	97-260	5	ug/L			ND		VOA
71-55-6	1,1,1-Trichloroethane	97-270	5	ug/L			ND		VOA
71-55-6	1,1,1-Trichloroethane	97-280	5	ug/L			NR		VOA
71-55-6	1,1,1-Trichloroethane	97-290	5	ug/L			ND		VOA
74-83-9	Bromomethane	96-101A	5	ug/L			ND		VOA
74-83-9	Bromomethane	97-200	5	ug/L			ND		VOA
74-83-9	Bromomethane	97-210	5	ug/L			ND		VOA
74-83-9	Bromomethane	97-220	5	ug/L			ND		VOA
74-83-9	Bromomethane	97-230	5	ug/L			ND		VOA
74-83-9	Bromomethane	97-240	5	ug/L			ND		VOA
74-83-9	Bromomethane	97-250	5	ug/L			ND		VOA
74-83-9	Bromomethane	97-260	5	ug/L			ND		VOA
74-83-9	Bromomethane	97-270	5	ug/L			ND		VOA
74-83-9	Bromomethane	97-280	5	ug/L			NR		VOA
74-83-9	Bromomethane	97-290	5	ug/L			ND		VOA
74-87-3	Chloromethane	96-101A	10	ug/L			ND		VOA
74-87-3	Chloromethane	97-200	10	ug/L			ND		VOA
74-87-3	Chloromethane	97-210	10	ug/L			ND		VOA
74-87-3	Chloromethane	97-220	10	ug/L			ND		VOA
74-87-3	Chloromethane	97-230	10	ug/L			ND		VOA
74-87-3	Chloromethane	97-240	10	ug/L			ND		VOA
74-87-3	Chloromethane	97-250	10	ug/L			ND		VOA
74-87-3	Chloromethane	97-260	10	ug/L			ND		VOA
74-87-3	Chloromethane	97-270	10	ug/L			ND		VOA
74-87-3	Chloromethane	97-280	10	ug/L			ND		VOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
74-87-3	Chloromethane	97-290	10	ug/L			ND		VOA
7429-90-5	Aluminum	96-106	200	ug/L			ND		Metals
7429-90-5	Aluminum	97-200	200	ug/L			U	U	Metals
7429-90-5	Aluminum	97-210	200	ug/L			U	U	Metals
7429-90-5	Aluminum	97-220	200	ug/L			ND		Metals
7429-90-5	Aluminum	97-230	200	ug/L	213				Metals
7429-90-5	Aluminum	97-240	200	ug/L			ND		Metals
7429-90-5	Aluminum	97-250	200	ug/L			ND		Metals
7429-90-5	Aluminum	97-260	200	ug/L			U	U	Metals
7429-90-5	Aluminum	97-270	200	ug/L	422			B	Metals
7429-90-5	Aluminum	97-280	200	ug/L			ND		Metals
7429-90-5	Aluminum	97-290	200	ug/L			ND		Metals
7439-89-6	Iron	96-106	100	ug/L			U		Metals
7439-89-6	Iron	97-200	100	ug/L	102				Metals
7439-89-6	Iron	97-210	100	ug/L			U	U	Metals
7439-89-6	Iron	97-220	100	ug/L			U	U	Metals
7439-89-6	Iron	97-230	100	ug/L	353				Metals
7439-89-6	Iron	97-240	100	ug/L			U	U	Metals
7439-89-6	Iron	97-250	100	ug/L			U	U	Metals
7439-89-6	Iron	97-260	100	ug/L	798				Metals
7439-89-6	Iron	97-270	100	ug/L	666				Metals
7439-89-6	Iron	97-280	100	ug/L			U	U	Metals
7439-89-6	Iron	97-290	100	ug/L			U	U	Metals
7439-92-1	Lead	96-106	3	ug/L			ND		Metals
7439-92-1	Lead	97-200	3	ug/L			ND		Metals
7439-92-1	Lead	97-210	3	ug/L			ND		Metals
7439-92-1	Lead	97-220	3	ug/L			ND		Metals
7439-92-1	Lead	97-230	3	ug/L			ND		Metals
7439-92-1	Lead	97-240	3	ug/L			ND		Metals

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
7439-92-1	Lead	97-250	3	ug/L			ND		Metals
7439-92-1	Lead	97-260	3	ug/L			U	U	Metals
7439-92-1	Lead	97-270	3	ug/L			ND		Metals
7439-92-1	Lead	97-280	3	ug/L			ND		Metals
7439-92-1	Lead	97-290	3	ug/L			ND		Metals
7439-95-4	Magnesium	96-106	5000	ug/L	21000				Metals
7439-95-4	Magnesium	97-200	5000	ug/L	42600				Metals
7439-95-4	Magnesium	97-210	5000	ug/L	65300				Metals
7439-95-4	Magnesium	97-220	5000	ug/L	43000				Metals
7439-95-4	Magnesium	97-230	5000	ug/L	33500				Metals
7439-95-4	Magnesium	97-240	5000	ug/L	32000				Metals
7439-95-4	Magnesium	97-250	5000	ug/L	32900				Metals
7439-95-4	Magnesium	97-260	5000	ug/L	32200				Metals
7439-95-4	Magnesium	97-270	5000	ug/L	32700				Metals
7439-95-4	Magnesium	97-280	5000	ug/L	34100				Metals
7439-95-4	Magnesium	97-290	5000	ug/L	36100				Metals
7439-96-5	Manganese	96-106	15	ug/L	5.1			B	Metals
7439-96-5	Manganese	97-200	15	ug/L	9			B	Metals
7439-96-5	Manganese	97-210	15	ug/L	6.2			B	Metals
7439-96-5	Manganese	97-220	15	ug/L	4.4			B	Metals
7439-96-5	Manganese	97-230	15	ug/L	11.6			B	Metals
7439-96-5	Manganese	97-240	15	ug/L	4.6			B	Metals
7439-96-5	Manganese	97-250	15	ug/L			U	U	Metals
7439-96-5	Manganese	97-260	15	ug/L	17.7				Metals
7439-96-5	Manganese	97-270	15	ug/L	17.5				Metals
7439-96-5	Manganese	97-280	15	ug/L			U	U	Metals
7439-96-5	Manganese	97-290	15	ug/L	12.2			B	Metals
7439-97-6	Mercury	96-106	0.2	ug/L	0.16			B	Metals
7439-97-6	Mercury	97-200	0.2	ug/L	0.16			B	Metals

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
7439-97-6	Mercury	97-210	0.2	ug/L			ND		Metals
7439-97-6	Mercury	97-220	0.2	ug/L			ND		Metals
7439-97-6	Mercury	97-230	0.2	ug/L			ND		Metals
7439-97-6	Mercury	97-240	0.2	ug/L			ND		Metals
7439-97-6	Mercury	97-250	0.2	ug/L			ND		Metals
7439-97-6	Mercury	97-260	0.2	ug/L			ND		Metals
7439-97-6	Mercury	97-270	0.2	ug/L			ND		Metals
7439-97-6	Mercury	97-280	0.2	ug/L			ND		Metals
7439-97-6	Mercury	97-290	0.2	ug/L			NR		Metals
7440-02-0	Nickel	96-106	40	ug/L	10.2			B	Metals
7440-02-0	Nickel	97-200	40	ug/L			ND		Metals
7440-02-0	Nickel	97-210	40	ug/L			ND		Metals
7440-02-0	Nickel	97-220	40	ug/L			ND		Metals
7440-02-0	Nickel	97-230	40	ug/L			ND		Metals
7440-02-0	Nickel	97-240	40	ug/L			ND		Metals
7440-02-0	Nickel	97-250	40	ug/L			ND		Metals
7440-02-0	Nickel	97-260	40	ug/L			ND		Metals
7440-02-0	Nickel	97-270	40	ug/L			ND		Metals
7440-02-0	Nickel	97-280	40	ug/L			ND		Metals
7440-02-0	Nickel	97-290	40	ug/L			ND		Metals
7440-09-7	Potassium	96-106	5000	ug/L	13800				Metals
7440-09-7	Potassium	97-200	5000	ug/L	13900				Metals
7440-09-7	Potassium	97-210	5000	ug/L	17000				Metals
7440-09-7	Potassium	97-220	5000	ug/L	14000				Metals
7440-09-7	Potassium	97-230	5000	ug/L	10600				Metals
7440-09-7	Potassium	97-240	5000	ug/L	11300				Metals
7440-09-7	Potassium	97-250	5000	ug/L	12700				Metals
7440-09-7	Potassium	97-260	5000	ug/L	12800				Metals
7440-09-7	Potassium	97-270	5000	ug/L	12600				Metals

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
7440-09-7	Potassium	97-280	5000	ug/L	14200				Metals
7440-09-7	Potassium	97-290	5000	ug/L	14100				Metals
7440-22-4	Silver	96-106	10	ug/L			ND		Metals
7440-22-4	Silver	97-200	10	ug/L			ND		Metals
7440-22-4	Silver	97-210	10	ug/L			ND		Metals
7440-22-4	Silver	97-220	10	ug/L			ND		Metals
7440-22-4	Silver	97-230	10	ug/L			ND		Metals
7440-22-4	Silver	97-240	10	ug/L			ND		Metals
7440-22-4	Silver	97-250	10	ug/L			ND		Metals
7440-22-4	Silver	97-260	10	ug/L			ND		Metals
7440-22-4	Silver	97-270	10	ug/L			ND		Metals
7440-22-4	Silver	97-280	10	ug/L			ND		Metals
7440-22-4	Silver	97-290	10	ug/L			ND		Metals
7440-23-5	Sodium	96-106	5000	ug/L	207000				Metals
7440-23-5	Sodium	97-200	5000	ug/L	249000				Metals
7440-23-5	Sodium	97-210	5000	ug/L	247000				Metals
7440-23-5	Sodium	97-220	5000	ug/L	248000				Metals
7440-23-5	Sodium	97-230	5000	ug/L	179000				Metals
7440-23-5	Sodium	97-240	5000	ug/L	226000				Metals
7440-23-5	Sodium	97-250	5000	ug/L	228000				Metals
7440-23-5	Sodium	97-260	5000	ug/L	191000				Metals
7440-23-5	Sodium	97-270	5000	ug/L	191000				Metals
7440-23-5	Sodium	97-280	5000	ug/L	191000				Metals
7440-23-5	Sodium	97-290	5000	ug/L	219000				Metals
7440-28-0	Thallium	96-106	10	ug/L			ND		Metals
7440-28-0	Thallium	97-200	10	ug/L			ND		Metals
7440-28-0	Thallium	97-210	10	ug/L			ND		Metals
7440-28-0	Thallium	97-220	10	ug/L			ND		Metals
7440-28-0	Thallium	97-230	10	ug/L			ND		Metals

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
7440-28-0	Thallium	97-240	10	ug/L			ND		Metals
7440-28-0	Thallium	97-250	10	ug/L			ND		Metals
7440-28-0	Thallium	97-260	10	ug/L			ND		Metals
7440-28-0	Thallium	97-270	10	ug/L			ND		Metals
7440-28-0	Thallium	97-280	10	ug/L			ND		Metals
7440-28-0	Thallium	97-290	10	ug/L			ND		Metals
7440-36-0	Antimony	96-106	60	ug/L			ND		Metals
7440-36-0	Antimony	97-200	60	ug/L			ND		Metals
7440-36-0	Antimony	97-210	60	ug/L			ND		Metals
7440-36-0	Antimony	97-220	60	ug/L			ND		Metals
7440-36-0	Antimony	97-230	60	ug/L			ND		Metals
7440-36-0	Antimony	97-240	60	ug/L			ND		Metals
7440-36-0	Antimony	97-250	60	ug/L			ND		Metals
7440-36-0	Antimony	97-260	60	ug/L			ND		Metals
7440-36-0	Antimony	97-270	60	ug/L			ND		Metals
7440-36-0	Antimony	97-280	60	ug/L			ND		Metals
7440-36-0	Antimony	97-290	60	ug/L			ND		Metals
7440-38-2	Arsenic	96-106	10	ug/L	26.2				Metals
7440-38-2	Arsenic	97-200	10	ug/L	18.8				Metals
7440-38-2	Arsenic	97-210	10	ug/L	13.6				Metals
7440-38-2	Arsenic	97-220	10	ug/L	17.2				Metals
7440-38-2	Arsenic	97-230	10	ug/L	32.6				Metals
7440-38-2	Arsenic	97-240	10	ug/L	22.5				Metals
7440-38-2	Arsenic	97-250	10	ug/L	22.8				Metals
7440-38-2	Arsenic	97-260	10	ug/L	20.4				Metals
7440-38-2	Arsenic	97-270	10	ug/L	22.1				Metals
7440-38-2	Arsenic	97-280	10	ug/L	18.8				Metals
7440-38-2	Arsenic	97-290	10	ug/L	25.2				Metals
7440-39-3	Barium	96-106	200	ug/L	42			B	Metals

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
7440-39-3	Barium	97-200	200	ug/L	47.4			B	Metals
7440-39-3	Barium	97-200	200	ug/L	47.4				Metals
7440-39-3	Barium	97-210	200	ug/L	63.3			B	Metals
7440-39-3	Barium	97-220	200	ug/L	39.3			B	Metals
7440-39-3	Barium	97-230	200	ug/L	53.6			B	Metals
7440-39-3	Barium	97-240	200	ug/L	29.4			B	Metals
7440-39-3	Barium	97-250	200	ug/L	31.7			B	Metals
7440-39-3	Barium	97-260	200	ug/L	35.9			B	Metals
7440-39-3	Barium	97-270	200	ug/L	39.6			B	Metals
7440-39-3	Barium	97-280	200	ug/L	34.4			B	Metals
7440-39-3	Barium	97-290	200	ug/L	44.3			B	Metals
7440-41-7	Beryllium	96-106	5	ug/L	0.52			B	Metals
7440-41-7	Beryllium	97-200	5	ug/L	0.42			B	Metals
7440-41-7	Beryllium	97-210	5	ug/L	0.71			B	Metals
7440-41-7	Beryllium	97-220	5	ug/L	0.33			B	Metals
7440-41-7	Beryllium	97-230	5	ug/L	0.62			B	Metals
7440-41-7	Beryllium	97-240	5	ug/L	0.73			B	Metals
7440-41-7	Beryllium	97-250	5	ug/L	0.77			B	Metals
7440-41-7	Beryllium	97-260	5	ug/L			ND		Metals
7440-41-7	Beryllium	97-270	5	ug/L	0.76			B	Metals
7440-41-7	Beryllium	97-280	5	ug/L			U	U	Metals
7440-41-7	Beryllium	97-290	5	ug/L			U	U	Metals
7440-43-9	Cadmium	96-106	5	ug/L			ND		Metals
7440-43-9	Cadmium	97-200	5	ug/L			ND		Metals
7440-43-9	Cadmium	97-210	5	ug/L			ND		Metals
7440-43-9	Cadmium	97-220	5	ug/L			ND		Metals
7440-43-9	Cadmium	97-230	5	ug/L			ND		Metals
7440-43-9	Cadmium	97-240	5	ug/L			ND		Metals
7440-43-9	Cadmium	97-250	5	ug/L			ND		Metals

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
7440-43-9	Cadmium	97-260	5	ug/L			ND		Metals
7440-43-9	Cadmium	97-270	5	ug/L			ND		Metals
7440-43-9	Cadmium	97-280	5	ug/L			ND		Metals
7440-43-9	Cadmium	97-290	5	ug/L			ND		Metals
7440-47-3	Chromium	96-106	10	ug/L	7.9			B	Metals
7440-47-3	Chromium	97-200	10	ug/L	4.2			B	Metals
7440-47-3	Chromium	97-210	10	ug/L			ND		Metals
7440-47-3	Chromium	97-220	10	ug/L			ND		Metals
7440-47-3	Chromium	97-230	10	ug/L			ND		Metals
7440-47-3	Chromium	97-240	10	ug/L	3.8			B	Metals
7440-47-3	Chromium	97-250	10	ug/L			U	U	Metals
7440-47-3	Chromium	97-260	10	ug/L	12				Metals
7440-47-3	Chromium	97-270	10	ug/L	13.9				Metals
7440-47-3	Chromium	97-280	10	ug/L	13.5				Metals
7440-47-3	Chromium	97-290	10	ug/L	7.2			B	Metals
7440-48-4	Cobalt	96-106	50	ug/L			ND		Metals
7440-48-4	Cobalt	97-200	50	ug/L			ND		Metals
7440-48-4	Cobalt	97-210	50	ug/L			ND		Metals
7440-48-4	Cobalt	97-220	50	ug/L			ND		Metals
7440-48-4	Cobalt	97-230	50	ug/L			ND		Metals
7440-48-4	Cobalt	97-240	50	ug/L			ND		Metals
7440-48-4	Cobalt	97-250	50	ug/L			ND		Metals
7440-48-4	Cobalt	97-260	50	ug/L			ND		Metals
7440-48-4	Cobalt	97-270	50	ug/L			ND		Metals
7440-48-4	Cobalt	97-280	50	ug/L			ND		Metals
7440-48-4	Cobalt	97-290	50	ug/L			ND		Metals
7440-50-8	Copper	96-106	25	ug/L			U		Metals
7440-50-8	Copper	97-200	25	ug/L			U	U	Metals
7440-50-8	Copper	97-210	25	ug/L	10.2			B	Metals

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
7440-50-8	Copper	97-220	25	ug/L			U	U	Metals
7440-50-8	Copper	97-230	25	ug/L			U	U	Metals
7440-50-8	Copper	97-240	25	ug/L			U	U	Metals
7440-50-8	Copper	97-250	25	ug/L			U	U	Metals
7440-50-8	Copper	97-260	25	ug/L			U	U	Metals
7440-50-8	Copper	97-270	25	ug/L			U	U	Metals
7440-50-8	Copper	97-280	25	ug/L			U	U	Metals
7440-50-8	Copper	97-290	25	ug/L			U	U	Metals
7440-61-1	Uranium	96-100		pCi/L			NR		Rad
7440-61-1	Uranium	97-200		pCi/L			NR		Rad
7440-61-1	Uranium	97-210		pCi/L			NR		Rad
7440-61-1	Uranium	97-220		pCi/L			NR		Rad
7440-61-1	Uranium	97-230		pCi/L			NR		Rad
7440-61-1	Uranium	97-240		pCi/L			NR		Rad
7440-61-1	Uranium	97-250		pCi/L			NR		Rad
7440-61-1	Uranium	97-260		pCi/L			NR		Rad
7440-61-1	Uranium	97-290		pCi/L	213				Rad
7440-62-2	Vanadium	96-106	50	ug/L	52.9				Metals
7440-62-2	Vanadium	97-200	50	ug/L	39.9			B	Metals
7440-62-2	Vanadium	97-210	50	ug/L	27.9			B	Metals
7440-62-2	Vanadium	97-220	50	ug/L	27.3			B	Metals
7440-62-2	Vanadium	97-230	50	ug/L	34			B	Metals
7440-62-2	Vanadium	97-240	50	ug/L	31.9			B	Metals
7440-62-2	Vanadium	97-250	50	ug/L			U	U	Metals
7440-62-2	Vanadium	97-260	50	ug/L	28.9			B	Metals
7440-62-2	Vanadium	97-270	50	ug/L	34.9			B	Metals
7440-62-2	Vanadium	97-280	50	ug/L	38.4			B	Metals
7440-62-2	Vanadium	97-290	50	ug/L	51.6				Metals
7440-66-6	Zinc	96-106	20	ug/L			U		Metals

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
7440-66-6	Zinc	97-200	20	ug/L			U	U	Metals
7440-66-6	Zinc	97-210	20	ug/L	19.5			B	Metals
7440-66-6	Zinc	97-220	20	ug/L			U	U	Metals
7440-66-6	Zinc	97-230	20	ug/L			U	U	Metals
7440-66-6	Zinc	97-240	20	ug/L			U	U	Metals
7440-66-6	Zinc	97-250	20	ug/L			U	U	Metals
7440-66-6	Zinc	97-260	20	ug/L	49.7				Metals
7440-66-6	Zinc	97-270	20	ug/L			U	U	Metals
7440-66-6	Zinc	97-280	20	ug/L			U	U	Metals
7440-66-6	Zinc	97-290	20	ug/L			U	U	Metals
7440-70-2	Calcium	96-106	5000	ug/L	75500				Metals
7440-70-2	Calcium	97-200	5000	ug/L	151000				Metals
7440-70-2	Calcium	97-210	5000	ug/L	227000				Metals
7440-70-2	Calcium	97-220	5000	ug/L	143000				Metals
7440-70-2	Calcium	97-230	5000	ug/L	110000				Metals
7440-70-2	Calcium	97-240	5000	ug/L	107000				Metals
7440-70-2	Calcium	97-250	5000	ug/L	113000				Metals
7440-70-2	Calcium	97-260	5000	ug/L	106000				Metals
7440-70-2	Calcium	97-270	5000	ug/L	110000				Metals
7440-70-2	Calcium	97-280	5000	ug/L	113000				Metals
7440-70-2	Calcium	97-290	5000	ug/L	119000				Metals
75-00-3	Chloroethane	96-101A	10	ug/L			ND		VOA
75-00-3	Chloroethane	97-200	10	ug/L			ND		VOA
75-00-3	Chloroethane	97-210	10	ug/L			ND		VOA
75-00-3	Chloroethane	97-220	10	ug/L			ND		VOA
75-00-3	Chloroethane	97-230	10	ug/L			ND		VOA
75-00-3	Chloroethane	97-240	10	ug/L			ND		VOA
75-00-3	Chloroethane	97-250	10	ug/L			ND		VOA
75-00-3	Chloroethane	97-260	10	ug/L			ND		VOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
75-00-3	Chloroethane	97-270	10	ug/L			ND		VOA
75-00-3	Chloroethane	97-280	10	ug/L			NR		VOA
75-00-3	Chloroethane	97-290	10	ug/L			ND		VOA
75-01-4	1-Chloroethene (Vinyl Chloride)	96-101A	10	ug/L			ND		VOA
75-01-4	1-Chloroethene (Vinyl Chloride)	97-200	10	ug/L			ND		VOA
75-01-4	1-Chloroethene (Vinyl Chloride)	97-210	10	ug/L			ND		VOA
75-01-4	1-Chloroethene (Vinyl Chloride)	97-220	10	ug/L			ND		VOA
75-01-4	1-Chloroethene (Vinyl Chloride)	97-230	10	ug/L			ND		VOA
75-01-4	1-Chloroethene (Vinyl Chloride)	97-240	10	ug/L			ND		VOA
75-01-4	1-Chloroethene (Vinyl Chloride)	97-250	10	ug/L			ND		VOA
75-01-4	1-Chloroethene (Vinyl Chloride)	97-260	10	ug/L			ND		VOA
75-01-4	1-Chloroethene (Vinyl Chloride)	97-270	10	ug/L			ND		VOA
75-01-4	1-Chloroethene (Vinyl Chloride)	97-280	10	ug/L			ND		VOA
75-01-4	1-Chloroethene (Vinyl Chloride)	97-290	10	ug/L			ND		VOA
75-09-2	Dichloromethane (Methylene Chloride)	96-101A	5	ug/L			ND		VOA
75-09-2	Dichloromethane (Methylene Chloride)	97-200	5	ug/L			ND		VOA
75-09-2	Dichloromethane (Methylene Chloride)	97-210	5	ug/L			ND		VOA
75-09-2	Dichloromethane (Methylene Chloride)	97-220	5	ug/L			ND		VOA
75-09-2	Dichloromethane (Methylene Chloride)	97-230	10	ug/L			U	U	VOA
75-09-2	Dichloromethane (Methylene Chloride)	97-240	5	ug/L			ND		VOA
75-09-2	Dichloromethane (Methylene Chloride)	97-250	10	ug/L				U	VOA
75-09-2	Dichloromethane (Methylene Chloride)	97-260	5	ug/L			ND		VOA
75-09-2	Dichloromethane (Methylene	97-270	5	ug/L			ND		VOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
	Chloride)								
75-09-2	Dichloromethane (Methylene Chloride)	97-280	5	ug/L			NR		VOA
75-09-2	Dichloromethane (Methylene Chloride)	97-290	5	ug/L			ND		VOA
75-15-0	Carbon disulfide	96-101A	5	ug/L			ND		VOA
75-15-0	Carbon disulfide	97-200	5	ug/L			ND		VOA
75-15-0	Carbon disulfide	97-210	5	ug/L			ND		VOA
75-15-0	Carbon disulfide	97-220	5	ug/L			ND		VOA
75-15-0	Carbon disulfide	97-230	5	ug/L			ND		VOA
75-15-0	Carbon disulfide	97-240	5	ug/L			ND		VOA
75-15-0	Carbon disulfide	97-250	5	ug/L			ND		VOA
75-15-0	Carbon disulfide	97-260	5	ug/L			ND		VOA
75-15-0	Carbon disulfide	97-270	5	ug/L			ND		VOA
75-15-0	Carbon disulfide	97-280	5	ug/L			NR		VOA
75-15-0	Carbon disulfide	97-290	5	ug/L			ND		VOA
75-25-2	Tribromomethane	96-101A	10	ug/L			ND		VOA
75-25-2	Tribromomethane	97-200	10	ug/L			ND		VOA
75-25-2	Tribromomethane	97-210	10	ug/L			ND		VOA
75-25-2	Tribromomethane	97-220	10	ug/L			ND		VOA
75-25-2	Tribromomethane	97-230	10	ug/L			ND		VOA
75-25-2	Tribromomethane	97-240	10	ug/L			ND		VOA
75-25-2	Tribromomethane	97-250	10	ug/L			ND		VOA
75-25-2	Tribromomethane	97-260	10	ug/L			ND		VOA
75-25-2	Tribromomethane	97-270	10	ug/L			ND		VOA
75-25-2	Tribromomethane	97-280	10	ug/L			ND		VOA
75-25-2	Tribromomethane	97-290	10	ug/L			ND		VOA
75-27-4	Bromodichloromethane	96-101A	5	ug/L			ND		VOA
75-27-4	Bromodichloromethane	97-200	5	ug/L			ND		VOA
75-27-4	Bromodichloromethane	97-210	5	ug/L			ND		VOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
75-27-4	Bromodichloromethane	97-220	5	ug/L			ND		VOA
75-27-4	Bromodichloromethane	97-230	5	ug/L			ND		VOA
75-27-4	Bromodichloromethane	97-240	5	ug/L			ND		VOA
75-27-4	Bromodichloromethane	97-250	5	ug/L			ND		VOA
75-27-4	Bromodichloromethane	97-260	5	ug/L			ND		VOA
75-27-4	Bromodichloromethane	97-270	5	ug/L			ND		VOA
75-27-4	Bromodichloromethane	97-280	5	ug/L			NR		VOA
75-27-4	Bromodichloromethane	97-290	5	ug/L			ND		VOA
75-34-3	1,1-Dichloroethane	96-101A	5	ug/L			ND		VOA
75-34-3	1,1-Dichloroethane	97-200	5	ug/L			ND		VOA
75-34-3	1,1-Dichloroethane	97-210	5	ug/L			ND		VOA
75-34-3	1,1-Dichloroethane	97-220	5	ug/L			ND		VOA
75-34-3	1,1-Dichloroethane	97-230	5	ug/L			ND		VOA
75-34-3	1,1-Dichloroethane	97-240	5	ug/L			ND		VOA
75-34-3	1,1-Dichloroethane	97-250	5	ug/L			ND		VOA
75-34-3	1,1-Dichloroethane	97-260	5	ug/L			ND		VOA
75-34-3	1,1-Dichloroethane	97-270	5	ug/L			ND		VOA
75-34-3	1,1-Dichloroethane	97-280	5	ug/L			ND		VOA
75-34-3	1,1-Dichloroethane	97-290	5	ug/L			ND		VOA
75-35-4	1,1-Dichloroethene	96-101A	5	ug/L			ND		VOA
75-35-4	1,1-Dichloroethene	97-200	5	ug/L			ND		VOA
75-35-4	1,1-Dichloroethene	97-210	5	ug/L			ND		VOA
75-35-4	1,1-Dichloroethene	97-220	5	ug/L			ND		VOA
75-35-4	1,1-Dichloroethene	97-230	5	ug/L			ND		VOA
75-35-4	1,1-Dichloroethene	97-240	5	ug/L			ND		VOA
75-35-4	1,1-Dichloroethene	97-250	5	ug/L			ND		VOA
75-35-4	1,1-Dichloroethene	97-260	5	ug/L			ND		VOA
75-35-4	1,1-Dichloroethene	97-270	5	ug/L			ND		VOA
75-35-4	1,1-Dichloroethene	97-280	5	ug/L			ND		VOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
75-35-4	1,1-Dichloroethene	97-290	5	ug/L			ND		VOA
7664-41-7	Ammonia	96-109		ug/L			ND		WetChem
7664-41-7	Ammonia	96-111		ug/L					WetChem
7664-41-7	Ammonia	96-113		ug/L					WetChem
7664-41-7	Ammonia	97-200		ug/L			ND		WetChem
7664-41-7	Ammonia	97-210		ug/L			ND		WetChem
7664-41-7	Ammonia	97-220		ug/L			ND		WetChem
7664-41-7	Ammonia	97-230		ug/L			ND		WetChem
7664-41-7	Ammonia	97-240		ug/L			ND		WetChem
7664-41-7	Ammonia	97-250		ug/L			ND		WetChem
7664-41-7	Ammonia	97-260		ug/L			ND		WetChem
7664-41-7	Ammonia	97-270		ug/L			ND		WetChem
7664-41-7	Ammonia	97-280		ug/L			ND		WetChem
7664-41-7	Ammonia	97-290		ug/L	151				WetChem
77-47-4	Hexachlorocyclopentadiene	96-103	50	ug/L			ND		SVOA
77-47-4	Hexachlorocyclopentadiene	97-200	50	ug/L			ND		SVOA
77-47-4	Hexachlorocyclopentadiene	97-210	50	ug/L			ND		SVOA
77-47-4	Hexachlorocyclopentadiene	97-220	50	ug/L			ND		SVOA
77-47-4	Hexachlorocyclopentadiene	97-230	50	ug/L			ND		SVOA
77-47-4	Hexachlorocyclopentadiene	97-240	50	ug/L			ND		SVOA
77-47-4	Hexachlorocyclopentadiene	97-250	50	ug/L			ND		SVOA
77-47-4	Hexachlorocyclopentadiene	97-260	50	ug/L			ND		SVOA
77-47-4	Hexachlorocyclopentadiene	97-270	50	ug/L			ND		SVOA
77-47-4	Hexachlorocyclopentadiene	97-280	50	ug/L			ND		SVOA
77-47-4	Hexachlorocyclopentadiene	97-290	50	ug/L			ND		SVOA
7782-49-2	Selenium	96-106	5	ug/L			ND		Metals
7782-49-2	Selenium	97-200	5	ug/L			ND		Metals
7782-49-2	Selenium	97-210	5	ug/L			ND		Metals
7782-49-2	Selenium	97-220	5	ug/L			ND		Metals

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
7782-49-2	Selenium	97-230	5	ug/L			ND		Metals
7782-49-2	Selenium	97-240	5	ug/L			ND		Metals
7782-49-2	Selenium	97-250	5	ug/L			ND		Metals
7782-49-2	Selenium	97-260	5	ug/L			ND		Metals
7782-49-2	Selenium	97-270	5	ug/L			ND		Metals
7782-49-2	Selenium	97-280	5	ug/L			U	U	Metals
7782-49-2	Selenium	97-290	5	ug/L			ND		Metals
78-59-1	Isophorone	96-103	10	ug/L			ND		SVOA
78-59-1	Isophorone	97-200	10	ug/L			ND		SVOA
78-59-1	Isophorone	97-210	10	ug/L			ND		SVOA
78-59-1	Isophorone	97-220	10	ug/L			ND		SVOA
78-59-1	Isophorone	97-230	10	ug/L			ND		SVOA
78-59-1	Isophorone	97-240	10	ug/L			ND		SVOA
78-59-1	Isophorone	97-250	10	ug/L			ND		SVOA
78-59-1	Isophorone	97-260	10	ug/L			ND		SVOA
78-59-1	Isophorone	97-270	10	ug/L			ND		SVOA
78-59-1	Isophorone	97-280	10	ug/L			ND		SVOA
78-59-1	Isophorone	97-290	10	ug/L			ND		SVOA
78-87-5	1,2-Dichloropropane	96-101A	5	ug/L			ND		VOA
78-87-5	1,2-Dichloropropane	97-200	5	ug/L			ND		VOA
78-87-5	1,2-Dichloropropane	97-210	5	ug/L			ND		VOA
78-87-5	1,2-Dichloropropane	97-220	5	ug/L			ND		VOA
78-87-5	1,2-Dichloropropane	97-230	5	ug/L			ND		VOA
78-87-5	1,2-Dichloropropane	97-240	5	ug/L			ND		VOA
78-87-5	1,2-Dichloropropane	97-250	5	ug/L			ND		VOA
78-87-5	1,2-Dichloropropane	97-260	5	ug/L			ND		VOA
78-87-5	1,2-Dichloropropane	97-270	5	ug/L			ND		VOA
78-87-5	1,2-Dichloropropane	97-280	5	ug/L			ND		VOA
78-87-5	1,2-Dichloropropane	97-290	5	ug/L			ND		VOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
78-93-3	2-Butanone (MEK)	96-101A	20	ug/L			ND		VOA
78-93-3	2-Butanone (MEK)	97-200	20	ug/L			ND		VOA
78-93-3	2-Butanone (MEK)	97-210	20	ug/L			ND		VOA
78-93-3	2-Butanone (MEK)	97-220	20	ug/L			ND		VOA
78-93-3	2-Butanone (MEK)	97-230	20	ug/L			ND		VOA
78-93-3	2-Butanone (MEK)	97-240	20	ug/L			ND		VOA
78-93-3	2-Butanone (MEK)	97-250	20	ug/L			ND		VOA
78-93-3	2-Butanone (MEK)	97-260	20	ug/L			ND		VOA
78-93-3	2-Butanone (MEK)	97-270	20	ug/L			ND		VOA
78-93-3	2-Butanone (MEK)	97-280	20	ug/L			ND		VOA
78-93-3	2-Butanone (MEK)	97-290	20	ug/L			ND		VOA
79-00-5	1,1,2-Trichloroethane	96-101A	5	ug/L			ND		VOA
79-00-5	1,1,2-Trichloroethane	97-200	5	ug/L			ND		VOA
79-00-5	1,1,2-Trichloroethane	97-210	5	ug/L			ND		VOA
79-00-5	1,1,2-Trichloroethane	97-220	5	ug/L			ND		VOA
79-00-5	1,1,2-Trichloroethane	97-230	5	ug/L			ND		VOA
79-00-5	1,1,2-Trichloroethane	97-240	5	ug/L			ND		VOA
79-00-5	1,1,2-Trichloroethane	97-250	5	ug/L			ND		VOA
79-00-5	1,1,2-Trichloroethane	97-260	5	ug/L			ND		VOA
79-00-5	1,1,2-Trichloroethane	97-270	5	ug/L			ND		VOA
79-00-5	1,1,2-Trichloroethane	97-280	5	ug/L			NR		VOA
79-00-5	1,1,2-Trichloroethane	97-290	5	ug/L			ND		VOA
79-01-6	1,1,2-Trichloroethylene	96-101A	5	ug/L			ND		VOA
79-01-6	1,1,2-Trichloroethylene	97-200	5	ug/L			ND		VOA
79-01-6	1,1,2-Trichloroethylene	97-210	5	ug/L			ND		VOA
79-01-6	1,1,2-Trichloroethylene	97-220	5	ug/L			ND		VOA
79-01-6	1,1,2-Trichloroethylene	97-230	5	ug/L			ND		VOA
79-01-6	1,1,2-Trichloroethylene	97-240	5	ug/L			ND		VOA
79-01-6	1,1,2-Trichloroethylene	97-250	5	ug/L			ND		VOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
79-01-6	1,1,2-Trichloroethylene	97-260	5	ug/L			ND		VOA
79-01-6	1,1,2-Trichloroethylene	97-270	5	ug/L			ND		VOA
79-01-6	1,1,2-Trichloroethylene	97-280	5	ug/L			ND		VOA
79-01-6	1,1,2-Trichloroethylene	97-290	5	ug/L			ND		VOA
79-34-5	1,1,2,2-Tetrachloroethane	96-101A	5	ug/L			ND		VOA
79-34-5	1,1,2,2-Tetrachloroethane	97-200	5	ug/L			ND		VOA
79-34-5	1,1,2,2-Tetrachloroethane	97-210	5	ug/L			ND		VOA
79-34-5	1,1,2,2-Tetrachloroethane	97-220	5	ug/L			ND		VOA
79-34-5	1,1,2,2-Tetrachloroethane	97-230	5	ug/L			ND		VOA
79-34-5	1,1,2,2-Tetrachloroethane	97-240	5	ug/L			ND		VOA
79-34-5	1,1,2,2-Tetrachloroethane	97-250	5	ug/L			ND		VOA
79-34-5	1,1,2,2-Tetrachloroethane	97-260	5	ug/L			ND		VOA
79-34-5	1,1,2,2-Tetrachloroethane	97-270	5	ug/L			ND		VOA
79-34-5	1,1,2,2-Tetrachloroethane	97-280	5	ug/L			ND		VOA
79-34-5	1,1,2,2-Tetrachloroethane	97-290	5	ug/L			ND		VOA
80-17-1	Benzene Sulfohydrazide					X			
83-32-9	Acenaphthene	96-103	10	ug/L			ND		SVOA
83-32-9	Acenaphthene	97-200	10	ug/L			ND		SVOA
83-32-9	Acenaphthene	97-210	10	ug/L			ND		SVOA
83-32-9	Acenaphthene	97-220	10	ug/L			ND		SVOA
83-32-9	Acenaphthene	97-230	10	ug/L			ND		SVOA
83-32-9	Acenaphthene	97-240	10	ug/L			ND		SVOA
83-32-9	Acenaphthene	97-250	10	ug/L			ND		SVOA
83-32-9	Acenaphthene	97-260	10	ug/L			ND		SVOA
83-32-9	Acenaphthene	97-270	10	ug/L			ND		SVOA
83-32-9	Acenaphthene	97-280	10	ug/L			ND		SVOA
83-32-9	Acenaphthene	97-290	10	ug/L			ND		SVOA
84-66-2	Diethyl phthalate	96-103	10	ug/L			ND		SVOA
84-66-2	Diethyl phthalate	97-200	10	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
84-66-2	Diethyl phthalate	97-210	10	ug/L			ND		SVOA
84-66-2	Diethyl phthalate	97-220	10	ug/L			ND		SVOA
84-66-2	Diethyl phthalate	97-230	10	ug/L			ND		SVOA
84-66-2	Diethyl phthalate	97-240	10	ug/L			ND		SVOA
84-66-2	Diethyl phthalate	97-250	10	ug/L			ND		SVOA
84-66-2	Diethyl phthalate	97-260	10	ug/L			ND		SVOA
84-66-2	Diethyl phthalate	97-270	10	ug/L			ND		SVOA
84-66-2	Diethyl phthalate	97-280	10	ug/L			ND		SVOA
84-66-2	Diethyl phthalate	97-290	10	ug/L			ND		SVOA
84-74-2	Di-n-butylphthalate					X			
84-74-2	Di-n-butylphthalate	96-103	10	ug/L			ND		SVOA
84-74-2	Di-n-butylphthalate	97-200	10	ug/L			ND		SVOA
84-74-2	Di-n-butylphthalate	97-210	10	ug/L			ND		SVOA
84-74-2	Di-n-butylphthalate	97-220	10	ug/L			ND		SVOA
84-74-2	Di-n-butylphthalate	97-230	10	ug/L			ND		SVOA
84-74-2	Di-n-butylphthalate	97-240	10	ug/L			ND		SVOA
84-74-2	Di-n-butylphthalate	97-250	10	ug/L			ND		SVOA
84-74-2	Di-n-butylphthalate	97-260	10	ug/L			ND		SVOA
84-74-2	Di-n-butylphthalate	97-270	10	ug/L			ND		SVOA
84-74-2	Di-n-butylphthalate	97-280	10	ug/L			ND		SVOA
84-74-2	Di-n-butylphthalate	97-290	10	ug/L			ND		SVOA
85-01-8	Phenanthrene					X			
85-01-8	Phenanthrene	96-103	10	ug/L			ND		SVOA
85-01-8	Phenanthrene	97-200	10	ug/L			ND		SVOA
85-01-8	Phenanthrene	97-210	10	ug/L			ND		SVOA
85-01-8	Phenanthrene	97-220	10	ug/L			ND		SVOA
85-01-8	Phenanthrene	97-230	10	ug/L			ND		SVOA
85-01-8	Phenanthrene	97-240	10	ug/L			ND		SVOA
85-01-8	Phenanthrene	97-250	10	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
85-01-8	Phenanthrene	97-260	10	ug/L			ND		SVOA
85-01-8	Phenanthrene	97-270	10	ug/L			ND		SVOA
85-01-8	Phenanthrene	97-280	10	ug/L			ND		SVOA
85-01-8	Phenanthrene	97-290	10	ug/L			ND		SVOA
85-68-7	Butylbenzylphthalate	96-103	10	ug/L			ND		SVOA
85-68-7	Butylbenzylphthalate	97-200	10	ug/L			ND		SVOA
85-68-7	Butylbenzylphthalate	97-210	10	ug/L			ND		SVOA
85-68-7	Butylbenzylphthalate	97-220	10	ug/L			ND		SVOA
85-68-7	Butylbenzylphthalate	97-230	10	ug/L			ND		SVOA
85-68-7	Butylbenzylphthalate	97-240	10	ug/L			ND		SVOA
85-68-7	Butylbenzylphthalate	97-250	10	ug/L			ND		SVOA
85-68-7	Butylbenzylphthalate	97-260	10	ug/L			ND		SVOA
85-68-7	Butylbenzylphthalate	97-270	10	ug/L			ND		SVOA
85-68-7	Butylbenzylphthalate	97-280	10	ug/L			ND		SVOA
85-68-7	Butylbenzylphthalate	97-290	10	ug/L	9			J	SVOA
86-30-6	N-Nitrosodiphenylamine	96-103	10	ug/L			ND		SVOA
86-30-6	N-Nitrosodiphenylamine	97-200	10	ug/L			ND		SVOA
86-30-6	N-Nitrosodiphenylamine	97-210	10	ug/L			ND		SVOA
86-30-6	N-Nitrosodiphenylamine	97-220	10	ug/L			ND		SVOA
86-30-6	N-Nitrosodiphenylamine	97-230	10	ug/L			ND		SVOA
86-30-6	N-Nitrosodiphenylamine	97-240	10	ug/L			ND		SVOA
86-30-6	N-Nitrosodiphenylamine	97-250	10	ug/L			ND		SVOA
86-30-6	N-Nitrosodiphenylamine	97-260	10	ug/L			ND		SVOA
86-30-6	N-Nitrosodiphenylamine	97-270	10	ug/L			ND		SVOA
86-30-6	N-Nitrosodiphenylamine	97-280	10	ug/L			ND		SVOA
86-30-6	N-Nitrosodiphenylamine	97-290	10	ug/L			ND		SVOA
86-73-7	Fluorene	96-103	10	ug/L			ND		SVOA
86-73-7	Fluorene	97-200	10	ug/L			ND		SVOA
86-73-7	Fluorene	97-210	10	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
86-73-7	Fluorene	97-220	10	ug/L			ND		SVOA
86-73-7	Fluorene	97-230	10	ug/L			ND		SVOA
86-73-7	Fluorene	97-240	10	ug/L			ND		SVOA
86-73-7	Fluorene	97-250	10	ug/L			ND		SVOA
86-73-7	Fluorene	97-260	10	ug/L			ND		SVOA
86-73-7	Fluorene	97-270	10	ug/L			ND		SVOA
86-73-7	Fluorene	97-280	10	ug/L			ND		SVOA
86-73-7	Fluorene	97-290	10	ug/L			ND		SVOA
86-74-8	Carbazole	96-103	10	ug/L			ND		SVOA
86-74-8	Carbazole	97-200	10	ug/L			ND		SVOA
86-74-8	Carbazole	97-210	10	ug/L			ND		SVOA
86-74-8	Carbazole	97-220	10	ug/L			ND		SVOA
86-74-8	Carbazole	97-230	10	ug/L			ND		SVOA
86-74-8	Carbazole	97-240	10	ug/L			ND		SVOA
86-74-8	Carbazole	97-250	10	ug/L			ND		SVOA
86-74-8	Carbazole	97-260	10	ug/L			ND		SVOA
86-74-8	Carbazole	97-270	10	ug/L			ND		SVOA
86-74-8	Carbazole	97-280	10	ug/L			ND		SVOA
86-74-8	Carbazole	97-290	10	ug/L			ND		SVOA
87-68-3	Hexachlorobutadiene	96-103	10	ug/L			ND		SVOA
87-68-3	Hexachlorobutadiene	97-200	10	ug/L			ND		SVOA
87-68-3	Hexachlorobutadiene	97-210	10	ug/L			ND		SVOA
87-68-3	Hexachlorobutadiene	97-220	10	ug/L			ND		SVOA
87-68-3	Hexachlorobutadiene	97-230	10	ug/L			ND		SVOA
87-68-3	Hexachlorobutadiene	97-240	10	ug/L			ND		SVOA
87-68-3	Hexachlorobutadiene	97-250	10	ug/L			ND		SVOA
87-68-3	Hexachlorobutadiene	97-260	10	ug/L			ND		SVOA
87-68-3	Hexachlorobutadiene	97-270	10	ug/L			ND		SVOA
87-68-3	Hexachlorobutadiene	97-280	10	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
87-68-3	Hexachlorobutadiene	97-290	10	ug/L			ND		SVOA
87-86-5	Pentachlorophenol	96-103	50	ug/L			ND		SVOA
87-86-5	Pentachlorophenol	97-200	50	ug/L			ND		SVOA
87-86-5	Pentachlorophenol	97-210	50	ug/L			ND		SVOA
87-86-5	Pentachlorophenol	97-220	50	ug/L			ND		SVOA
87-86-5	Pentachlorophenol	97-230	50	ug/L			ND		SVOA
87-86-5	Pentachlorophenol	97-240	50	ug/L			ND		SVOA
87-86-5	Pentachlorophenol	97-250	50	ug/L			ND		SVOA
87-86-5	Pentachlorophenol	97-260	50	ug/L			ND		SVOA
87-86-5	Pentachlorophenol	97-270	50	ug/L			ND		SVOA
87-86-5	Pentachlorophenol	97-280	50	ug/L			ND		SVOA
87-86-5	Pentachlorophenol	97-290	50	ug/L			ND		SVOA
88-06-2	2,4,6-Trichlorophenol	96-103	10	ug/L			ND		SVOA
88-06-2	2,4,6-Trichlorophenol	97-200	10	ug/L			ND		SVOA
88-06-2	2,4,6-Trichlorophenol	97-210	10	ug/L			ND		SVOA
88-06-2	2,4,6-Trichlorophenol	97-220	10	ug/L			ND		SVOA
88-06-2	2,4,6-Trichlorophenol	97-230	10	ug/L			ND		SVOA
88-06-2	2,4,6-Trichlorophenol	97-240	10	ug/L			ND		SVOA
88-06-2	2,4,6-Trichlorophenol	97-250	10	ug/L			ND		SVOA
88-06-2	2,4,6-Trichlorophenol	97-260	10	ug/L			ND		SVOA
88-06-2	2,4,6-Trichlorophenol	97-270	10	ug/L			ND		SVOA
88-06-2	2,4,6-Trichlorophenol	97-280	10	ug/L			ND		SVOA
88-06-2	2,4,6-Trichlorophenol	97-290	10	ug/L			ND		SVOA
88-74-4	2-Nitroaniline	96-103	50	ug/L			ND		SVOA
88-74-4	2-Nitroaniline	97-200	50	ug/L			ND		SVOA
88-74-4	2-Nitroaniline	97-210	50	ug/L			ND		SVOA
88-74-4	2-Nitroaniline	97-220	50	ug/L			ND		SVOA
88-74-4	2-Nitroaniline	97-230	50	ug/L			ND		SVOA
88-74-4	2-Nitroaniline	97-240	50	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
88-74-4	2-Nitroaniline	97-250	50	ug/L			ND		SVOA
88-74-4	2-Nitroaniline	97-260	50	ug/L			ND		SVOA
88-74-4	2-Nitroaniline	97-270	50	ug/L			ND		SVOA
88-74-4	2-Nitroaniline	97-280	50	ug/L			ND		SVOA
88-74-4	2-Nitroaniline	97-290	50	ug/L			ND		SVOA
88-75-5	2-Nitrophenol	96-103	10	ug/L			ND		SVOA
88-75-5	2-Nitrophenol	97-200	10	ug/L			ND		SVOA
88-75-5	2-Nitrophenol	97-210	10	ug/L			ND		SVOA
88-75-5	2-Nitrophenol	97-220	10	ug/L			ND		SVOA
88-75-5	2-Nitrophenol	97-230	10	ug/L			ND		SVOA
88-75-5	2-Nitrophenol	97-240	10	ug/L			ND		SVOA
88-75-5	2-Nitrophenol	97-250	10	ug/L			ND		SVOA
88-75-5	2-Nitrophenol	97-260	10	ug/L			ND		SVOA
88-75-5	2-Nitrophenol	97-270	10	ug/L			ND		SVOA
88-75-5	2-Nitrophenol	97-280	10	ug/L			ND		SVOA
88-75-5	2-Nitrophenol	97-290	10	ug/L			ND		SVOA
91-20-3	Naphthalene					X			
91-20-3	Naphthalene	96-103	10	ug/L			ND		SVOA
91-20-3	Naphthalene	97-200	10	ug/L			ND		SVOA
91-20-3	Naphthalene	97-210	10	ug/L			ND		SVOA
91-20-3	Naphthalene	97-220	10	ug/L			ND		SVOA
91-20-3	Naphthalene	97-230	10	ug/L			ND		SVOA
91-20-3	Naphthalene	97-240	10	ug/L			ND		SVOA
91-20-3	Naphthalene	97-250	10	ug/L			ND		SVOA
91-20-3	Naphthalene	97-260	10	ug/L			ND		SVOA
91-20-3	Naphthalene	97-270	10	ug/L			ND		SVOA
91-20-3	Naphthalene	97-280	10	ug/L			ND		SVOA
91-20-3	Naphthalene	97-290	10	ug/L			ND		SVOA
91-57-6	2-Methylnaphthalene	96-103	10	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
91-57-6	2-Methylnaphthalene	97-200	10	ug/L			ND		SVOA
91-57-6	2-Methylnaphthalene	97-210	10	ug/L			ND		SVOA
91-57-6	2-Methylnaphthalene	97-220	10	ug/L			ND		SVOA
91-57-6	2-Methylnaphthalene	97-230	10	ug/L			ND		SVOA
91-57-6	2-Methylnaphthalene	97-240	10	ug/L			ND		SVOA
91-57-6	2-Methylnaphthalene	97-250	10	ug/L			ND		SVOA
91-57-6	2-Methylnaphthalene	97-260	10	ug/L			ND		SVOA
91-57-6	2-Methylnaphthalene	97-270	10	ug/L			ND		SVOA
91-57-6	2-Methylnaphthalene	97-280	10	ug/L			ND		SVOA
91-57-6	2-Methylnaphthalene	97-290	10	ug/L			ND		SVOA
91-58-7	2-Chloronaphthalene	96-103	10	ug/L			ND		SVOA
91-58-7	2-Chloronaphthalene	97-200	10	ug/L			ND		SVOA
91-58-7	2-Chloronaphthalene	97-210	10	ug/L			ND		SVOA
91-58-7	2-Chloronaphthalene	97-220	10	ug/L			ND		SVOA
91-58-7	2-Chloronaphthalene	97-230	10	ug/L			ND		SVOA
91-58-7	2-Chloronaphthalene	97-240	10	ug/L			ND		SVOA
91-58-7	2-Chloronaphthalene	97-250	10	ug/L			ND		SVOA
91-58-7	2-Chloronaphthalene	97-260	10	ug/L			ND		SVOA
91-58-7	2-Chloronaphthalene	97-270	10	ug/L			ND		SVOA
91-58-7	2-Chloronaphthalene	97-280	10	ug/L			ND		SVOA
91-58-7	2-Chloronaphthalene	97-290	10	ug/L			ND		SVOA
91-94-1	3,3 -Dichlorobenzidine	96-103	50	ug/L			ND		SVOA
91-94-1	3,3 -Dichlorobenzidine	97-200	50	ug/L			ND		SVOA
91-94-1	3,3 -Dichlorobenzidine	97-210	50	ug/L			ND		SVOA
91-94-1	3,3 -Dichlorobenzidine	97-220	50	ug/L			ND		SVOA
91-94-1	3,3 -Dichlorobenzidine	97-230	50	ug/L			ND		SVOA
91-94-1	3,3 -Dichlorobenzidine	97-240	50	ug/L			ND		SVOA
91-94-1	3,3 -Dichlorobenzidine	97-250	50	ug/L			ND		SVOA
91-94-1	3,3 -Dichlorobenzidine	97-260	50	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
91-94-1	3,3 -Dichlorobenzidine	97-270	50	ug/L			ND		SVOA
91-94-1	3,3 -Dichlorobenzidine	97-280	50	ug/L			ND		SVOA
91-94-1	3,3 -Dichlorobenzidine	97-290	50	ug/L			ND		SVOA
95-48-7	o-Cresol	96-103	10	ug/L			ND		SVOA
95-48-7	o-Cresol	97-200	10	ug/L			ND		SVOA
95-48-7	o-Cresol	97-210	10	ug/L			ND		SVOA
95-48-7	o-Cresol	97-220	10	ug/L			ND		SVOA
95-48-7	o-Cresol	97-230	10	ug/L			ND		SVOA
95-48-7	o-Cresol	97-240	10	ug/L			ND		SVOA
95-48-7	o-Cresol	97-250	10	ug/L			ND		SVOA
95-48-7	o-Cresol	97-260	10	ug/L			ND		SVOA
95-48-7	o-Cresol	97-270	10	ug/L			ND		SVOA
95-48-7	o-Cresol	97-280	10	ug/L			ND		SVOA
95-48-7	o-Cresol	97-290	10	ug/L			ND		SVOA
95-50-1	1,2-Dichlorobenzene	96-103	10	ug/L			ND		SVOA
95-50-1	1,2-Dichlorobenzene	97-200	10	ug/L			ND		SVOA
95-50-1	1,2-Dichlorobenzene	97-210	10	ug/L			ND		SVOA
95-50-1	1,2-Dichlorobenzene	97-220	10	ug/L			ND		SVOA
95-50-1	1,2-Dichlorobenzene	97-230	10	ug/L			ND		SVOA
95-50-1	1,2-Dichlorobenzene	97-240	10	ug/L			ND		SVOA
95-50-1	1,2-Dichlorobenzene	97-250	10	ug/L			ND		SVOA
95-50-1	1,2-Dichlorobenzene	97-260	10	ug/L			ND		SVOA
95-50-1	1,2-Dichlorobenzene	97-270	10	ug/L			ND		SVOA
95-50-1	1,2-Dichlorobenzene	97-280	10	ug/L			ND		SVOA
95-50-1	1,2-Dichlorobenzene	97-290	10	ug/L			ND		SVOA
95-57-8	2-Chlorophenol	96-103	10	ug/L			ND		SVOA
95-57-8	2-Chlorophenol	97-200	10	ug/L			ND		SVOA
95-57-8	2-Chlorophenol	97-210	10	ug/L			ND		SVOA
95-57-8	2-Chlorophenol	97-220	10	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
95-57-8	2-Chlorophenol	97-230	10	ug/L			ND		SVOA
95-57-8	2-Chlorophenol	97-240	10	ug/L			ND		SVOA
95-57-8	2-Chlorophenol	97-250	10	ug/L			ND		SVOA
95-57-8	2-Chlorophenol	97-260	10	ug/L			ND		SVOA
95-57-8	2-Chlorophenol	97-270	10	ug/L			ND		SVOA
95-57-8	2-Chlorophenol	97-280	10	ug/L			ND		SVOA
95-57-8	2-Chlorophenol	97-290	10	ug/L			ND		SVOA
95-63-6	1,2,4-Trimethylbenzene					X			
95-95-4	2,4,5-Trichlorophenol	96-103	10	ug/L			ND		SVOA
95-95-4	2,4,5-Trichlorophenol	97-200	10	ug/L			ND		SVOA
95-95-4	2,4,5-Trichlorophenol	97-210	10	ug/L			ND		SVOA
95-95-4	2,4,5-Trichlorophenol	97-220	10	ug/L			ND		SVOA
95-95-4	2,4,5-Trichlorophenol	97-230	10	ug/L			ND		SVOA
95-95-4	2,4,5-Trichlorophenol	97-240	10	ug/L			ND		SVOA
95-95-4	2,4,5-Trichlorophenol	97-250	10	ug/L			ND		SVOA
95-95-4	2,4,5-Trichlorophenol	97-260	10	ug/L			ND		SVOA
95-95-4	2,4,5-Trichlorophenol	97-270	10	ug/L			ND		SVOA
95-95-4	2,4,5-Trichlorophenol	97-280	10	ug/L			ND		SVOA
95-95-4	2,4,5-Trichlorophenol	97-290	10	ug/L			ND		SVOA
98-95-3	Nitrobenzene	96-103	10	ug/L			ND		SVOA
98-95-3	Nitrobenzene	97-200	10	ug/L			ND		SVOA
98-95-3	Nitrobenzene	97-210	10	ug/L			ND		SVOA
98-95-3	Nitrobenzene	97-220	10	ug/L			ND		SVOA
98-95-3	Nitrobenzene	97-230	10	ug/L			ND		SVOA
98-95-3	Nitrobenzene	97-240	10	ug/L			ND		SVOA
98-95-3	Nitrobenzene	97-250	10	ug/L			ND		SVOA
98-95-3	Nitrobenzene	97-260	10	ug/L			ND		SVOA
98-95-3	Nitrobenzene	97-270	10	ug/L			ND		SVOA
98-95-3	Nitrobenzene	97-280	10	ug/L			ND		SVOA

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
98-95-3	Nitrobenzene	97-290	10	ug/L			ND		SVOA
99-09-2	m-Nitroaniline	96-103	10	ug/L			ND		SVOA
99-09-2	m-Nitroaniline	97-200	10	ug/L			ND		SVOA
99-09-2	m-Nitroaniline	97-210	10	ug/L			ND		SVOA
99-09-2	m-Nitroaniline	97-220	10	ug/L			ND		SVOA
99-09-2	m-Nitroaniline	97-230	10	ug/L			ND		SVOA
99-09-2	m-Nitroaniline	97-240	10	ug/L			ND		SVOA
99-09-2	m-Nitroaniline	97-250	10	ug/L			ND		SVOA
99-09-2	m-Nitroaniline	97-260	10	ug/L			ND		SVOA
99-09-2	m-Nitroaniline	97-270	10	ug/L			ND		SVOA
99-09-2	m-Nitroaniline	97-280	10	ug/L			ND		SVOA
99-09-2	m-Nitroaniline	97-290	10	ug/L			ND		SVOA
pH	pH	96-109							WetChem
pH	pH	96-111							WetChem
pH	pH	96-113			7.76				WetChem
pH	pH	97-200			8.5				WetChem
pH	pH	97-210			7.66				WetChem
pH	pH	97-220			7.94				WetChem
pH	pH	97-230			8.16				WetChem
pH	pH	97-240			7.91				WetChem
pH	pH	97-250			7.85				WetChem
pH	pH	97-260			7.78				WetChem
pH	pH	97-270			7.74				WetChem
pH	pH	97-280			7.82				WetChem
pH	pH	97-290			7.51				WetChem
SpecCond	Specific Conductance	96-109		uMHOS/cm					WetChem
SpecCond	Specific Conductance	96-111		uMHOS/cm					WetChem
SpecCond	Specific Conductance	96-113		uMHOS/cm					WetChem
SpecCond	Specific Conductance	97-200		uMHOS/cm					WetChem

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
SpecCond	Specific Conductance	97-210		uMHOS/cm					WetChem
SpecCond	Specific Conductance	97-220		uMHOS/cm					WetChem
SpecCond	Specific Conductance	97-230		uMHOS/cm					WetChem
SpecCond	Specific Conductance	97-240		uMHOS/cm					WetChem
SpecCond	Specific Conductance	97-250		uMHOS/cm					WetChem
SpecCond	Specific Conductance	97-260		uMHOS/cm					WetChem
SpecCond	Specific Conductance	97-270		uMHOS/ cm	1595				WetChem
SpecCond	Specific Conductance	97-280		uMHOS/ cm	1673				WetChem
SpecCond	Specific Conductance	97-290		uMHOS/ cm	1670				WetChem
TDS	Total Dissolved Solids	96-109		mg/L					WetChem
TDS	Total Dissolved Solids	96-111		mg/L					WetChem
TDS	Total Dissolved Solids	96-113		mg/L					WetChem
TDS	Total Dissolved Solids	97-200		mg/L					WetChem
TDS	Total Dissolved Solids	97-210		mg/L					WetChem
TDS	Total Dissolved Solids	97-220		mg/L					WetChem
TDS	Total Dissolved Solids	97-230		mg/L					WetChem
TDS	Total Dissolved Solids	97-240		mg/L					WetChem
TDS	Total Dissolved Solids	97-250		mg/L					WetChem
TDS	Total Dissolved Solids	97-260		mg/L					WetChem
TDS	Total Dissolved Solids	97-270		mg/L	1080				WetChem
TDS	Total Dissolved Solids	97-280		mg/L	1090				WetChem
TDS	Total Dissolved Solids	97-290		mg/L	1050				WetChem
TOC	Total Organic Carbon	96-109		mg/L					WetChem
TOC	Total Organic Carbon	96-111		mg/L					WetChem
TOC	Total Organic Carbon	96-113		mg/L					WetChem
TOC	Total Organic Carbon	97-200		mg/L					WetChem
TOC	Total Organic Carbon	97-210		mg/L					WetChem

Table A-1. ERDF Leachate Data (Q1, 162 unique compounds). (56 sheets)

CAS #	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	TIC	Reported	Evaluation Report	Class
TOC	Total Organic Carbon	97-220		mg/L					WetChem
TOC	Total Organic Carbon	97-230		mg/L					WetChem
TOC	Total Organic Carbon	97-240		mg/L					WetChem
TOC	Total Organic Carbon	97-250		mg/L					WetChem
TOC	Total Organic Carbon	97-260		mg/L					WetChem
TOC	Total Organic Carbon	97-270		mg/L					WetChem
TOC	Total Organic Carbon	97-280		mg/L	9.74				WetChem
TOC	Total Organic Carbon	97-290		mg/L	12.1				WetChem
TSS	Total Suspended Solids	96-109		mg/L					WetChem
TSS	Total Suspended Solids	96-111		mg/L					WetChem
TSS	Total Suspended Solids	96-113		mg/L					WetChem
TSS	Total Suspended Solids	97-200		mg/L					WetChem
TSS	Total Suspended Solids	97-210		mg/L					WetChem
TSS	Total Suspended Solids	97-220		mg/L					WetChem
TSS	Total Suspended Solids	97-230		mg/L					WetChem
TSS	Total Suspended Solids	97-240		mg/L					WetChem
TSS	Total Suspended Solids	97-250		mg/L					WetChem
TSS	Total Suspended Solids	97-260		mg/L					WetChem
TSS	Total Suspended Solids	97-270		mg/L	17				WetChem
TSS	Total Suspended Solids	97-280		mg/L	3				WetChem
TSS	Total Suspended Solids	97-290		mg/L	4				WetChem

Table A-2. ERDF Leachate Data Consisting of Metals, Organometalics, Test Parameters and Radionuclides to be Considered Separately (Q2, 135 compounds). (4 Sheets)

CAS #	Constituent
100-01-6	4-Nitroaniline
100-02-7	4-Nitrophenol
100-41-4	Ethyl benzene
100-42-5	Styrene
10045-97-3	Cs-137
10061-01-5	cis-1,3-Dichloropropene
10061-02-6	trans-1,3-Dichloropropene
101-55-3	4-Bromophenylphenyl ether
10198-40-0	Co-60
105-67-9	2,4-Dimethylphenol
106-44-5	4-Methylphenol
106-46-7	1,4-Dichlorobenzene
106-47-8	4-Chloroaniline
107-06-2	1,2-Dichloroethane
108-10-1	4-Methyl-2-pentanone
108-60-1	Bis(2-Chloroisopropyl) ether
108-90-7	Chlorobenzene
108-95-2	Phenol
111-44-4	Bis(2-chloroethyl) ether
111-91-1	Bis(2-Chloroethoxy)methane
117-84-0	Di-n-octylphthalate
118-74-1	Hexachlorobenzene
120-12-7	Anthracene
120-82-1	1,2,4-Trichlorobenzene
120-83-2	2,4-Dichlorophenol
121-14-2	2,4-Dinitrotoluene
124-48-1	Dibromochloromethane
12587-46-1	Gross alpha
12587-47-2	Gross beta
127-18-4	1,1,2,2-Tetrachloroethene
131-11-3	Dimethyl phthalate
132-64-9	Dibenzofuran
1330-20-7	Xylene
13966-00-2	K-40
13966-02-4	Be-7
13967-48-1	Ru-106
13967-70-9	Cs-134
14234-35-6	Sb-125
14265-44-2	Phosphate

Table A-2. ERDF Leachate Data Consisting of Metals, Organometalics, Test Parameters and Radionuclides to be Considered Separately (Q2, 135 compounds). (4 Sheets)

CAS #	Constituent
14391-16-3	Eu-155
14797-55-8	Nitrate
14797-65-0	Nitrite
14808-79-8	Sulfate
15585-10-1	Eu-154
16887-00-6	Chloride
16984-48-8	Fluoride
191-24-2	Benzo(ghi)perylene
193-39-5	Indeno(1,2,3-cd)pyrene
205-99-2	Benzo(b)fluoranthene
207-08-9	Benzo(k)fluoranthene
208-96-8	Acenaphthylene
218-01-9	Chrysene
50-32-8	Benzo(a)pyrene
51-28-5	2,4-Dinitrophenol
53-70-3	Dibenz[a,h]anthracene
534-52-1	4,6-Dinitro-o-cresol
540-59-0	1,2-Dichloroethylene
541-73-1	1,3-Dichlorobenzene
56-23-5	Carbon tetrachloride
56-55-3	Benzo(a)anthracene
59-50-7	4-Chloro-3-methylphenol
591-78-6	2-Hexanone
606-20-2	2,6-Dinitrotoluene
621-64-7	N-Nitroso-di-n-propylamine
67-66-3	Chloroform
67-72-1	Hexachloroethane
7005-72-3	4-Chlorophenylphenyl ether
71-43-2	Benzene
71-55-6	1,1,1-Trichloroethane
74-83-9	Bromomethane
74-87-3	Chloromethane
7429-90-5	Aluminum
7439-89-6	Iron
7439-92-1	Lead
7439-95-4	Magnesium
7439-96-5	Manganese
7439-97-6	Mercury
7440-02-0	Nickel

Table A-2. ERDF Leachate Data Consisting of Metals, Organometalics, Test Parameters and Radionuclides to be Considered Separately (Q2, 135 compounds). (4 Sheets)

CAS #	Constituent
7440-09-7	Potassium
7440-22-4	Silver
7440-23-5	Sodium
7440-28-0	Thallium
7440-36-0	Antimony
7440-38-2	Arsenic
7440-39-3	Barium
7440-41-7	Beryllium
7440-43-9	Cadmium
7440-47-3	Chromium
7440-48-4	Cobalt
7440-50-8	Copper
7440-61-1	Uranium
7440-62-2	Vanadium
7440-66-6	Zinc
7440-70-2	Calcium
75-00-3	Chloroethane
75-01-4	1-Chloroethene (Vinyl Chloride)
75-09-2	Dichloromethane (Methylene Chloride)
75-15-0	Carbon disulfide
75-25-2	Tribromomethane
75-27-4	Bromodichloromethane
75-34-3	1,1-Dichloroethane
75-35-4	1,1-Dichloroethene
7664-41-7	Ammonia
77-47-4	Hexachlorocyclopentadiene
7782-49-2	Selenium
78-59-1	Isophorone
78-87-5	1,2-Dichloropropane
78-93-3	2-Butanone (MEK)
79-00-5	1,1,2-Trichloroethane
79-01-6	1,1,2-Trichloroethylene
79-34-5	1,1,2,2-Tetrachloroethane
83-32-9	Acenaphthene
84-66-2	Diethyl phthalate
86-30-6	N-Nitrosodiphenylamine
86-73-7	Fluorene
86-74-8	Carbazole
87-68-3	Hexachlorobutadiene

Table A-2. ERDF Leachate Data Consisting of Metals, Organometalics, Test Parameters and Radionuclides to be Considered Separately (Q2, 135 compounds). (4 Sheets)

CAS #	Constituent
87-86-5	Pentachlorophenol
88-06-2	2,4,6-Trichlorophenol
88-74-4	2-Nitroaniline
88-75-5	2-Nitrophenol
91-57-6	2-Methylnaphthalene
91-58-7	2-Chloronaphthalene
91-94-1	3,3 -Dichlorobenzidine
95-48-7	o-Cresol
95-50-1	1,2-Dichlorobenzene
95-57-8	2-Chlorophenol
95-95-4	2,4,5-Trichlorophenol
98-95-3	Nitrobenzene
99-09-2	m-Nitroaniline
pH	pH
SpecCond	Specific Conductance
TDS	Total Dissolved Solids
TOC	Total Organic Carbon
TSS	Total Suspended Solids

Table A-3. TICs and Organic Detected Compounds in ERDF Leachate (Q3, 27 unique compounds).

CAS .	Constituent	Sample ID	Detection Limit	Unit	Evaluated Result	Evaluation Report	Class
103-65-1	Propylbenzene						
104-76-7	2-Ethyl-1-hexanol						
1066-40-6	Trimethylsilanol						
108-88-3	Toluene	97-270	10	ug/L	2	J	VOA
112-40-3	n-Dodecane						
117-81-7	Bis(2-ethylhexyl) phthalate	97-220	10	ug/L	1	J	SVOA
117-81-7	Bis(2-ethylhexyl) phthalate	97-250	10	ug/L	6	J	SVOA
117-81-7	Bis(2-ethylhexyl) phthalate	97-260	10	ug/L	1	J	SVOA
117-81-7	Bis(2-ethylhexyl) phthalate	97-270	10	ug/L	6	J	SVOA
117-81-7	Bis(2-ethylhexyl) phthalate	97-290	10	ug/L	14		SVOA
129-00-0	Pyrene						
1825-61-2	Methoxytrimethylsilane						
206-44-0	Fluoranthene						
26601-64-9	1,1'-Biphenyl, hexachloro						
35065-27-1	2,2',4,4',5,5'-hexachloro-1,1'-Biphenyl						
35065-29-3	2,2',3,4,4',5,5'-Heptachlorobiphenyl						
355-02-2	Perfluoro(methylcyclohexane)						
38380-01-7	1,1'-Biphenyl, 2,2',4,4',5-pentachloro						
38380-04-0	1,1'-Biphenyl, 2,2',3,4',5',?-hexachloro						
52663-67-9	1,1'-Biphenyl, 2,2',3,3',5,5'-hexachloro						
57-10-3	n-Hexadecanoic acid						
57-11-4	n-Octadecanoic acid						
611-14-3	2-Ethyltoluene						
620-14-4	3-Ethyltoluene						
67-64-1	2-Propanone (Acetone)	97-250	10	ug/L	14	U	VOA
67-64-1	2-Propanone (Acetone)	97-290	20	ug/L	17	J	VOA
80-17-1	Benzene Sulfohydrazide						
84-74-2	Di-n-butylphthalate						
85-01-8	Phenanthrene						
85-68-7	Butylbenzylphthalate	97-290	10	ug/L	9	J	SVOA
91-20-3	Naphthalene						
95-63-6	1,2,4-Trimethylbenzene						

Table A-4. Appendix VIII NOS (32 compounds).

CAS #	Constituent
106-46-7	1,4-Dichlorobenzene
107-06-2	1,2-Dichloroethane
108-60-1	Bis(2-Chloroisopropyl) ether
108-90-7	Chlorobenzene
11096-82-5	PCB-1260
11097-69-1	PCB-1254
111-44-4	Bis(2-chloroethyl) ether
111-91-1	Bis(2-Chloroethoxy)methane
118-74-1	Hexachlorobenzene
120-82-1	1,2,4-Trichlorobenzene
120-83-2	2,4-Dichlorophenol
124-48-1	Dibromochloromethane
12672-29-6	PCB-1248
127-18-4	1,1,2,2-Tetrachloroethene
35065-27-1	2,2',4,4',5,5'-hexachloro-1,1'-Biphenyl
541-73-1	1,3-Dichlorobenzene
59-50-7	4-Chloro-3-methylphenol
67-72-1	Hexachloroethane
71-55-6	1,1,1-Trichloroethane
74-83-9	Bromomethane
74-87-3	Chloromethane
75-00-3	Chloroethane
75-25-2	Tribromomethane
75-27-4	Bromodichloromethane
75-34-3	1,1-Dichloroethane
76-13-1	1,2,2-Trichlorotrifluoroethane
79-00-5	1,1,2-Trichloroethane
79-34-5	1,1,2,2-Tetrachloroethane
87-86-5	Pentachlorophenol
91-58-7	2-Chloronaphthalene
95-50-1	1,2-Dichlorobenzene
95-57-8	2-Chlorophenol

Table A-5. Regulatory Compounds Consisting of Metals, Organometalics and Test Parameters to be Considered Separately (Q7, 90 compounds). (3 Sheets)

CAS #	Constituent
10102-43-9	Nitric oxide
10102-44-0	Nitrogen dioxide
10102-45-1	Thallium(I) nitrate
12039-52-0	Thallium selenite
128-03-0	Potassium dimethyldithiocarbamate
128-04-1	Sodium dimethyldithiocarbamate
1303-28-2	Arsenic pentoxide
1314-32-5	Thallic oxide
1314-62-1	Vanadium pentoxide
1314-84-7	Zinc phosphide
131522	Sodium pentachlorophenate
1327-53-3	Arsenic trioxide
1335-32-6	Lead subacetate
13463-39-3	Nickel carbonyl
136-30-1	Sodium dibutyldithiocarbamate
137-29-1	Copper dimethyldithiocarbamate
137-30-4	Ziram
137-41-7	Potassium n-methyldithiocarbamate
137-42-8	Metam Sodium
13765-19-0	Calcium chromate
143-33-9	Sodium cyanide
14324-55-1	Ethyl ziram
144-34-3	Selenium, tetrakis (dimethyl-dithiocarbamate)
148-18-5	Sodium diethyldithiocarbamate
151-50-8	Potassium cyanide
15339-36-3	Manganese dimethyldithiocarbamate
16065-83-1	Chromium (III) ion
16984-48-8	Fluoride
18496-25-8	Sulfide
18496-25-8R	Sulfide, reactive
18540-29-9	Chromium(VI)
20816-12-0	Osmium tetroxide
20859-73-8	Aluminum phosphide
25567-55-9	2,3,4,6-Tetrachlorophenol, sodium salt
301-04-2	Lead acetate
353-50-4	Carbon oxyfluoride
460-19-5	Cyanogen

Table A-5. Regulatory Compounds Consisting of Metals, Organometalics and Test Parameters to be Considered Separately (Q7, 90 compounds). (3 Sheets)

CAS #	Constituent
506-61-6	Potassium silver cyanide
506-64-9	Silver cyanide
506-68-3	Cyanogen bromide
506-77-4	Cyanogen chloride
51-12-5	Cyanides, as CN
51026-28-9	Potassium hydroxymethyl-n-methyl-dithiocarbamate
53535-27-6	2,3,4,6-Tetrachlorophenol, potassium salt
542-62-1	Barium cyanide
544-92-3	Copper cyanide
557-19-7	Nickel cyanide
557-21-1	Zinc cyanide
563-68-8	Thallium(I) acetate
57-12-5	Cyanide
57-12-5R	Cyanide, reactive
592-01-8	Calcium cyanide
62-38-4	Phenylmercury acetate
62-74-8	Fluoroacetic acid, sodium salt (Fratol)
628-86-4	Mercury fulminate
630-10-4	Selenourea
6533-73-9	Thallium(I) carbonate
74-90-8	Hydrogen cyanide
7439-92-1	Lead
7439-97-6	Mercury
7440-02-0	Nickel
7440-22-4	Silver
7440-28-0	Thallium
7440-31-5	Tin, metal
7440-36-0	Antimony
7440-38-2	Arsenic
7440-39-3	Barium
7440-41-7	Beryllium
7440-43-9	Cadmium
7440-47-3	Chromium
7440-48-4	Cobalt
7440-50-8	Copper
7440-62-2	Vanadium
7440-66-6	Zinc
7446-18-6	Thallium(I) sulfate

Table A-5. Regulatory Compounds Consisting of Metals, Organometalics and Test Parameters to be Considered Separately (Q7, 90 compounds). (3 Sheets)

CAS #	Constituent
7446-27-7	Lead phosphate
7488-56-4	Selenium sulfide
75-44-5	Phosgene
7664-39-3	Hydrogen fluoride
7778-39-4	Arsenic acid
7782-49-2	Selenium
7783-00-8	Selenium dioxide
7783-06-4	Hydrogen sulfide
7791-12-0	Thallium(I) chloride
78-00-2	Tetraethyl lead
7803-55-6	Ammonium vanadate
7978-73-6	Potassium pentachlorophenate
8007-45-2	Coal tar creosote
98-05-5	Benzenearsonic acid
O&G	Oil and grease

Table A-6. Regulated Compounds from the Regulatory DQO and the ETF Delisting Petition Potentially Used in Industries Unrelated to Hanford (Q10, 228 compounds). (7 Sheets)

CAS #	Constituent	Pesticide	Military	Dyestuff	Pharma-ceutical	Solvent	Consumer	Group/ Mixture	Polymer	Independent Review	ETF Delisting	Regulatory DQO
100-01-6	4-Nitroaniline									X	X	X
100-44-7	Benzyl chloride									X	X	X
100-75-4	N-Nitrosopiperidine									X	X	X
101-14-4	4,4'-Methylenebis(2-chloroaniline)									X	X	X
101-27-9	Barban	X								X		X
101-77-9	4,4-Methylene dianiline								X	X		X
101-80-4	4,4'-Diaminodiphenyl ether			X						X		X
105-60-2	Caprolactam, vapor						X			X		X
10595-95-6	N-Nitrosomethylethylamine									X	X	X
106-47-8	4-Chloroaniline									X	X	X
106-49-0	p-Toluidine									X	X	X
106-51-4	p-Benzoquinone									X	X	X
106-89-8	Epichlorohydrin					X				X	X	X
10605-21-7	Carbendazim	X								X		X
107-19-7	Propargyl alcohol									X	X	X
107-20-0	Chloroacetaldehyde									X	X	X
107-30-2	Chloromethyl methyl ether									X	X	X
107-41-5	Hexylene glycol						X			X		X
107-49-3	Tetraethyl pyrophosphate									X	X	X
108-31-6	Maleic anhydride (2,5-Furandione)									X	X	X
108-44-1	m-Toluidine								X	X		X
108-46-3	Resorcinol (1,3-Benzenediol)									X	X	X
108-98-5	Thiophenol									X	X	X
109-87-5	Methylal						X			X		X
110-80-5	2-Ethoxyethanol									X	X	X
111-30-8	Glutaraldehyde				X					X		X
1114-71-2	Pebulate	X								X		X
1120-71-4	1,3-Propane sultone									X	X	X
114-26-1	Propoxur	X								X		X
115-29-7	Endosulfan	X								X		X
115-90-2	Fensulfothion	X								X		X
117-79-3	2-Aminoanthraquinone			X								X
118-96-7	2,4,6-Trinitrotoluene		X							X		X

Table A-6. Regulated Compounds from the Regulatory DQO and the ETF Delisting Petition Potentially Used in Industries Unrelated to Hanford (Q10, 228 compounds). (7 Sheets)

CAS #	Constituent	Pesticide	Military	Dyestuff	Pharma-ceutical	Solvent	Consumer	Group/ Mixture	Polymer	Independent Review	ETF Delisting	Regulatory DQO
119-90-4	3,3'-Dimethoxybenzidine			X						X	X	X
119-93-7	3,3'-Dimethylbenzidine			X						X	X	X
120-58-1	Isosafrole						X			X	X	X
120-80-9	Catechol				X					X		X
121-14-2	2,4-Dinitrotoluene									X	X	X
121-75-5	Malathion	X								X		X
121-82-4	Cyclonite		X							X		X
122-42-9	Propham	X								X		X
126-72-7	Tris(2,3-dibromopropyl) phosphate						X			X	X	X
126-85-2	Nitrogen mustard N-oxide		X							X	X	X
126-99-8	Chloroprene									X	X	X
1300-73-8	Xylidine		X	X						X		X
13121-70-5	Cyhexatin	X								X		X
13552-44-8	4,4-Methylenedianiline dihydrochloride								X	X		X
136-78-7	Sesone	X								X		X
137-26-8	Thiram				X					X	X	X
137-30-4	Ziram	X								X		X
13838-16-9	Enflurane				X					X		X
139-91-3	5-(Morpholinomethyl)-3-amino-2-oxazolidinone (furaltudone)				X					X		X
1395-21-7	Subtilisins							X				X
140-57-8	Aramite	X								X	X	X
141-66-2	Dicrotophos	X								X		X
143-50-0	Kepone	X								X	X	X
14484-64-1	Ferbam	X								X		X
1477-55-0	m-Xylene-a,a'-diamine								X	X		X
151-56-4	Ethyleneimine									X	X	X
151-67-7	Halothane						X			X		X
1563-38-8	Carbofuran phenol	X								X		X
1563-66-2	Carbofuran	X								X		X
1615-80-1	N,N'-Diethylhydrazine									X	X	X
1646-88-4	Aldicarb sulfone									X	X	X
16752-77-5	Methomyl	X								X		X
1694-09-3	Benzyl violet 4b			X						X		X

Table A-6. Regulated Compounds from the Regulatory DQO and the ETF Delisting Petition Potentially Used in Industries Unrelated to Hanford (Q10, 228 compounds). (7 Sheets)

CAS #	Constituent	Pesticide	Military	Dyestuff	Pharma-ceutical	Solvent	Consumer	Group/ Mixture	Polymer	Independent Review	ETF Delisting	Regulatory DQO
1746-01-6	TCDD (Dioxin/Furan Indicator)											X
17804-35-2	Benomyl	X								X		X
1888-71-7	Hexachloropropylene									X	X	X
189-55-9	Dibenzo[a,i]pyrene										X	
189-64-0	Dibenzo[a,h]pyrene										X	
1912-24-9	Atrazine	X								X		X
192-65-4	Dibenzo[a,e]pyrene										X	
1929-77-7	Vernolate	X								X		X
1929-82-4	Nitrapyrin	X								X		X
2008-41-5	Butylate	X								X		X
2032-65-7	Methiocarb	X								X		X
205-82-3	Benzo[j]fluoranthene										X	
2104-64-5	EPN	X								X		X
21087-64-9	Metribuzin	X								X		X
2179-59-1	Allyl propyl disulfide						X			X		X
2212-67-1	Molinate	X								X		X
22224-92-6	Fenamiphos	X								X		X
224-42-0	Dibenz[a,j]acridine										X	
226-36-8	Dibenz[a,h]acridine										X	
2303-17-5	Triallate	X								X		X
23135-22-0	Oxamyl	X								X		X
23564-05-8	Thiophanate-methyl	X								X		X
23950-58-5	Pronamide	X								X	X	X
2465-27-2	Auramine (technical grade)			X						X		X
2631-37-0	Promecarb	X								X		X
2646-17-5	Oil orange SS			X						X		X
28434-86-8	3,3'-Dichloro-4,4'-diaminodiphenyl ether			X						X		X
29191-52-4	Anisidine (o-,p- isomers)			X						X		X
2971-90-6	Clopidol	X								X		X
298-00-0	Methyl parathion	X								X	X	X
298-02-2	Phorate	X								X	X	X
298-04-4	Disulfoton	X								X	X	X
299-84-3	Ronnel	X								X		X

Table A-6. Regulated Compounds from the Regulatory DQO and the ETF Delisting Petition Potentially Used in Industries Unrelated to Hanford (Q10, 228 compounds). (7 Sheets)

CAS #	Constituent	Pesticide	Military	Dyestuff	Pharma-ceutical	Solvent	Consumer	Group/ Mixture	Polymer	Independent Review	ETF Delisting	Regulatory DQO
299-86-5	Crufomate	X								X		X
300-76-5	Naled	X								X		X
302-70-5	Nitrogen mustard N-oxide hydrochloride		X							X		X
30558-43-1	A2213	X								X		X
315-18-4	Mexacarbate	X								X		X
333-41-5	Diazinon	X								X		X
3383-96-8	Temephos	X								X		X
3424-82-6	o,p'-DDE (2,4'-DDE)	X								X		X
35400-43-2	Sulprofos	X								X		X
3547-04-4	DDE (p,p'-Dichlorodiphenyldichloroethylene)	X								X		X
3689-24-5	Tetraethyldithiopyrophosphate (TEDP)	X								X	X	X
3761-53-3	Ponceau MX			X						X		X
465-73-6	Isodrin										X	
4685-14-7	Paraquat	X								X		X
479-45-8	Tetryl		X							X		X
509-14-8	Tetranitromethane		X							X	X	X
51-79-6	Ethyl carbamate (urethane)									X	X	X
510-15-6	Chlorobenzilate										X	
52-85-7	Famphur				X					X	X	X
528-29-0	Dinitrobenzene, all isomers							X				X
53-19-0	o,p'-DDD (2,4'-DDD)	X								X		X
53-96-3	2-Acetylaminofluorene									X	X	X
532-27-4	a-Chloroacetophenone		X							X		X
534-52-1	4,6-Dinitro-o-cresol									X	X	X
54-11-5	Nicotine				X					X	X	X
540-59-0	1,2-Dichloroethylene										X	
540-73-8	1,2-Dimethylhydrazine									X	X	X
542-88-1	Dichloromethyl ether									X	X	X
55-18-5	N-Nitrosodiethylamine									X	X	X
55-38-9	Fenthion	X								X		X
55-63-0	Nitroglycerin		X							X		X

Table A-6. Regulated Compounds from the Regulatory DQO and the ETF Delisting Petition Potentially Used in Industries Unrelated to Hanford (Q10, 228 compounds). (7 Sheets)

CAS #	Constituent	Pesticide	Military	Dyestuff	Pharma-ceutical	Solvent	Consumer	Group/ Mixture	Polymer	Independent Review	ETF Delisting	Regulatory DQO
555-84-9	1-(5-Nitrofurfurylidene)amino)-2-imidazolidinone	X								X		X
55720-99-5	Chlorinated diphenyl oxide							X				X
56-38-2	Parathion	X								X	X	X
56-49-5	3-Methylcholanthrene										X	
563-12-2	Ethion	X								X		X
57-24-9	Strychnine	X								X	X	X
57-47-6	Physostigmine				X					X		X
57-64-7	Physostigmine salicylate				X					X		X
58-90-2	2,3,4,6-Tetrachlorophenol										X	
59-87-0	Nitrofurazone				X					X		X
59355-75-8	Methyl acetylene-propadiene mixture (MAPP)							X				X
59669-26-0	Thiodicarb	X								X		X
60-11-7	p-Dimethylaminoazobenzene									X	X	X
606-20-2	2,6-Dinitrotoluene			X						X		X
608-93-5	Pentachlorobenzene									X	X	X
61-82-5	Amitrole	X								X	X	X
615-53-2	N-Nitroso-N-methylurethane									X	X	X
62-44-2	Phenacetin	X								X	X	X
62-73-7	Dichlorvas	X								X		X
62-74-8	Fluoroacetic acid, sodium salt (Fratol)	X								X	X	X
63-25-2	Carbaryl	X								X		X
630-20-6	1,1,1,2-Tetrachloroethane										X	
636-21-5	o-Toluidine hydrochloride			X						X	X	X
6423-43-4	Propylene glycol dinitrate		X							X		X
66-27-3	Methyl methanesulfonate									X	X	X
67-45-8	Furazolidone				X					X		X
680-31-9	Hexamethylphosphoramide	X								X		X
684-93-5	N-Nitroso-N-methylurea									X	X	X
68476-85-7	Liquified petroleum gas							X				X
6923-22-4	Monocrotophos	X								X		X
696-28-6	Dichlorophenylarsine									X	X	X

Table A-6. Regulated Compounds from the Regulatory DQO and the ETF Delisting Petition Potentially Used in Industries Unrelated to Hanford (Q10, 228 compounds). (7 Sheets)

CAS #	Constituent	Pesticide	Military	Dyestuff	Pharma-ceutical	Solvent	Consumer	Group/ Mixture	Polymer	Independent Review	ETF Delisting	Regulatory DQO
72-43-5	Methoxychlor										X	
74-88-4	Iodomethane									X	X	X
74-93-1	Thiomethanol									X	X	X
74-95-3	Dibromomethane									X	X	X
75-47-8	Iodoform				X					X		X
759-73-9	N-Nitroso-N-ethylurea									X	X	X
759-94-4	EPTC	X								X		X
76-01-7	Pentachloroethane										X	
76-06-2	Chloropicrin		X							X		X
76-22-2	Camphor, synthetic						X			X		X
764-41-0	1,4-Dichloro-2-butene									X	X	X
765-34-4	Glycidylaldehyde									X	X	X
77-78-1	Dimethyl sulfate									X	X	X
7782-41-4	Fluorine									X	X	X
7786-34-7	Mevinphos	X								X		X
78-30-8	Triorthocresyl phosphate	X								X		X
78-34-2	Dioxathion	X								X		X
7803-51-2	Phosphine				X					X		X
789-02-6	o,p'-DDT (2,4'-DDT)	X								X		X
79-06-1	Acrylamide									X	X	X
79-44-7	Dimethylcarbamoyl chloride									X	X	X
79-46-9	2-Nitropropane									X	X	X
80-62-6	Methyl methacrylate									X	X	X
8001-58-9	Creosote									X	X	X
8006-64-2	Turpentine							X				X
8022-00-2	Methyl demeton	X								X		X
8052-42-4	Asphalt (petroleum) fumes							X				X
8065-48-3	Demeton	X								X		X
81-81-2	Warfarin	X								X		X
82-68-8	Pentachloronitrobenzene (PCNB)										X	
83-26-1	Pindone	X								X		X
83-79-4	Rotenone	X								X		X
838-88-0	4,4'-Methylenebis(2-methylaniline)								X	X		X

Table A-6. Regulated Compounds from the Regulatory DQO and the ETF Delisting Petition Potentially Used in Industries Unrelated to Hanford (Q10, 228 compounds). (7 Sheets)

CAS #	Constituent	Pesticide	Military	Dyestuff	Pharma-ceutical	Solvent	Consumer	Group/ Mixture	Polymer	Independent Review	ETF Delisting	Regulatory DQO
85-00-7	Diquat	X								X		X
85-44-9	Phthalic anhydride									X	X	X
86-50-0	Azinphos-methyl	X								X		X
86-88-4	alpha-Naphthylthiourea									X	X	X
87-65-0	2,6-Dichlorophenol									X	X	X
88-85-7	2-sec-Butyl-4,6-dinitrophenol; syn Dinoseb										X	
90-04-0	o-Anisidine			X						X		X
91-80-5	Methapyrilene				X					X	X	X
91-94-1	3,3 -Dichlorobenzidine			X						X		X
92-67-1	4-Aminobiphenyl									X	X	X
92-84-2	Phenothiazine	X								X		X
92-87-5	Benzidine			X						X		X
924-16-3	N-Nitrosodi-n-butylamine									X	X	X
93-72-1	Silvex (2,4,5-TP)										X	
93-76-5	2,4,5-T										X	
930-55-2	N-Nitrosopyrrolidine									X	X	X
94-59-7	Safrole				X					X	X	X
94-75-7	2,4-D										X	
944-22-9	Fonofos	X								X		X
95-53-4	o-Toluidine (2-methylaniline)									X	X	X
95-54-5	1,2-Phenylenediamine						X			X		X
95-80-7	Toluene-2,4-diamine									X	X	X
95-94-3	1,2,4,5-Tetrachlorobenzene									X	X	X
96-12-8	1,2-Dibromo-3-chloropropane										X	
96-18-4	1,2,3-Trichloropropane									X	X	X
96-45-7	Ethylenethiourea									X	X	X
97-63-2	Ethyl methacrylate									X	X	X
97-77-8	Disulfiram				X							X
98-00-1	Furfuryl alcohol						X			X		X
98-07-7	Benzotrichloride									X	X	X
98-87-3	Benzal chloride									X	X	X
99-55-8	5-Nitro-o-toluidine									X	X	X

Table A-7. Regulated Organic Compounds Determined Potentially Used in Industries Unrelated to Hanford and Not Further Considered for Analysis Unless in ERDF in the Future (Q11, 138 compounds). (5 Sheets)

CAS #	Constituent	Pesticide	Military	Dyestuff	Pharma-ceutical	Solvent	Consumer	Group/ Mixture	Polymer	Independent Review	ETF Delisting	Regulatory DQO
100-01-6	4-Nitroaniline									X	X	X
100-44-7	Benzyl chloride									X	X	X
100-75-4	N-Nitrosopiperidine									X	X	X
101-14-4	4,4'-Methylenebis(2-chloroaniline)									X	X	X
101-27-9	Barban	X								X		X
10595-95-6	N-Nitrosomethylethylamine									X	X	X
106-47-8	4-Chloroaniline									X	X	X
106-49-0	p-Toluidine									X	X	X
106-51-4	p-Benzoquinone									X	X	X
106-89-8	Epichlorohydrin					X				X	X	X
10605-21-7	Carbendazim	X								X		X
107-19-7	Propargyl alcohol									X	X	X
107-20-0	Chloroacetaldehyde									X	X	X
107-30-2	Chloromethyl methyl ether									X	X	X
107-49-3	Tetraethyl pyrophosphate									X	X	X
108-31-6	Maleic anhydride (2,5-Furandione)									X	X	X
108-46-3	Resorcinol (1,3-Benzenediol)									X	X	X
108-98-5	Thiophenol									X	X	X
110-80-5	2-Ethoxyethanol									X	X	X
1114-71-2	Pebulate	X								X		X
1120-71-4	1,3-Propane sultone									X	X	X
114-26-1	Propoxur	X								X		X
115-29-7	Endosulfan	X								X		X
119-90-4	3,3'-Dimethoxybenzidine			X						X	X	X
119-93-7	3,3'-Dimethylbenzidine			X						X	X	X
120-58-1	Isosafrole						X			X	X	X
121-14-2	2,4-Dinitrotoluene									X	X	X
122-42-9	Propham	X								X		X
126-72-7	Tris(2,3-dibromopropyl) phosphate						X			X	X	X
126-85-2	Nitrogen mustard N-oxide		X							X	X	X
126-99-8	Chloroprene									X	X	X
137-26-8	Thiram				X					X	X	X

Table A-7. Regulated Organic Compounds Determined Potentially Used in Industries Unrelated to Hanford and Not Further Considered for Analysis Unless in ERDF in the Future (Q11, 138 compounds). (5 Sheets)

CAS #	Constituent	Pesticide	Military	Dyestuff	Pharma-ceutical	Solvent	Consumer	Group/ Mixture	Polymer	Independent Review	ETF Delisting	Regulatory DQO
140-57-8	Aramite	X								X	X	X
143-50-0	Kepone	X								X	X	X
14484-64-1	Ferbam	X								X		X
151-56-4	Ethyleneimine									X	X	X
1563-38-8	Carbofuran phenol	X								X		X
1563-66-2	Carbofuran	X								X		X
1615-80-1	N,N'-Diethylhydrazine									X	X	X
1646-88-4	Aldicarb sulfone									X	X	X
16752-77-5	Methomyl	X								X		X
1746-01-6	TCDD (Dioxin/Furan Indicator)											X
17804-35-2	Benomyl	X								X		X
1888-71-7	Hexachloropropylene									X	X	X
189-55-9	Dibenzo[a,i]pyrene										X	
189-64-0	Dibenzo[a,h]pyrene										X	
192-65-4	Dibenzo[a,e]pyrene										X	
1929-77-7	Vernolate	X								X		X
2008-41-5	Butylate	X								X		X
2032-65-7	Methiocarb	X								X		X
205-82-3	Benzo[j]fluoranthene										X	
2212-67-1	Molinate	X								X		X
224-42-0	Dibenz[a,j]acridine										X	
226-36-8	Dibenz[a,h]acridine										X	
2303-17-5	Triallate	X								X		X
23135-22-0	Oxamyl	X								X		X
23564-05-8	Thiophanate-methyl	X								X		X
23950-58-5	Pronamide	X								X	X	X
2631-37-0	Promecarb	X								X		X
298-00-0	Methyl parathion	X								X	X	X
298-02-2	Phorate	X								X	X	X
298-04-4	Disulfoton	X								X	X	X
30558-43-1	A2213	X								X		X
315-18-4	Mexacarbate	X								X		X

Table A-7. Regulated Organic Compounds Determined Potentially Used in Industries Unrelated to Hanford and Not Further Considered for Analysis Unless in ERDF in the Future (Q11, 138 compounds). (5 Sheets)

CAS #	Constituent	Pesticide	Military	Dyestuff	Pharma-ceutical	Solvent	Consumer	Group/ Mixture	Polymer	Independent Review	ETF Delisting	Regulatory DQO
3689-24-5	Tetraethyldithiopyrophosphate (TEDP)	X								X	X	X
465-73-6	Isodrin										X	
509-14-8	Tetranitromethane		X							X	X	X
51-79-6	Ethyl carbamate (urethane)									X	X	X
510-15-6	Chlorobenzilate										X	
52-85-7	Famphur				X					X	X	X
53-96-3	2-Acetylaminofluorene									X	X	X
534-52-1	4,6-Dinitro-o-cresol									X	X	X
54-11-5	Nicotine				X					X	X	X
540-73-8	1,2-Dimethylhydrazine									X	X	X
542-88-1	Dichloromethyl ether									X	X	X
55-18-5	N-Nitrosodiethylamine									X	X	X
55-63-0	Nitroglycerin		X							X		X
56-38-2	Parathion	X								X	X	X
56-49-5	3-Methylcholanthrene										X	
57-24-9	Strychnine	X								X	X	X
57-47-6	Physostigmine				X					X		X
57-64-7	Physostigmine salicylate				X					X		X
58-90-2	2,3,4,6-Tetrachlorophenol										X	
59669-26-0	Thiodicarb	X								X		X
60-11-7	p-Dimethylaminoazobenzene									X	X	X
606-20-2	2,6-Dinitrotoluene			X						X		X
608-93-5	Pentachlorobenzene									X	X	X
61-82-5	Amitrole	X								X	X	X
615-53-2	N-Nitroso-N-methylurethane									X	X	X
62-44-2	Phenacetin	X								X	X	X
63-25-2	Carbaryl	X								X		X
630-20-6	1,1,1,2-Tetrachloroethane										X	
636-21-5	o-Toluidine hydrochloride			X						X	X	X
66-27-3	Methyl methanesulfonate									X	X	X
684-93-5	N-Nitroso-N-methylurea									X	X	X

Table A-7. Regulated Organic Compounds Determined Potentially Used in Industries Unrelated to Hanford and Not Further Considered for Analysis Unless in ERDF in the Future (Q11, 138 compounds). (5 Sheets)

CAS #	Constituent	Pesticide	Military	Dyestuff	Pharma-ceutical	Solvent	Consumer	Group/ Mixture	Polymer	Independent Review	ETF Delisting	Regulatory DQO
696-28-6	Dichlorophenylarsine									X	X	X
72-43-5	Methoxychlor										X	
74-88-4	Iodomethane									X	X	X
74-93-1	Thiomethanol									X	X	X
74-95-3	Dibromomethane									X	X	X
759-73-9	N-Nitroso-N-ethylurea									X	X	X
759-94-4	EPTC	X								X		X
76-01-7	Pentachloroethane										X	
764-41-0	1,4-Dichloro-2-butene									X	X	X
765-34-4	Glycidylaldehyde									X	X	X
77-78-1	Dimethyl sulfate									X	X	X
7782-41-4	Fluorine									X	X	X
7803-51-2	Phosphine				X					X		X
79-06-1	Acrylamide									X	X	X
79-44-7	Dimethylcarbamoyl chloride									X	X	X
79-46-9	2-Nitropropane									X	X	X
80-62-6	Methyl methacrylate									X	X	X
81-81-2	Warfarin	X								X		X
82-68-8	Pentachloronitrobenzene (PCNB)										X	
85-44-9	Phthalic anhydride									X	X	X
86-88-4	alpha-Naphthylthiourea									X	X	X
87-65-0	2,6-Dichlorophenol									X	X	X
88-85-7	2-sec-Butyl-4,6-dinitrophenol; syn Dinoseb										X	
91-80-5	Methapyrilene				X					X	X	X
91-94-1	3,3 -Dichlorobenzidine			X						X		X
92-67-1	4-Aminobiphenyl									X	X	X
92-87-5	Benzidine			X						X		X
924-16-3	N-Nitrosodi-n-butylamine									X	X	X
93-72-1	Silvex (2,4,5-TP)										X	
93-76-5	2,4,5-T										X	
930-55-2	N-Nitrosopyrrolidine									X	X	X
94-59-7	Safrole				X					X	X	X

Table A-7. Regulated Organic Compounds Determined Potentially Used in Industries Unrelated to Hanford and Not Further Considered for Analysis Unless in ERDF in the Future (Q11, 138 compounds). (5 Sheets)

CAS #	Constituent	Pesticide	Military	Dyestuff	Pharma-ceutical	Solvent	Consumer	Group/ Mixture	Polymer	Independent Review	ETF Delisting	Regulatory DQO
95-53-4	o-Toluidine (2-methylaniline)									X	X	X
95-80-7	Toluene-2,4-diamine									X	X	X
95-94-3	1,2,4,5-Tetrachlorobenzene									X	X	X
96-12-8	1,2-Dibromo-3-chloropropane										X	
96-18-4	1,2,3-Trichloropropane									X	X	X
96-45-7	Ethylenethiourea									X	X	X
97-63-2	Ethyl methacrylate									X	X	X
97-77-8	Disulfiram				X							X
98-07-7	Benzotrichloride									X	X	X
98-87-3	Benzal chloride									X	X	X
99-55-8	5-Nitro-o-toluidine									X	X	X

Table A-8. Regulated Organic Compounds Potentially Used at Hanford (Q13, 249 compounds). (6 Sheets)

CAS #	Constituent
100-02-7	4-Nitrophenol
100-25-4	1,4-Dinitrobenzene
100-41-4	Ethyl benzene
100-42-5	Styrene
100-51-6	Benzyl alcohol
101-55-3	4-Bromophenylphenyl ether
1024-57-3	Heptachlor Epoxide
103-85-5	Phenylthiourea
105-67-9	2,4-Dimethylphenol
106-46-7	1,4-Dichlorobenzene
106-50-3	p-Phenylenediamine
106-93-4	Ethylene dibromide
107-02-8	Acrolein
107-05-1	3-Chloropropene
107-06-2	1,2-Dichloroethane
107-10-8	n-Propylamine
107-12-0	Propionitrile
107-13-1	Acrylonitrile
107-18-6	2-Propen-1-ol (Allyl alcohol)
108-05-4	Acetic acid vinyl ester
108-10-1	4-Methyl-2-pentanone
108-60-1	Bis(2-Chloroisopropyl) ether
108-88-3	Toluene
108-90-7	Chlorobenzene
108-95-2	Phenol
109-06-8	2-Methylpyridine (2-Picoline)
109-77-3	Malononitrile
110-00-9	Furan
110-75-8	2-Chloroethyl vinyl ether
110-86-1	Pyridine
111-44-4	Bis(2-chloroethyl) ether
111-54-6	Ethylenebisdithiocarbamic acid
111-91-1	Bis(2-Chloroethoxy)methane
1116-54-7	N-Nitrosodiethanolamine
1129-41-5	Metolcarb (3-methylcholanthrene)
1134-23-2	Cycloate
115-02-6	Azaserine
116-06-3	Aldicarb
117-81-7	Bis(2-ethylhexyl) phthalate
117-84-0	Di-n-octylphthalate
118-74-1	Hexachlorobenzene
119-38-0	Isolan

Table A-8. Regulated Organic Compounds Potentially Used at Hanford (Q13, 249 compounds). (6 Sheets)

CAS #	Constituent
120-12-7	Anthracene
120-54-7	Bis(pentamethylene)-thiuram tetrasulfide
120-82-1	1,2,4-Trichlorobenzene
120-83-2	2,4-Dichlorophenol
121-44-8	Triethylamine
122-09-8	alpha,alpha-Dimethylphenethylamine
122-39-4	N,N-Diphenylamine
122-66-7	1,2-Diphenylhydrazine
123-33-1	Maleic hydrazide
123-63-7	Paraldehyde
123-91-1	1,4-Dioxane
124-48-1	Dibromochloromethane
126-68-1	O,O,O-Triethyl phosphorothioate
126-98-7	2-Methyl-2-propenenitrile
127-18-4	1,1,2,2-Tetrachloroethene
129-00-0	Pyrene
130-15-4	1,4-Naphthoquinone
131-11-3	Dimethyl phthalate
131-89-5	2-Cyclohexyl-4,6-dinitrophenol
1319-77-3	Cresols, total
13256-22-9	N-Nitrososarcosine
1330-20-7	Xylene
1336-36-3	Polychlorinated biphenyls (PCBs)
1338-23-4	Methyl ethyl ketone peroxide
134-32-7	alpha-Naphthylamine
1402-68-2	Aflatoxins
141-78-6	Acetic acid ethyl ester
145-73-3	Endothall
1464-53-5	1,2,3,4-Diepoxybutane
148-82-3	Melphalan (alanine nitrogen mustard)
14901-08-7	Cycasin
152-16-9	Octamethylpyrophosphoramide
156-59-2	1,2-cis-Dichloroethene
156-60-5	1,2-trans-Dichloroethene
1634-02-2	Tetrabutylthiuram disulfide
16543-55-8	N-Nitrosonornicotine
17702-57-7	Formparanate
18883-66-4	Streptozotocin
193-39-5	Indeno(1,2,3-cd)pyrene
194-59-2	7H-Dibenzo[c,g]carbazole
205-99-2	Benzo(b)fluoranthene
206-44-0	Fluoranthene
207-08-9	Benzo(k)fluoranthene

Table A-8. Regulated Organic Compounds Potentially Used at Hanford (Q13, 249 compounds). (6 Sheets)

CAS #	Constituent
20830-81-3	Daunomycin
218-01-9	Chrysene
225-51-4	Benz[c]acridine
22781-23-3	Bendiocarb
22961-82-6	Bendiocarb phenol
2303-16-4	Diallate
23422-53-9	Formetanate hydrochloride
25154-54-5	Dinitrobenzene
25265-76-3	Phenylenediamine
25322-20-7	Tetrachloroethane
25323-30-2	Dichloroethylene
25376-45-8	Toluenediamine
25735-29-9	Trichloropropane
26419-73-8	Tirpate
26471-62-5	Toluene diisocyanate
26545-73-3	Dichloropropanol
26638-19-7	Dichloropropane
26952-23-8	Dichloropropene
2763-96-4	5-(Aminomethyl)-3-isoxazolol
297-97-2	O,O-Diethyl O-pyrazinyl phosphoro- thioate
302-01-2	Hydrazine
305-03-3	Chlorambucil
309-00-2	Aldrin
311-45-5	Diethyl-p-nitrophenyl phosphate
319-84-6	alpha-BHC
319-85-7	beta-BHC
3288-58-2	o, o-Diethyl -S- methyl dithiophosphate
35576-91-1	Nitrosamines
357-57-3	Brucine
39196-18-4	Thiofanox
4170-30-3	2-Butenaldehyde
4549-40-0	N-Nitrosomethylvinylamine
492-80-8	Auramine
494-03-1	Chlornaphazin
496-72-0	Toluene-3,4-diamine
50-00-0	Formaldehyde
50-07-7	Mitomycin C
50-18-0	Cyclophosphamide
50-29-3	4,4-DDT
50-32-8	Benzo(a)pyrene
50-55-5	Reserpine
504-24-5	4-Aminopyridine
505-60-2	Mustard gas

Table A-8. Regulated Organic Compounds Potentially Used at Hanford (Q13, 249 compounds). (6 Sheets)

CAS #	Constituent
51-28-5	2,4-Dinitrophenol
51-43-4	Epinephrine
51-52-5	Propylthiouracil
51-75-2	Nitrogen mustard
52-24-4	Tris(1-aziridinyl)phosphine sulfide
52888-80-9	Prosulfocarb
53-70-3	Dibenz[a,h]anthracene
533-74-4	Dazomet
5344-82-1	1-(o-Chlorophenyl)thiourea
541-53-7	Dithiobiuret, syb 2,4-Dithiobiuret
541-73-1	1,3-Dichlorobenzene
542-75-6	1,3-Dichloropropene
542-76-7	3-Chloropropionitrile
55-91-4	Diisopropylfluorophosphate (DFP)
55285-14-8	Carbosulfan
55406-53-6	3-Iodo-2-propynyl n-butylcarbamate
56-04-2	Methylthiouracil
56-23-5	Carbon tetrachloride
56-53-1	Diethylstilbesterol
56-55-3	Benzo(a)anthracene
57-14-7	1,1-Dimethylhydrazine
57-74-9	Chlordane
57-97-6	7,12-Dimethylbenz[a]anthracene
58-89-9	gamma-BHC (Lindane)
59-50-7	4-Chloro-3-methylphenol
59-89-2	N-Nitrosomorpholine
591-08-2	1-Acetyl-2-thiourea
5952-26-1	Diethylene glycol, dicarbamate
598-31-2	Bromoacetone
60-29-7	Ethyl ether
60-34-4	Methylhydrazine
60-51-5	Dimethoate
60-57-1	Dieldrin
62-50-0	Ethyl methanesulfonate
62-53-3	Aniline
62-55-5	Thioacetamide (Ethanethioamide)
62-56-6	Thiourea
62-75-9	N-Nitroso-N,N-dimethylamine
621-64-7	N-Nitroso-di-n-propylamine
624-83-9	Methyl isocyanate
6358-53-8	Citrus red No. 2
64-00-6	m-Cumenyl methylcarbamate
64-18-6	Formic acid

Table A-8. Regulated Organic Compounds Potentially Used at Hanford (Q13, 249 compounds). (6 Sheets)

CAS #	Constituent
640-19-7	Fluoroacetamide
644-64-4	Dimetilan
66-75-1	Uracil mustard
67-56-1	Methyl alcohol
67-64-1	2-Propanone (Acetone)
67-66-3	Chloroform
67-72-1	Hexachloroethane
692-42-2	Diethylarsine
70-25-7	MNNG (N-Methyl-N'-nitro-N-nitrosoguanidine)
70-30-4	Hexachlorophene
71-36-3	n-Butyl alcohol
71-43-2	Benzene
71-55-6	1,1,1-Trichloroethane
72-20-8	Endrin
72-54-8	4,4-DDD
72-55-9	4,4-DDE
72-57-1	Trypan blue
74-83-9	Bromomethane
74-87-3	Chloromethane
75-00-3	Chloroethane
75-01-4	1-Chloroethene (Vinyl Chloride)
75-05-8	Acetonitrile
75-09-2	Dichloromethane (Methylene Chloride)
75-15-0	Carbon disulfide
75-21-8	Oxirane (Ethylene Oxide)
75-25-2	Tribromomethane
75-27-4	Bromodichloromethane
75-34-3	1,1-Dichloroethane
75-35-4	1,1-Dichloroethene
75-36-5	Acetyl chloride
75-55-8	2-Methylaziridine
75-60-5	Cacodylic acid
75-69-4	Trichlorofluoromethane
75-70-7	Trichloromethanethiol
75-71-8	Dichlorodifluoromethane
75-86-5	2-Methyllactonitrile
75-87-6	Chloral
757-58-4	Hexaethyl tetraphosphate
76-13-1	1,2,2-Trichlorotrifluoroethane (Freon 113)
76-44-8	Heptachlor
77-47-4	Hexachlorocyclopentadiene
78-59-1	Isophorone
78-83-1	2-Methylpropyl alcohol

Table A-8. Regulated Organic Compounds Potentially Used at Hanford (Q13, 249 compounds). (6 Sheets)

CAS #	Constituent
78-87-5	1,2-Dichloropropane
78-93-3	2-Butanone (MEK)
79-00-5	1,1,2-Trichloroethane
79-01-6	1,1,2-Trichloroethylene
79-19-6	Thiosemicarbazide
79-22-1	Methyl chlorocarbonate
79-34-5	1,1,2,2-Tetrachloroethane
8001-35-2	Toxaphene
81-07-2	Saccharin
823-40-5	Toluene-2,6-diamine
83-32-9	Acenaphthene
84-66-2	Diethyl phthalate
84-74-2	Di-n-butylphthalate
85-68-7	Butylbenzylphthalate
86-30-6	N-Nitrosodiphenylamine
86-73-7	Fluorene
86-74-8	Carbazole
87-68-3	Hexachlorobutadiene
87-86-5	Pentachlorophenol
88-06-2	2,4,6-Trichlorophenol
91-20-3	Naphthalene
91-58-7	2-Chloronaphthalene
91-59-8	2-Naphthylamine
94-58-6	Dihydrosafrole
94-75-7	2,4-D
95-06-7	Sulfallate
95-50-1	1,2-Dichlorobenzene
95-57-8	2-Chlorophenol
95-95-4	2,4,5-Trichlorophenol
97-74-5	Tetrabutylthiuram monosulfide
98-82-8	(1-Methylethyl)benzene
98-86-2	Acetophenone
98-95-3	Nitrobenzene
99-35-4	1,3,5-Trinitrobenzene
99-65-0	1,3-Dinitrobenzene

Table A-9. Regulated Organic Compounds Eliminated Based on Professional Judgement (Q14, 55 compounds). (2 Sheets)

CAS #	Constituent	Pesticide	Military	Dyestuff	Pharma-ceutical	Fungicide	Consumer	Comment
110-00-9	Furan							insoluable in water
115-02-6	Azaserine				X			
116-06-3	Aldicarb	X						
118-74-1	Hexachlorobenzene	X						
123-63-7	Paraldehyde							solvent
1402-68-2	Aflatoxins							Used in R&D only
145-73-3	Endothall	X						
148-82-3	Melphalan (alanine nitrogen mustard)				X			
152-16-9	Octamethylpyrophosphoramide	X						
18883-66-4	Streptozotocin				X			
20830-81-3	Daunomycin				X			
22781-23-3	Bendiocarb	X						
2303-16-4	Diallate	X						
297-97-2	O,O-Diethyl O-pyrazinyl phosphoro- thioate	X						
305-03-3	Chlorambucil				X			
309-00-2	Aldrin	X						
357-57-3	Brucine	X						
39196-18-4	Thiofanox	X						
492-80-8	Auramine			X				
494-03-1	Chlornaphazin				X			
50-07-7	Mitomycin C				X			
50-18-0	Cyclophosphamide				X			
50-29-3	4,4-DDT	X						
50-55-5	Reserpine				X			
505-60-2	Mustard gas		X					
51-43-4	Epinephrine				X			
51-52-5	Propylthiouracil				X			
51-75-2	Nitrogen mustard		X					
52-24-4	Tris(1-aziridinyl)phosphine sulfide				X			
56-04-2	Methylthiouracil				X			
56-53-1	Diethylstilbesterol	X						
57-74-9	Chlordane	X						
58-89-9	gamma-BHC (Lindane)	X						
60-51-5	Dimethoate	X						
60-57-1	Dieldrin	X						
6358-53-8	Citrus red No. 2			X				
64-18-6	Formic acid							short half life

Table A-8. Regulated Organic Compounds Potentially Used at Hanford (Q13, 249 compounds). (6 Sheets)

CAS #	Constituent							
66-75-1	Uracil mustard				X			
67-56-1	Methyl alcohol							short half life
70-25-7	MNNG (N-Methyl-N'-nitro-N-nitrosoguanidine)			X				
72-20-8	Endrin	X						
72-54-8	4,4-DDD	X						
72-55-9	4,4-DDE	X						
72-57-1	Trypan blue	X						
75-21-8	Oxirane (Ethylene Oxide)					X		
75-60-5	Cacodylic acid	X						
76-44-8	Heptachlor	X						
77-47-4	Hexachlorocyclopentadiene	X						
8001-35-2	Toxaphene	X						
81-07-2	Saccharin						X	
86-74-8	Carbazole							insoluable in water; Merck index #1834
94-75-7	2,4-D	X						
95-06-7	Sulfallate	X						
98-82-8	(1-Methylethyl)benzene							insoluable in water
99-35-4	1,3,5-Trinitrobenzene		X					

Table A-10. Regulated Organic Compounds Detected in ERDF Leachate and Included as COPC (Q16, 8 compounds).

CAS #	Constituent
108-88-3	Toluene
117-81-7	Bis(2-ethylhexyl) phthalate
129-00-0	Pyrene
206-44-0	Fluoranthene
67-64-1	2-Propanone (Acetone)
84-74-2	Di-n-butylphthalate
85-68-7	Butylbenzylphthalate
91-20-3	Naphthalene

Table A-11. Regulated Organic Compounds Not Reported as Detection in ERDF Leachate (Q17, 186 compounds). (5 Sheets)

CAS #	Constituent
100-02-7	4-Nitrophenol
100-25-4	1,4-Dinitrobenzene
100-41-4	Ethyl benzene
100-42-5	Styrene
100-51-6	Benzyl alcohol
101-55-3	4-Bromophenylphenyl ether
1024-57-3	Heptachlor Epoxide
103-85-5	Phenylthiourea
105-67-9	2,4-Dimethylphenol
106-46-7	1,4-Dichlorobenzene
106-50-3	p-Phenylenediamine
106-93-4	Ethylene dibromide
107-02-8	Acrolein
107-05-1	3-Chloropropene
107-06-2	1,2-Dichloroethane
107-10-8	n-Propylamine
107-12-0	Propionitrile
107-13-1	Acrylonitrile
107-18-6	2-Propen-1-ol (Allyl alcohol)
108-05-4	Acetic acid vinyl ester
108-10-1	4-Methyl-2-pentanone
108-60-1	Bis(2-Chloroisopropyl) ether
108-90-7	Chlorobenzene
108-95-2	Phenol
109-06-8	2-Methylpyridine (2-Picoline)
109-77-3	Malononitrile
110-75-8	2-Chloroethyl vinyl ether
110-86-1	Pyridine
111-44-4	Bis(2-chloroethyl) ether
111-54-6	Ethylenebisdithiocarbamic acid
111-91-1	Bis(2-Chloroethoxy)methane
1116-54-7	N-Nitrosodiethanolamine
1129-41-5	Metolcarb (3-methylcholanthrene)
1134-23-2	Cycloate
117-84-0	Di-n-octylphthalate
119-38-0	Isolan
120-12-7	Anthracene
120-54-7	Bis(pentamethylene)-thiuram tetrasulfide
120-82-1	1,2,4-Trichlorobenzene

Table A-11. Regulated Organic Compounds Not Reported as Detection in ERDF Leachate (Q17, 186 compounds). (5 Sheets)

CAS #	Constituent
120-83-2	2,4-Dichlorophenol
121-44-8	Triethylamine
122-09-8	alpha,alpha-Dimethylphenethylamine
122-39-4	N,N-Diphenylamine
122-66-7	1,2-Diphenylhydrazine
123-33-1	Maleic hydrazide
123-91-1	1,4-Dioxane
124-48-1	Dibromochloromethane
126-68-1	O,O,O-Triethyl phosphorothioate
126-98-7	2-Methyl-2-propenenitrile
127-18-4	1,1,2,2-Tetrachloroethene
130-15-4	1,4-Naphthoquinone
131-11-3	Dimethyl phthalate
131-89-5	2-Cyclohexyl-4,6-dinitrophenol
1319-77-3	Cresols, total
13256-22-9	N-Nitrososarcosine
1330-20-7	Xylene
1336-36-3	Polychlorinated biphenyls (PCBs)
1338-23-4	Methyl ethyl ketone peroxide
134-32-7	alpha-Naphthylamine
141-78-6	Acetic acid ethyl ester
1464-53-5	1,2,3,4-Diepoxybutane
14901-08-7	Cycasin
156-59-2	1,2-cis-Dichloroethene
156-60-5	1,2-trans-Dichloroethene
1634-02-2	Tetrabutylthiuram disulfide
16543-55-8	N-Nitrosonornicotine
17702-57-7	Formparanate
193-39-5	Indeno(1,2,3-cd)pyrene
194-59-2	7H-Dibenzo[c,g]carbazole
205-99-2	Benzo(b)fluoranthene
207-08-9	Benzo(k)fluoranthene
218-01-9	Chrysene
225-51-4	Benz[c]acridine
22961-82-6	Bendiocarb phenol
23422-53-9	Formetanate hydrochloride
25154-54-5	Dinitrobenzene
25265-76-3	Phenylenediamine
25322-20-7	Tetrachloroethane

Table A-11. Regulated Organic Compounds Not Reported as Detection in ERDF Leachate (Q17, 186 compounds). (5 Sheets)

CAS #	Constituent
25323-30-2	Dichloroethylene
25376-45-8	Toluenediamine
25735-29-9	Trichloropropane
26419-73-8	Tirpate
26471-62-5	Toluene diisocyanate
26545-73-3	Dichloropropanol
26638-19-7	Dichloropropane
26952-23-8	Dichloropropene
2763-96-4	5-(Aminomethyl)-3-isoxazolol
302-01-2	Hydrazine
311-45-5	Diethyl-p-nitrophenyl phosphate
319-84-6	alpha-BHC
319-85-7	beta-BHC
3288-58-2	o, o-Diethyl -S- methyl dithiophosphate
35576-91-1	Nitrosamines
4170-30-3	2-Butenaldehyde
4549-40-0	N-Nitrosomethylvinylamine
496-72-0	Toluene-3,4-diamine
50-00-0	Formaldehyde
50-32-8	Benzo(a)pyrene
504-24-5	4-Aminopyridine
51-28-5	2,4-Dinitrophenol
52888-80-9	Prosulfocarb
53-70-3	Dibenz[a,h]anthracene
533-74-4	Dazomet
5344-82-1	1-(o-Chlorophenyl)thiourea
541-53-7	Dithiobiuret, syb 2,4-Dithiobiuret
541-73-1	1,3-Dichlorobenzene
542-75-6	1,3-Dichloropropene
542-76-7	3-Chloropropionitrile
55-91-4	Diisopropylfluorophosphate (DFP)
55285-14-8	Carbosulfan
55406-53-6	3-Iodo-2-propynyl n-butylcarbamate
56-23-5	Carbon tetrachloride
56-55-3	Benzo(a)anthracene
57-14-7	1,1-Dimethylhydrazine
57-97-6	7,12-Dimethylbenz[a]anthracene
59-50-7	4-Chloro-3-methylphenol
59-89-2	N-Nitrosomorpholine

Table A-11. Regulated Organic Compounds Not Reported as Detection in ERDF Leachate (Q17, 186 compounds). (5 Sheets)

CAS #	Constituent
591-08-2	1-Acetyl-2-thiourea
5952-26-1	Diethylene glycol, dicarbamate
598-31-2	Bromoacetone
60-29-7	Ethyl ether
60-34-4	Methylhydrazine
62-50-0	Ethyl methanesulfonate
62-53-3	Aniline
62-55-5	Thioacetamide (Ethanethioamide)
62-56-6	Thiourea
62-75-9	N-Nitroso-N,N-dimethylamine
621-64-7	N-Nitroso-di-n-propylamine
624-83-9	Methyl isocyanate
64-00-6	m-Cumenyl methylcarbamate
640-19-7	Fluoroacetamide
644-64-4	Dimetilan
67-66-3	Chloroform
67-72-1	Hexachloroethane
692-42-2	Diethylarsine
70-30-4	Hexachlorophene
71-36-3	n-Butyl alcohol
71-43-2	Benzene
71-55-6	1,1,1-Trichloroethane
74-83-9	Bromomethane
74-87-3	Chloromethane
75-00-3	Chloroethane
75-01-4	1-Chloroethene (Vinyl Chloride)
75-05-8	Acetonitrile
75-09-2	Dichloromethane (Methylene Chloride)
75-15-0	Carbon disulfide
75-25-2	Tribromomethane
75-27-4	Bromodichloromethane
75-34-3	1,1-Dichloroethane
75-35-4	1,1-Dichloroethene
75-36-5	Acetyl chloride
75-55-8	2-Methylaziridine
75-69-4	Trichlorofluoromethane
75-70-7	Trichloromethanethiol
75-71-8	Dichlorodifluoromethane
75-86-5	2-Methyllactonitrile

Table A-11. Regulated Organic Compounds Not Reported as Detection in ERDF Leachate (Q17, 186 compounds). (5 Sheets)

CAS #	Constituent
75-87-6	Chloral
757-58-4	Hexaethyl tetraphosphate
76-13-1	1,2,2-Trichlorotrifluoroethane (Freon 113)
78-59-1	Isophorone
78-83-1	2-Methylpropyl alcohol
78-87-5	1,2-Dichloropropane
78-93-3	2-Butanone (MEK)
79-00-5	1,1,2-Trichloroethane
79-01-6	1,1,2-Trichloroethylene
79-19-6	Thiosemicarbazide
79-22-1	Methyl chlorocarbonate
79-34-5	1,1,2,2-Tetrachloroethane
823-40-5	Toluene-2,6-diamine
83-32-9	Acenaphthene
84-66-2	Diethyl phthalate
86-30-6	N-Nitrosodiphenylamine
86-73-7	Fluorene
87-68-3	Hexachlorobutadiene
87-86-5	Pentachlorophenol
88-06-2	2,4,6-Trichlorophenol
91-58-7	2-Chloronaphthalene
91-59-8	2-Naphthylamine
94-58-6	Dihydrosafrole
95-50-1	1,2-Dichlorobenzene
95-57-8	2-Chlorophenol
95-95-4	2,4,5-Trichlorophenol
97-74-5	Tetrabutylthiuram monosulfide
98-86-2	Acetophenone
98-95-3	Nitrobenzene
99-65-0	1,3-Dinitrobenzene

Table A-12. Regulated Organic Compounds to be Analyzed by Unique Method or by Non-SW-846 Method and Included in Neither the EPA Docket Nor COPC List (Q23, 61 compounds). (2 Sheets)

CAS #	Constituent
57-14-7	1,1-Dimethylhydrazine
60-34-4	Methylhydrazine
624-83-9	Methyl isocyanate
75-55-8	2-Methylaziridine
103-85-5	Phenylthiourea
111-54-6	Ethylenebisdithiocarbamic acid
1129-41-5	Metolcarb (3-methylcholanthrene)
1134-23-2	Cycloate
119-38-0	Isolan
120-54-7	Bis(pentamethylene)-thiuram tetrasulfide
123-33-1	Maleic hydrazide
13256-22-9	N-Nitrososarcosine
1338-23-4	Methyl ethyl ketone peroxide
14901-08-7	Cycasin
1634-02-2	Tetrabutylthiuram disulfide
16543-55-8	N-Nitrosonornicotine
17702-57-7	Formparanate
225-51-4	Benz[c]acridine
22961-82-6	Bendiocarb phenol
23422-53-9	Formetanate hydrochloride
25265-76-3	Phenylenediamine
25322-20-7	Tetrachloroethane
25323-30-2	Dichloroethylene
25376-45-8	Toluenediamine
25735-29-9	Trichloropropane
26419-73-8	Tirpate
26471-62-5	Toluene diisocyanate
26545-73-3	Dichloropropanol
26638-19-7	Dichloropropane
26952-23-8	Dichloropropene
2763-96-4	5-(Aminomethyl)-3-isoxazolol
302-01-2	Hydrazine
311-45-5	Diethyl-p-nitrophenyl phosphate

Table A-12. Regulated Organic Compounds to be Analyzed by Unique Method or by Non-SW-846 Method and Included in Neither the EPA Docket Nor COPC List (Q23, 61 compounds). (2 Sheets)

CAS #	Constituent
3288-58-2	o, o-Diethyl -S- methyl dithiophosphate
4549-40-0	N-Nitrosomethylvinylamine
496-72-0	Toluene-3,4-diamine
504-24-5	4-Aminopyridine
52888-80-9	Prosulfocarb
533-74-4	Dazomet
5344-82-1	1-(o-Chlorophenyl)thiourea
541-53-7	Dithiobiuret, syb 2,4-Dithiobiuret
55-91-4	Diisopropylfluorophosphate (DFP)
55285-14-8	Carbosulfan
55406-53-6	3-Iodo-2-propynyl n-butylcarbamate
5952-26-1	Diethylene glycol, dicarbamate
62-55-5	Thioacetamide (Ethanethioamide)
62-56-6	Thiourea
64-00-6	m-Cumenyl methylcarbamate
640-19-7	Fluoroacetamide
644-64-4	Dimetilan
692-42-2	Diethylarsine
121-44-8	Triethylamine
75-36-5	Acetyl chloride
75-70-7	Trichloromethanethiol
75-86-5	2-Methyllactonitrile
75-87-6	Chloral
757-58-4	Hexaethyl tetraphosphate
79-19-6	Thiosemicarbazide
79-22-1	Methyl chlorocarbonate
97-74-5	Tetrabutylthiuram monosulfide
35576-91-1	Nitrosamines

Table A-13. Uniqe Ions of ERDF Leachate Inorganic and Organometalic Compounds (31 compounds).

CAS #	Constituent	Ions
7429-90-5	Aluminum	Al
7664-41-7	Ammonia	NH4
7440-36-0	Antimony	Sb
7440-38-2	Arsenic	As
7440-39-3	Barium	Ba
7440-41-7	Beryllium	Be
7440-43-9	Cadmium	Cd
7440-70-2	Calcium	Ca
16887-00-6	Chloride	Cl
7440-47-3	Chromium	Cr
7440-48-4	Cobalt	Co
7440-50-8	Copper	Cu
16984-48-8	Fluoride	F
7439-89-6	Iron	Fe
7439-92-1	Lead	Pb
7439-95-4	Magnesium	Mg
7439-96-5	Manganese	Mn
7439-97-6	Mercury	Hg
7440-02-0	Nickel	Ni
14797-55-8	Nitrate	NO3
1594-56-5	Nitrite	NO2
14265-44-2	Phosphate	PO4
7440-09-7	Potassium	K
7782-49-2	Selenium	Se
7440-22-4	Silver	Ag
7440-23-5	Sodium	Na
14808-79-8	Sulfate	SO4
7440-28-0	Thallium	Tl
7440-61-1	Uranium	U
7440-62-2	Vanadium	V
7440-66-6	Zinc	Zn

Table A-14. Unique Ions of Inorganic and Organometalic Compounds from Regulatory Input List (38 compounds).

CAS #	Constituent	Ions
7429-90-5	Aluminum	Al
7664-41-7	Ammonia	NH4
7440-36-0	Antimony	Sb
7440-38-2	Arsenic	As
7440-39-3	Barium	Ba
7440-41-7	Beryllium	Be
7726-95-6	Bromine	Br
7440-43-9	Cadmium	Cd
7440-70-2	Calcium	Ca
1333-86-4	Carbon black	C
3812-32-6	Carbonate	CO3
16887-00-6	Chloride	Cl
7440-47-3	Chromium	Cr
16065-83-1	Chromium (III) ion	Cr (III)
18540-29-9	Chromium(VI)	Cr(VI)
7440-48-4	Cobalt	Co
7440-50-8	Copper	Cu
57-12-5	Cyanide	CN
16984-48-8	Fluoride	F
7439-92-1	Lead	Pb
7439-96-5	Manganese	Mn
7439-97-6	Mercury	Hg
7440-02-0	Nickel	Ni
14797-55-8	Nitrate	NO3
14797-65-0	Nitrite	NO2
7440-04-2	Osmium	Os
14265-44-2	Phosphate	PO4
7723-14-0	Phosphorus	P
7440-09-7	Potassium	K
7782-49-2	Selenium	Se
7440-22-4	Silver	Ag
7440-23-5	Sodium	Na
14808-79-8	Sulfate	SO4
63705-05-5	Sulfur	S
7440-28-0	Thallium	Tl
7440-31-5	Tin, metal	Sn
7440-62-2	Vanadium	V
7440-66-6	Zinc	Zn

Table A-15. Detected Metals in ERDF Leachate with Analyses Frequency and Associated Docket Values (30 compounds).

Class	CAS #	Constituent	# Detects	Min Value Detect	Max Value Detect	# Analyzed	Docket Value	10x Docket Value	Unit
Metals	7429-90-5	Aluminum	2	213	422	11			ug/L
Metals	7440-36-0	Antimony	0			11	6	60	ug/L
Metals	7440-38-2	Arsenic	11	13.6	32.6	11	50	500	ug/L
Metals	7440-39-3	Barium	12	29.4	63.3	12	2000	20000	ug/L
Metals	7440-41-7	Beryllium	8	0.33	0.77	11	4	40	ug/L
Metals	7440-43-9	Cadmium	0			11	5	50	ug/L
Metals	7440-70-2	Calcium	11	75500	227000	11			ug/L
Metals	7440-47-3	Chromium	7	3.8	13.9	11	100	1000	ug/L
Metals	7440-48-4	Cobalt	0			11	2100	21000	ug/L
Metals	7440-50-8	Copper	1	10.2	10.2	11	1300	13000	ug/L
Metals	7439-89-6	Iron	4	102	798	11			ug/L
Metals	7439-92-1	Lead	0			11	15	150	ug/L
Metals	7439-95-4	Magnesium	11	21000	65300	11			ug/L
Metals	7439-96-5	Manganese	9	4.4	17.7	11			ug/L
Metals	7439-97-6	Mercury	2	0.16	0.16	11	2	20	ug/L
Metals	7440-02-0	Nickel	1	10.2	10.2	11	100	1000	ug/L
Metals	7440-09-7	Potassium	11	10600	17000	11			ug/L
Metals	7782-49-2	Selenium	0			11	50	500	ug/L
Metals	7440-22-4	Silver	0			11	200	2000	ug/L
Metals	7440-23-5	Sodium	11	179000	249000	11			ug/L
Metals	7440-28-0	Thallium	0			11	2	20	ug/L
Metals	7440-62-2	Vanadium	10	27.3	52.9	11	300	3000	ug/L
Metals	7440-66-6	Zinc	2	19.5	49.7	11	10000	100000	ug/L
WetChem	7664-41-7	Ammonia	1	151	151	13			ug/L
WetChem	16887-00-6	Chloride	11	154	443	13			mg/L
WetChem	16984-48-8	Fluoride	11	0.73	1.18	13	4	40	mg/L
WetChem	14797-55-8	Nitrate	11	3.42	19.3	13			mg/L
WetChem	14797-65-0	Nitrite	0			13			mg/L
WetChem	14265-44-2	Phosphate	5	0.41	0.84	13			mg/L
WetChem	14808-79-8	Sulfate	11	247	534	13			mg/L

Table A-16. Metals/Ions from the Regulatory Input List not Included as COPC (7 compounds).

CAS #	Constituent	Ions
24959-67-9	Bromine	Br
1333-86-4	Carbon black	C
16065-83-1	Chromium (III) ion	Cr(III)
18540-29-9	Chromium(VI)	Cr(VI)
7440-04-2	Osmium	Os
7723-14-0	Phosphorus	P
63705-05-5	Sulfur	S

APPENDIX B

CURSIVE DATA VALIDATION OF ERDF LEACHATE DATA FOR BLANK CONTAMINATION

B1.0 PURPOSE

ERDF performed analyses on the leachate collected from each batch before shipping the leachate in tankers to ETF. The available analytical data included leachate samples, laboratory methods blanks and field blanks. Most of the laboratory blanks showed detections of a number of analytes, which demonstrate laboratory contamination. To obtain a better understanding of the presented analytical data, the detections observed in the instrument blanks need to be taken into consideration when evaluating the results of the leachate samples.

Every leachate sample submitted for analysis was also accompanied by a field blank. Field blanks demonstrate whether contamination exists in the field. In order to assess whether the concentration in the ERDF leachate sample is actually present or due to laboratory/field sampling contamination, the sample data were validated.

A comparison of analytical data to laboratory blanks and field blanks was done by performing a cursive validation. This cursive validation only concentrated on the possible blank contamination found in the analyses of volatile, semi-volatile compounds and metals analyses. The blanks submitted with the WetChem analytical data did not show any blank contamination, therefore, WetChem data was not included in this data validation. The data validation did not include evaluation of calibrations because full data packages were not readily available, calibration data are on file in the laboratory. The matrix spikes and duplicate analyses were also not evaluated.

B2.0 GUIDANCE

To perform the cursive data validation, the EPA Contract Laboratory Program National Functional Guidelines for Organic and Inorganic data, February 1994 were used. These guidelines provide the following limits and validation actions concerning blank data:

- **Inorganic:**

Sample results greater than the instrument detection limit (IDL) but less than 5 times (5x) the amount found in the associated blank were qualified as undetected (U) at the Contract Required Detection Limit (CRDL, also called reporting limit). For any result reported as a negative value, the absolute value was used instead of the negative result.

- **Organic:**

(1) Compounds detected in the sample (other than the common lab contaminants) that were also detected in the associated blank were qualified as undetected (U) if the sample concentration is less than 5 times (5x) the blank concentration.

(2) Compounds detected in the samples that are common lab contaminants, such as acetone and methylene chloride for volatiles and the phthalates for the semi-volatiles, that were also detected in the associated blank were qualified as undetected (U) if the sample concentration was less than 10 times (10x) the blank concentration.

(3) For all compounds, if the sample result was greater than the Contract Required Quantitation Limit (CRQL, also called reporting limit), but less than the 5x or 10x multiple of the blank result, the CRQL was raised to the amount of the sample result.

(4) If the sample result was less than the CRQL, no adjustment of the CRQL was necessary.

B3.0 DATA USED

Summary data packages were available for this validation. Each report included a laboratory blank. It is assumed that the laboratory compiled the packages correctly and the associated blanks and samples were presented in each package. This cursive validation did not include an evaluation of the correct correlation between laboratory blanks and analytical samples.

The ERDF samples and field blanks reviewed are listed in Table B3-1; each field blank is listed with the associated sample(s). The association between samples and field blanks is based on documentation provided by ERDF project management. The association of laboratory blanks and ERDF samples and field samples is based on the individual data packages submitted by the laboratory.

Table B3-1. ERDF Leachate Samples.

ERDF Sample ID	ERDF Field Blank ID	VOA Laboratory Blank ID	SVOA Laboratory Blank ID	Metals Laboratory Blank ID
96-100, 96-101A	96-102B	QCBLK126700-1	QCBLK126242-1	QCBLK126739-1
96-103, 96-104 (Dup)	96-105	QCBLK126700-1	QCBLK126242-1	QCBLK126739-1
96-106, 96-107 (Dup)	96-108	QCBLK126700-1	QCBLK126242-1	QCBLK126739-1
96-109	96-110	QCBLK126700-1	QCBLK126242-1	QCBLK126739-1
96-111	96-112	QCBLK126700-1	QCBLK126242-1	QCBLK126739-1
96-113	96-114	QCBLK126700-1	QCBLK126242-1	QCBLK126739-1
97-200	97-201	QCBLK127015-*	QCBLK126848-*	QCBLK126872-*
97-210	97-211	QCBLK129379-1	QCBLK129176-1	QCBLK129218-1
97-220	97-221	QCBLK129379-*	QCBLK129176-1	QCBLK129369-1
97-230	97-231	QCBLK130857-1	QCBLK129363-1	QCBLK129602-1
97-240	97-241	QCBLK130325-1	QCBLK130064-1	QCBLK130348-1
97-250	97-251	QCBLK130857-1	QCBLK130894-1	QCBLK130714-1
97-260	97-261	QCBLK135329-1	QCBLK135066-1	QCBLK135352-1
97-270	97-271	QCBLK138793-1	QCBLK138313-1	QCBLK138481-1
97-280	97-281	QCBLK156492-1	QCBLK155585-1	QCBLK155771-1
97-290, 97-292 (Dup)	97-291	QCBLK161499-1	QCBLK161501-1	QCBLK162009-1

* Last digit was illegible on photocopy

B4.0 VALIDATION PROCESS

All the steps of the validation process are included in Table B4-1, ERDF Leachate Data.

The reported detections were listed in the spreadsheet for the leachate samples and field blanks, Table B4-1. In the first step of the validation process, the results from the associated laboratory blanks were entered into the column "Lab Blank." The next column, "Lab Blank Validation Limit" provides the 5x or 10x validation limit as explained in Section B2.0. The sample and field blank results were compared to the validation limit. In accordance with the guidance, detections reported below the validation limit were qualified as undetected (U).

In the second step of the validation process, any detection reported in the field blank was entered into the respective location in the column "Field Blank Result." The next column, "Field Blank Limit" calculated the appropriate 5x or 10x validation limit. The sample results were then compared to the field blank limit and sample results below the limit were qualified as undetected (U).

Table B4-2 is a summary of the validation process results, and lists the ERDF leachate samples with the final results and the associated qualifiers.

Table B4-1. ERDF Leachate Data, Validation Process. (10 Sheets)

Class	Sample ID	Constituent	CAS #	Result	Unit	Detection Limit	Lab Blank Result	Lab Blank Validation Limit	Validated Result based on Lab Blank	Validation Qualifier	Field Blank Result	Field Blank Limit	Field Blank Evaluated Result (Detections)	Field Blank Evaluated Result (Non-detections)	Validation Qualifier
Metals	96-106	Arsenic	7440-38-2	26.2	ug/L	10		0	26.2				26.2		
Metals	96-106	Barium	7440-39-3	42	ug/L	200		0	42	B			42		B
Metals	96-106	Beryllium	7440-41-7	0.52	ug/L	5		0	0.52	B			0.52		B
Metals	96-106	Calcium	7440-70-2	75500	ug/L	5000	106	530	75500				75500		
Metals	96-106	Chromium	7440-47-3	7.9	ug/L	10		0	7.9	B			7.9		B
Metals	96-106	Copper	7440-50-8	24.7	ug/L	25	5.9	29.5	U	U				U	U
Metals	96-106	Iron	7439-89-6	157	ug/L	100	48.5	242.5	U	U				U	U
Metals	96-106	Magnesium	7439-95-4	21000	ug/L	5000	161	805	21000				21000		
Metals	96-106	Manganese	7439-96-5	5.1	ug/L	15	0.71	3.55	5.1	B			5.1		B
Metals	96-106	Mercury	7439-97-6	0.16	ug/L	0.2		0	0.16	B			0.16		B
Metals	96-106	Nickel	7440-02-0	10.2	ug/L	40		0	10.2	B			10.2		B
Metals	96-106	Potassium	7440-09-7	13800	ug/L	5000		0	13800				13800		
Metals	96-106	Sodium	7440-23-5	207000	ug/L	5000	107	535	207000		642	3210	207000		
Metals	96-106	Vanadium	7440-62-2	52.9	ug/L	50	4.6	23	52.9				52.9		
Metals	96-106	Zinc	7440-66-6	47.5	ug/L	20	8.9	44.5	47.5		171	855		U	U
Metals	96-107	Arsenic	7440-38-2	25.4	ug/L	10		0	25.4				25.4		
Metals	96-107	Barium	7440-39-3	38.8	ug/L	200	1.4	7	38.8	B			38.8		B
Metals	96-107	Beryllium	7440-41-7	0.35	ug/L	5		0	0.35	B			0.35		B
Metals	96-107	Calcium	7440-70-2	71400	ug/L	5000	106	530	71400				71400		
Metals	96-107	Chromium	7440-47-3	5.2	ug/L	10		0	5.2	B			5.2		B
Metals	96-107	Copper	7440-50-8	18.3	ug/L	25	5.9	29.5	U	U				U	U
Metals	96-107	Iron	7439-89-6	104	ug/L	100	48.5	242.5	U	U				U	U
Metals	96-107	Magnesium	7439-95-4	20000	ug/L	5000	161	805	20000				20000		
Metals	96-107	Manganese	7439-96-5	4	ug/L	15	0.71	3.55	4	B			4		B
Metals	96-107	Mercury	7439-97-6	0.16	ug/L	0.2		0	0.16	B			0.16		B
Metals	96-107	Potassium	7440-09-7	11400	ug/L	5000		0	11400				11400		
Metals	96-107	Sodium	7440-23-5	197000	ug/L	5000	107	535	197000		642	3210	197000		
Metals	96-107	Vanadium	7440-62-2	44.4	ug/L	50	4.6	23	44.4	B			44.4		B
Metals	96-107	Zinc	7440-66-6	51	ug/L	20	8.9	44.5	51		171	855		U	U
Metals	*96-108*	*Barium*	*7440-39-3*	*1.4*	*ug/L*	*200*	*1.4*	*7*	*U*	*U*					
Metals	*96-108*	*Calcium*	*7440-70-2*	*311*	*ug/L*	*5000*	*106*	*530*	*U*	*U*					
Metals	*96-108*	*Copper*	*7440-50-8*	*6.6*	*ug/L*	*25*	*5.9*	*29.5*	*U*	*U*					

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Table B4-1. ERDF Leachate Data, Validation Process. (10 Sheets)

Class	Sample ID	Constituent	CAS #	Result	Unit	Detection Limit	Lab Blank Result	Lab Blank Validation Limit	Validated Result based on Lab Blank	Validation Qualifier	Field Blank Result	Field Blank Limit	Field Blank Evaluated Result (Detections)	Field Blank Evaluated Result (Non-detections)	Validation Qualifier
Metals	*96-108*	*Iron*	*7439-89-6*	*38.8*	*ug/L*	*100*	*48.5*	*242.5*	*U*	*U*					
Metals	*96-108*	*Magnesium*	*7439-95-4*	*94.2*	*ug/L*	*5000*	*161*	*805*	*U*	*U*					
Metals	*96-108*	*Manganese*	*7439-96-5*	*1.2*	*ug/L*	*15*	*0.71*	*3.55*	*U*	*U*					
Metals	*96-108*	*Sodium*	*7440-23-5*	*642*	*ug/L*	*5000*	*107*	*535*	*642*	*B*					
Metals	*96-108*	*Vanadium*	*7440-62-2*	*4.2*	*ug/L*	*50*	*4.6*	*23*	*U*	*U*					
Metals	*96-108*	*Zinc*	*7440-66-6*	*171*	*ug/L*	*20*	*8.9*	*44.5*	*171*						
Metals	97-200	Aluminum	7429-90-5	61.3	ug/L	200	122	610	U	U				U	U
Metals	97-200	Arsenic	7440-38-2	18.8	ug/L	10		0	18.8				18.8		
Metals	97-200	Barium	7440-39-3	47.4	ug/L	200		0	47.4	B			47.4		B
Metals	97-200	Beryllium	7440-41-7	0.42	ug/L	5		0	0.42	B			0.42		B
Metals	97-200	Calcium	7440-70-2	151000	ug/L	5000	114	570	151000				151000		
Metals	97-200	Chromium	7440-47-3	4.2	ug/L	10		0	4.2	B			4.2		B
Metals	97-200	Copper	7440-50-8	23.3	ug/L	25	90.7	453.5	U	U	10.5	52.5		U	U
Metals	97-200	Iron	7439-89-6	102	ug/L	100		0	102				102		
Metals	97-200	Magnesium	7439-95-4	42600	ug/L	5000		0	42600		193	965	42600		
Metals	97-200	Manganese	7439-96-5	9	ug/L	15		0	9	B	1	5	9		B
Metals	97-200	Mercury	7439-97-6	0.16	ug/L	0.2		0	0.16	B			0.16		B
Metals	97-200	Potassium	7440-09-7	13900	ug/L	5000		0	13900				13900		
Metals	97-200	Sodium	7440-23-5	249000	ug/L	5000		0	249000		687	3435	249000		
Metals	97-200	Vanadium	7440-62-2	39.9	ug/L	50	4.4	22	39.9	B			39.9		B
Metals	97-200	Zinc	7440-66-6	18.2	ug/L	20	12.3	61.5	U	U				U	U
Metals	97-201	Barium	7440-39-3	2	ug/L	200		0	2	B			2		B
Metals	97-201	Calcium	7440-70-2	345	ug/L	5000	114	570	U	U				U	U
Metals	*97-201*	*Copper*	*7440-50-8*	*10.5*	*ug/L*	*25*		*0*	*10.5*	*B*					
Metals	*97-201*	*Iron*	*7439-89-6*	*43.3*	*ug/L*	*100*	*90.7*	*453.5*	*U*	*U*					
Metals	*97-201*	*Magnesium*	*7439-95-4*	*193*	*ug/L*	*5000*		*0*	*193*	*B*					
Metals	*97-201*	*Manganese*	*7439-96-5*	*1*	*ug/L*	*15*		*0*	*1*	*B*					
Metals	*97-201*	*Sodium*	*7440-23-5*	*687*	*ug/L*	*5000*		*0*	*687*	*B*					
Metals	*97-201*	*Vanadium*	*7440-62-2*	*7.4*	*ug/L*	*50*	*4.4*	*22*	*U*	*U*					
Metals	*97-201*	*Zinc*	*7440-66-6*	*15*	*ug/L*	*20*	*12.3*	*61.5*	*U*	*U*					
Metals	97-210	Aluminum	7429-90-5	47.1	ug/L	200	126	630	U	U		0		U	U
Metals	97-210	Arsenic	7440-38-2	13.6	ug/L	10		0	13.6			0	13.6		

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Table B4-1. ERDF Leachate Data, Validation Process. (10 Sheets)

Class	Sample ID	Constituent	CAS #	Result	Unit	Detection Limit	Lab Blank Result	Lab Blank Validation Limit	Validated Result based on Lab Blank	Validation Qualifier	Field Blank Result	Field Blank Limit	Field Blank Evaluated Result (Detections)	Field Blank Evaluated Result (Non-detections)	Validation Qualifier
Metals	97-210	Barium	7440-39-3	63.3	ug/L	200		0	63.3	B	0.9	4.5	63.3		B
Metals	97-210	Beryllium	7440-41-7	0.71	ug/L	5		0	0.71	B		0	0.71		B
Metals	97-210	Calcium	7440-70-2	227000	ug/L	5000	124	620	227000			0	227000		
Metals	97-210	Copper	7440-50-8	10.2	ug/L	25		0	10.2	B		0	10.2		B
Metals	97-210	Iron	7439-89-6	61.6	ug/L	100	61.8	309	U	U		0		U	U
Metals	97-210	Magnesium	7439-95-4	65300	ug/L	5000	76.2	381	65300			0	65300		
Metals	97-210	Manganese	7439-96-5	6.2	ug/L	15		0	6.2	B		0	6.2		B
Metals	97-210	Potassium	7440-09-7	17000	ug/L	5000		0	17000			0	17000		
Metals	97-210	Sodium	7440-23-5	247000	ug/L	5000		0	247000		465	2325	247000		
Metals	97-210	Vanadium	7440-62-2	27.9	ug/L	50		0	27.9	B		0	27.9		B
Metals	97-210	Zinc	7440-66-6	19.5	ug/L	20	2.9	14.5	19.5	B		0	19.5		B
Metals	*97-211*	*Aluminum*	*7429-90-5*	*33.7*	*ug/L*	*200*	*126*	*630*	*U*	*U*					
Metals	*97-211*	*Barium*	*7440-39-3*	*0.9*	*ug/L*	*200*		*0*	*0.9*	*B*					
Metals	*97-211*	*Calcium*	*7440-70-2*	*258*	*ug/L*	*5000*	*124*	*620*	*U*	*U*					
Metals	*97-211*	*Iron*	*7439-89-6*	*18.9*	*ug/L*	*100*	*61.8*	*309*	*U*	*U*					
Metals	*97-211*	*Lead*	*7439-92-1*	*2*	*ug/L*	*3*		*0*	*2*	*B*					
Metals	*97-211*	*Sodium*	*7440-23-5*	*465*	*ug/L*	*5000*		*0*	*465*	*B*					
Metals	*97-211*	*Zinc*	*7440-66-6*	*10.9*	*ug/L*	*20*	*2.9*	*14.5*	*U*	*U*					
Metals	97-220	Arsenic	7440-38-2	17.2	ug/L	10		0	17.2			0	17.2		
Metals	97-220	Barium	7440-39-3	39.3	ug/L	200		0	39.3	B	1.1	5.5	39.3		B
Metals	97-220	Beryllium	7440-41-7	0.33	ug/L	5		0	0.33	B		0	0.33		B
Metals	97-220	Calcium	7440-70-2	143000	ug/L	5000	110	550	143000			0	143000		
Metals	97-220	Copper	7440-50-8	10.9	ug/L	25		0	10.9	B	21.4	107		U	U
Metals	97-220	Iron	7439-89-6	57.1	ug/L	100	53.9	269.5	U	U		0		U	U
Metals	97-220	Magnesium	7439-95-4	43000	ug/L	5000		0	43000			0	43000		
Metals	97-220	Manganese	7439-96-5	4.4	ug/L	15		0	4.4	B		0	4.4		B
Metals	97-220	Potassium	7440-09-7	14000	ug/L	5000		0	14000			0	14000		
Metals	97-220	Sodium	7440-23-5	248000	ug/L	5000		0	248000		491	2455	248000		
Metals	97-220	Vanadium	7440-62-2	27.3	ug/L	50		0	27.3	B		0	27.3		B
Metals	97-220	Zinc	7440-66-6	28.1	ug/L	20	3.6	18	28.1		29.6	148		U	U
Metals	*97-221*	*Barium*	*7440-39-3*	*1.1*	*ug/L*	*200*		*0*	*1.1*	*B*					
Metals	*97-221*	*Calcium*	*7440-70-2*	*311*	*ug/L*	*5000*	*110*	*550*	*U*	*U*					

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Table B4-1. ERDF Leachate Data, Validation Process. (10 Sheets)

Class	Sample ID	Constituent	CAS #	Result	Unit	Detection Limit	Lab Blank Result	Lab Blank Validation Limit	Validated Result based on Lab Blank	Validation Qualifier	Field Blank Result	Field Blank Limit	Field Blank Evaluated Result (Detections)	Field Blank Evaluated Result (Non-detections)	Validation Qualifier
Metals	*97-221*	*Copper*	*7440-50-8*	*21.4*	*ug/L*	*25*		*0*	*21.4*	*B*					
Metals	*97-221*	*Iron*	*7439-89-6*	*26.8*	*ug/L*	*100*	*53.9*	*269.5*	*U*	*U*					
Metals	*97-221*	*Lead*	*7439-92-1*	*1.2*	*ug/L*	*3*		*0*	*1.2*	*B*					
Metals	*97-221*	*Sodium*	*7440-23-5*	*491*	*ug/L*	*5000*		*0*	*491*	*B*					
Metals	*97-221*	*Zinc*	*7440-66-6*	*29.6*	*ug/L*	*20*	*3.6*	*18*	*29.6*						
Metals	97-230	Aluminum	7429-90-5	213	ug/L	200		0	213			0	213		
Metals	97-230	Arsenic	7440-38-2	32.6	ug/L	10		0	32.6			0	32.6		
Metals	97-230	Barium	7440-39-3	53.6	ug/L	200	0.67	3.35	53.6	B		0	53.6		B
Metals	97-230	Beryllium	7440-41-7	0.62	ug/L	5		0	0.62	B		0	0.62		B
Metals	97-230	Calcium	7440-70-2	110000	ug/L	5000	28.8	144	110000		297	1485	110000		
Metals	97-230	Copper	7440-50-8	14	ug/L	25		0	14	B	7.9	39.5		U	U
Metals	97-230	Iron	7439-89-6	353	ug/L	100	19.3	96.5	353			0	353		
Metals	97-230	Magnesium	7439-95-4	33500	ug/L	5000		0	33500			0	33500		
Metals	97-230	Manganese	7439-96-5	11.6	ug/L	15	1.7	8.5	11.6	B		0	11.6		B
Metals	97-230	Potassium	7440-09-7	10600	ug/L	5000		0	10600			0	10600		
Metals	97-230	Sodium	7440-23-5	179000	ug/L	5000		0	179000		495	2475	179000		
Metals	97-230	Vanadium	7440-62-2	34	ug/L	50		0	34	B		0	34		B
Metals	97-230	Zinc	7440-66-6	13.2	ug/L	20	6.8	34	U	U		0		U	U
Metals	*97-231*	*Barium*	*7440-39-3*	*1.5*	*ug/L*	*200*	*0.67*	*3.35*	*U*	*U*					
Metals	*97-231*	*Calcium*	*7440-70-2*	*297*	*ug/L*	*5000*	*28.8*	*144*	*297*	*B*					
Metals	*97-231*	*Copper*	*7440-50-8*	*7.9*	*ug/L*	*25*		*0*	*7.9*	*B*					
Metals	*97-231*	*Iron*	*7439-89-6*	*47.9*	*ug/L*	*100*	*19.3*	*96.5*	*U*	*U*					
Metals	*97-231*	*Manganese*	*7439-96-5*	*1.5*	*ug/L*	*15*	*1.7*	*8.5*	*U*	*U*					
Metals	*97-231*	*Sodium*	*7440-23-5*	*495*	*ug/L*	*5000*		*0*	*495*	*B*					
Metals	*97-231*	*Zinc*	*7440-66-6*	*15.9*	*ug/L*	*20*	*6.8*	*34*	*U*	*U*					
Metals	97-240	Arsenic	7440-38-2	22.5	ug/L	10		0	22.5			0	22.5		
Metals	97-240	Barium	7440-39-3	29.4	ug/L	200		0	29.4	B		0	29.4		B
Metals	97-240	Beryllium	7440-41-7	0.73	ug/L	5		0	0.73	B		0	0.73		B
Metals	97-240	Calcium	7440-70-2	107000	ug/L	5000	111	555	107000			0	107000		
Metals	97-240	Chromium	7440-47-3	3.8	ug/L	10		0	3.8	B		0	3.8		B
Metals	97-240	Copper	7440-50-8	17.7	ug/L	25	8.7	43.5	U	U		0		U	U
Metals	97-240	Iron	7439-89-6	56.9	ug/L	100	52.4	262	U	U		0		U	U

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Table B4-1. ERDF Leachate Data, Validation Process. (10 Sheets)

Class	Sample ID	Constituent	CAS #	Result	Unit	Detection Limit	Lab Blank Result	Lab Blank Validation Limit	Validated Result based on Lab Blank	Validation Qualifier	Field Blank Result	Field Blank Limit	Field Blank Evaluated Result (Detections)	Field Blank Evaluated Result (Non-detections)	Validation Qualifier
Metals	97-240	Magnesium	7439-95-4	32000	ug/L	5000		0	32000			0	32000		
Metals	97-240	Manganese	7439-96-5	4.6	ug/L	15		0	4.6	B		0	4.6		B
Metals	97-240	Potassium	7440-09-7	11300	ug/L	5000		0	11300			0	11300		
Metals	97-240	Sodium	7440-23-5	226000	ug/L	5000		0	226000		485	2425	226000		
Metals	97-240	Vanadium	7440-62-2	31.9	ug/L	50		0	31.9	B		0	31.9		B
Metals	97-240	Zinc	7440-66-6	26	ug/L	20	8.1	40.5	U	U		0		U	U
Metals	*97-241*	*Calcium*	*7440-70-2*	*290*	*ug/L*	*5000*	*111*	*555*	*U*	*U*					
Metals	*97-241*	*Copper*	*7440-50-8*	*10.2*	*ug/L*	*25*	*8.7*	*43.5*	*U*	*U*					
Metals	*97-241*	*Iron*	*7439-89-6*	*11.1*	*ug/L*	*100*	*52.4*	*262*	*U*	*U*					
Metals	*97-241*	*Sodium*	*7440-23-5*	*485*	*ug/L*	*5000*		*0*	*485*	*B*					
Metals	*97-241*	*Zinc*	*7440-66-6*	*14.7*	*ug/L*	*20*	*8.1*	*40.5*	*U*	*U*					
Metals	97-250	Arsenic	7440-38-2	22.8	ug/L	10		0	22.8			0	22.8		
Metals	97-250	Barium	7440-39-3	31.7	ug/L	200		0	31.7	B	1.9	9.5	31.7		B
Metals	97-250	Beryllium	7440-41-7	0.77	ug/L	5		0	0.77	B		0	0.77		B
Metals	97-250	Calcium	7440-70-2	113000	ug/L	5000	94.1	470.5	113000			0	113000		
Metals	97-250	Chromium	7440-47-3	7.9	ug/L	10	4	20	U	U		0		U	U
Metals	97-250	Copper	7440-50-8	6.9	ug/L	25	9.5	47.5	U	U		0		U	U
Metals	97-250	Iron	7439-89-6	58.5	ug/L	100	41.5	207.5	U	U		0		U	U
Metals	97-250	Magnesium	7439-95-4	32900	ug/L	5000	80	400	32900			0	32900		
Metals	97-250	Manganese	7439-96-5	6	ug/L	15		0	6	B	2.2	11		U	U
Metals	97-250	Potassium	7440-09-7	12700	ug/L	5000		0	12700			0	12700		
Metals	97-250	Sodium	7440-23-5	228000	ug/L	5000		0	228000		838	4190	228000		
Metals	97-250	Vanadium	7440-62-2	49.9	ug/L	50		0	49.9	B	13.8	69		U	U
Metals	97-250	Zinc	7440-66-6	8.9	ug/L	20	7	35	U	U		0		U	U
Metals	*97-251*	*Barium*	*7440-39-3*	*1.9*	*ug/L*	*200*		*0*	*1.9*	*B*					
Metals	*97-251*	*Calcium*	*7440-70-2*	*328*	*ug/L*	*5000*	*94.1*	*470.5*	*U*	*U*					
Metals	*97-251*	*Copper*	*7440-50-8*	*9.8*	*ug/L*	*25*	*9.5*	*47.5*	*U*	*U*					
Metals	*97-251*	*Iron*	*7439-89-6*	*30.3*	*ug/L*	*100*	*41.5*	*207.5*	*U*	*U*					
Metals	*97-251*	*Lead*	*7439-92-1*	*1*	*ug/L*	*3*		*0*	*1*	*B*					
Metals	*97-251*	*Magnesium*	*7439-95-4*	*285*	*ug/L*	*5000*	*80*	*400*	*U*	*U*					
Metals	*97-251*	*Manganese*	*7439-96-5*	*2.2*	*ug/L*	*15*		*0*	*2.2*	*B*					
Metals	*97-251*	*Sodium*	*7440-23-5*	*838*	*ug/L*	*5000*		*0*	*838*	*B*					

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Metals	*97-251*	*Vanadium*	*7440-62-2*	*13.8*	*ug/L*	*50*		*0*	*13.8*	*B*					
Metals	*97-251*	*Zinc*	*7440-66-6*	*17.1*	*ug/L*	*20*	*7*	*35*	*U*	*U*					
Metals	97-260	Aluminum	7429-90-5	494	ug/L	200	131	655	U	U		0		U	U
Metals	97-260	Arsenic	7440-38-2	20.4	ug/L	10		0	20.4			0	20.4		
Metals	97-260	Barium	7440-39-3	35.9	ug/L	200		0	35.9	B	1.5	7.5	35.9		B
Metals	97-260	Calcium	7440-70-2	106000	ug/L	5000	111	555	106000		648	3240	106000		
Metals	97-260	Chromium	7440-47-3	12	ug/L	10		0	12			0	12		
Metals	97-260	Copper	7440-50-8	6.4	ug/L	25		0	6.4	B	12.5	62.5		U	U
Metals	97-260	Iron	7439-89-6	798	ug/L	100	66.4	332	798			0	798		
Metals	97-260	Lead	7439-92-1	1.8	ug/L	3	2.9	14.5	U	U		0		U	U
Metals	97-260	Magnesium	7439-95-4	32200	ug/L	5000		0	32200			0	32200		
Metals	97-260	Manganese	7439-96-5	17.7	ug/L	15		0	17.7			0	17.7		
Metals	97-260	Potassium	7440-09-7	12800	ug/L	5000		0	12800			0	12800		
Metals	97-260	Sodium	7440-23-5	191000	ug/L	5000		0	191000		641	3205	191000		
Metals	97-260	Vanadium	7440-62-2	28.9	ug/L	50		0	28.9	B		0	28.9		B
Metals	97-260	Zinc	7440-66-6	49.7	ug/L	20	5	25	49.7			0	49.7		
Metals	*97-261*	*Barium*	*7440-39-3*	*1.5*	*ug/L*	*200*		*0*	*1.5*	*B*					
Metals	*97-261*	*Calcium*	*7440-70-2*	*648*	*ug/L*	*5000*	*111*	*555*	*648*	*B*					
Metals	*97-261*	*Copper*	*7440-50-8*	*12.5*	*ug/L*	*25*		*0*	*12.5*	*B*					
Metals	*97-261*	*Iron*	*7439-89-6*	*50.6*	*ug/L*	*100*	*66.4*	*332*	*U*	*U*					
Metals	*97-261*	*Lead*	*7439-92-1*	*1.7*	*ug/L*	*3*	*2.9*	*14.5*	*U*	*U*					
Metals	*97-261*	*Sodium*	*7440-23-5*	*641*	*ug/L*	*5000*		*0*	*641*	*B*					
Metals	*97-261*	*Zinc*	*7440-66-6*	*22.9*	*ug/L*	*20*	*5*	*25*	*U*	*U*					
Metals	97-270	Aluminum	7429-90-5	422	ug/L	200	56.6	283	422	B		0	422		B
Metals	97-270	Arsenic	7440-38-2	22.1	ug/L	10		0	22.1			0	22.1		
Metals	97-270	Barium	7440-39-3	39.6	ug/L	200		0	39.6	B	4.2	21	39.6		B
Metals	97-270	Beryllium	7440-41-7	0.76	ug/L	5		0	0.76	B		0	0.76		B
Metals	97-270	Calcium	7440-70-2	110000	ug/L	5000	43.8	219	110000		1600	8000	110000		
Metals	97-270	Chromium	7440-47-3	13.9	ug/L	10		0	13.9			0	13.9		
Metals	97-270	Copper	7440-50-8	14.4	ug/L	25		0	14.4	B	12.2	61		U	U
Metals	97-270	Iron	7439-89-6	666	ug/L	100	33.6	168	666			0	666		
Metals	97-270	Magnesium	7439-95-4	32700	ug/L	5000	52.9	264.5	32700		321	1605	32700		

Field Blank data are presented in *italic* font.

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B = estimated value, between IDL and CRDL (inorganic)

Table B4-1. ERDF Leachate Data, Validation Process. (10 Sheets)

Class	Sample ID	Constituent	CAS #	Result	Unit	Detection Limit	Lab Blank Result	Lab Blank Validation Limit	Validated Result based on Lab Blank	Validation Qualifier	Field Blank Result	Field Blank Limit	Field Blank Evaluated Result (Detections)	Field Blank Evaluated Result (Non-detections)	Validation Qualifier
Metals	97-270	Manganese	7439-96-5	17.5	ug/L	15	0.61	3.05	17.5			0	17.5		
Metals	97-270	Potassium	7440-09-7	12600	ug/L	5000		0	12600			0	12600		
Metals	97-270	Sodium	7440-23-5	191000	ug/L	5000	90.5	452.5	191000		2270	11350	191000		
Metals	97-270	Vanadium	7440-62-2	34.9	ug/L	50		0	34.9	B		0	34.9		B
Metals	97-270	Zinc	7440-66-6	104	ug/L	20	6.1	30.5	104		36.5	182.5		U	U
Metals	*97-271*	*Aluminum*	*7429-90-5*	*56*	*ug/L*	*200*	*56.6*	*283*	*U*	*U*					
Metals	*97-271*	*Barium*	*7440-39-3*	*4.2*	*ug/L*	*200*		*0*	*4.2*	*B*					
Metals	*97-271*	*Calcium*	*7440-70-2*	*1600*	*ug/L*	*5000*	*43.8*	*219*	*1600*	*B*					
Metals	*97-271*	*Cobalt*	*7440-48-4*	*2.9*	*ug/L*	*50*	*3.2*	*16*	*U*	*U*					
Metals	*97-271*	*Copper*	*7440-50-8*	*12.2*	*ug/L*	*25*		*0*	*12.2*	*B*					
Metals	*97-271*	*Iron*	*7439-89-6*	*63.3*	*ug/L*	*100*	*33.6*	*168*	*U*	*U*					
Metals	*97-271*	*Lead*	*7439-92-1*	*2.1*	*ug/L*	*3*	*3*	*15*	*U*	*U*					
Metals	*97-271*	*Magnesium*	*7439-95-4*	*321*	*ug/L*	*5000*	*52.9*	*264.5*	*321*	*B*					
Metals	*97-271*	*Manganese*	*7439-96-5*	*1.6*	*ug/L*	*15*	*0.61*	*3.05*	*U*	*U*					
Metals	*97-271*	*Sodium*	*7440-23-5*	*2270*	*ug/L*	*5000*	*90.5*	*452.5*	*2270*	*B*					
Metals	*97-271*	*Zinc*	*7440-66-6*	*36.5*	*ug/L*	*20*	*6.1*	*30.5*	*36.5*						
Metals	97-280	Arsenic	7440-38-2	18.8	ug/L	10	2.2	11	18.8			0	18.8		
Metals	97-280	Barium	7440-39-3	34.4	ug/L	200	0.88	4.4	34.4	B		0	34.4		B
Metals	97-280	Beryllium	7440-41-7	1.5	ug/L	5	0.68	3.4	U	U		0		U	U
Metals	97-280	Calcium	7440-70-2	113000	ug/L	5000	306	1530	113000			0	113000		
Metals	97-280	Chromium	7440-47-3	13.5	ug/L	10		0	13.5			0	13.5		
Metals	97-280	Copper	7440-50-8	17.4	ug/L	25		0	17.4	B	7.3	36.5		U	U
Metals	97-280	Iron	7439-89-6	71.3	ug/L	100	138	690	U	U		0		U	U
Metals	97-280	Magnesium	7439-95-4	34100	ug/L	5000	323	1615	34100			0	34100		
Metals	97-280	Manganese	7439-96-5	4.8	ug/L	15	1.2	6	U	U		0		U	U
Metals	97-280	Potassium	7440-09-7	14200	ug/L	5000		0	14200			0	14200		
Metals	97-280	Selenium	7782-49-2	3.1	ug/L	5		0	3.1	B	2.7	13.5		U	U
Metals	97-280	Sodium	7440-23-5	191000	ug/L	5000	128	640	191000			0	191000		
Metals	97-280	Vanadium	7440-62-2	38.4	ug/L	50	3.8	19	38.4	B		0	38.4		B
Metals	97-280	Zinc	7440-66-6	15.6	ug/L	20		0	15.6	B	12.4	62		U	U
Metals	*97-281*	*Barium*	*7440-39-3*	*1.1*	*ug/L*	*200*	*0.88*	*4.4*	*U*	*U*					
Metals	*97-281*	*Beryllium*	*7440-41-7*	*0.45*	*ug/L*	*5*	*0.68*	*3.4*	*U*	*U*					

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B = estimated value, between IDL and CRDL (inorganic)

Table B4-1. ERDF Leachate Data, Validation Process. (10 Sheets)

Class	Sample ID	Constituent	CAS #	Result	Unit	Detection Limit	Lab Blank Result	Lab Blank Validation Limit	Validated Result based on Lab Blank	Validation Qualifier	Field Blank Result	Field Blank Limit	Field Blank Evaluated Result (Detections)	Field Blank Evaluated Result (Non-detections)	Validation Qualifier
Metals	*97-281*	*Calcium*	*7440-70-2*	*354*	*ug/L*	*5000*	*306*	*1530*	*U*	*U*					
Metals	*97-281*	*Copper*	*7440-50-8*	*7.3*	*ug/L*	*25*		*0*	*7.3*	*B*					
Metals	*97-281*	*Iron*	*7439-89-6*	*29.7*	*ug/L*	*100*	*138*	*690*	*U*	*U*					
Metals	*97-281*	*Lead*	*7439-92-1*	*1.7*	*ug/L*	*3*		*0*	*1.7*	*B*					
Metals	*97-281*	*Magnesium*	*7439-95-4*	*112*	*ug/L*	*5000*	*323*	*1615*	*U*	*U*					
Metals	*97-281*	*Manganese*	*7439-96-5*	*1.2*	*ug/L*	*15*	*1.2*	*6*	*U*	*U*					
Metals	*97-281*	*Selenium*	*7782-49-2*	*2.7*	*ug/L*	*5*		*0*	*2.7*	*B*					
Metals	*97-281*	*Sodium*	*7440-23-5*	*636*	*ug/L*	*5000*	*128*	*640*	*U*	*U*					
Metals	*97-281*	*Vanadium*	*7440-62-2*	*5.2*	*ug/L*	*50*	*3.8*	*19*	*U*	*U*					
Metals	*97-281*	*Zinc*	*7440-66-6*	*12.4*	*ug/L*	*20*		*0*	*12.4*	*B*					
Metals	97-290	Arsenic	7440-38-2	25.2	ug/L	10		0	25.2			0	25.2		
Metals	97-290	Barium	7440-39-3	44.3	ug/L	200	0.44	2.2	44.3	B		0	44.3		B
Metals	97-290	Beryllium	7440-41-7	0.084	ug/L	5	0.45	2.25	U	U		0		U	U
Metals	97-290	Calcium	7440-70-2	119000	ug/L	5000	58.6	293	119000			0	119000		
Metals	97-290	Chromium	7440-47-3	7.2	ug/L	10		0	7.2	B		0	7.2		B
Metals	97-290	Copper	7440-50-8	27.4	ug/L	25	7	35	U	U		0		U	U
Metals	97-290	Iron	7439-89-6	122	ug/L	100	46.1	230.5	U	U		0		U	U
Metals	97-290	Magnesium	7439-95-4	36100	ug/L	5000	161	805	36100			0	36100		
Metals	97-290	Manganese	7439-96-5	12.2	ug/L	15	1.5	7.5	12.2	B		0	12.2		B
Metals	97-290	Potassium	7440-09-7	14100	ug/L	5000		0	14100			0	14100		
Metals	97-290	Sodium	7440-23-5	219000	ug/L	5000	111	555	219000		827	4135	219000		
Metals	97-290	Vanadium	7440-62-2	51.6	ug/L	50	9.3	46.5	51.6			0	51.6		
Metals	97-290	Zinc	7440-66-6	13.9	ug/L	20		0	13.9	B	8.7	43.5		U	U
Metals	*97-291*	*Barium*	*7440-39-3*	*1.3*	*ug/L*	*200*	*0.44*	*2.2*	*U*	*U*					
Metals	*97-291*	*Cadmium*	*7440-43-9*	*4.2*	*ug/L*	*5*		*0*	*4.2*	*B*					
Metals	*97-291*	*Calcium*	*7440-70-2*	*291*	*ug/L*	*5000*	*58.6*	*293*	*U*	*U*					
Metals	*97-291*	*Copper*	*7440-50-8*	*12.9*	*ug/L*	*25*	*7*	*35*	*U*	*U*					
Metals	*97-291*	*Iron*	*7439-89-6*	*28.2*	*ug/L*	*100*	*46.1*	*230.5*	*U*	*U*					
Metals	*97-291*	*Magnesium*	*7439-95-4*	*180*	*ug/L*	*5000*	*161*	*805*	*U*	*U*					
Metals	*97-291*	*Manganese*	*7439-96-5*	*2*	*ug/L*	*15*	*1.5*	*7.5*	*U*	*U*					
Metals	*97-291*	*Sodium*	*7440-23-5*	*827*	*ug/L*	*5000*	*111*	*555*	*827*	*B*					
Metals	*97-291*	*Vanadium*	*7440-62-2*	*10.9*	*ug/L*	*50*	*9.3*	*46.5*	*U*	*U*					

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B = estimated value, between IDL and CRDL (inorganic)

Table B4-1. ERDF Leachate Data, Validation Process. (10 Sheets)

Class	Sample ID	Constituent	CAS #	Result	Unit	Detection Limit	Lab Blank Result	Lab Blank Validation Limit	Validated Result based on Lab Blank	Validation Qualifier	Field Blank Result	Field Blank Limit	Field Blank Evaluated Result (Detections)	Field Blank Evaluated Result (Non-detections)	Validation Qualifier
Metals	*97-291*	*Zinc*	*7440-66-6*	*8.7*	*ug/L*	*20*		*0*	*8.7*	*B*					
Metals	97-292	Aluminum	7429-90-5	45.6	ug/L	200	68.8	344	U	U		0		U	U
Metals	97-292	Arsenic	7440-38-2	25.9	ug/L	10		0	25.9			0	25.9		
Metals	97-292	Barium	7440-39-3	40.2	ug/L	200	0.44	2.2	40.2	B		0	40.2		B
Metals	97-292	Beryllium	7440-41-7	0.78	ug/L	5	0.45	2.25	U	U		0		U	U
Metals	97-292	Calcium	7440-70-2	108000	ug/L	5000	58.6	293	108000			0	108000		
Metals	97-292	Chromium	7440-47-3	6.1	ug/L	10		0	6.1	B		0	6.1		B
Metals	97-292	Copper	7440-50-8	25.9	ug/L	25	7	35	U	U		0		U	U
Metals	97-292	Iron	7439-89-6	123	ug/L	100	46.1	230.5	U	U		0		U	U
Metals	97-292	Magnesium	7439-95-4	32900	ug/L	5000	161	805	32900			0	32900		
Metals	97-292	Manganese	7439-96-5	11.2	ug/L	15	1.5	7.5	11.2	B		0	11.2		B
Metals	97-292	Potassium	7440-09-7	14600	ug/L	5000		0	14600			0	14600		
Metals	97-292	Sodium	7440-23-5	199000	ug/L	5000	111	555	199000		827	4135	199000		
Metals	97-292	Vanadium	7440-62-2	49	ug/L	50	9.3	46.5	49	B		0	49		B
Metals	97-292	Zinc	7440-66-6	15.2	ug/L	20		0	15.2	B	8.7	43.5		U	U
SVOA	96-103	Bis(2-ethylhexyl) phthalate	117-81-7	8	ug/L	10	3	30	U	U				U	U
SVOA	96-104	Bis(2-ethylhexyl) phthalate	117-81-7	14	ug/L	10	3	30	U	U				U	U
SVOA	96-104	Butylbenzylphthalate	85-68-7	8	ug/L	10	0	0	8	J			8		J
SVOA	96-104	Di-n-octylphthalate	117-84-0	5	ug/L	10	0	0	5	J			5		J
SVOA	*97-201*	*Diethyl phthalate*	*84-66-2*	*7*	*ug/L*	*10*	*0*	*0*	*7*	*J*					
SVOA	*97-201*	*Dimethyl phthalate*	*131-11-3*	*6*	*ug/L*	*10*	*0*	*0*	*6*	*J*					
SVOA	*97-211*	*Diethyl phthalate*	*84-66-2*	*20*	*ug/L*	*10*	*0*	*0*	*20*						
SVOA	*97-211*	*Dimethyl phthalate*	*131-11-3*	*11*	*ug/L*	*10*	*0*	*0*	*11*						
SVOA	97-220	Bis(2-ethylhexyl) phthalate	117-81-7	1	ug/L	10	0	0	1	J		0	1		J
SVOA	97-240	Bis(2-ethylhexyl) phthalate	117-81-7	2	ug/L	10	15	150	U	U		0		U	U
SVOA	*97-241*	*Diethyl phthalate*	*84-66-2*	*1*	*ug/L*	*10*	*0*	*0*	*1*	*J*					
SVOA	97-250	Bis(2-ethylhexyl) phthalate	117-81-7	6	ug/L	10	0	0	6	J		0	6		J
SVOA	*97-251*	*Diethyl phthalate*	*84-66-2*	*10*	*ug/L*	*10*	*0*	*0*	*10*						

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B = estimated value, between IDL and CRDL (inorganic)

Table B4-1. ERDF Leachate Data, Validation Process. (10 Sheets)

Class	Sample ID	Constituent	CAS #	Result	Unit	Detection Limit	Lab Blank Result	Lab Blank Validation Limit	Validated Result based on Lab Blank	Validation Qualifier	Field Blank Result	Field Blank Limit	Field Blank Evaluated Result (Detections)	Field Blank Evaluated Result (Non-detections)	Validation Qualifier
SVOA	97-260	Bis(2-ethylhexyl) phthalate	117-81-7	1	ug/L	10	0	0	1	J		0	1		J
SVOA	97-270	Bis(2-ethylhexyl) phthalate	117-81-7	6	ug/L	10		0	6	J		0	6		J
SVOA	*97-271*	*Bis(2-ethylhexyl) phthalate*	*117-81-7*	*6*	*ug/L*	*10*	*5*	*50*	*U*	*U*					
SVOA	*97-271*	*Diethyl phthalate*	*84-66-2*	*18*	*ug/L*	*10*	*0*	*0*	*18*						
SVOA	*97-271*	*Dimethyl phthalate*	*131-11-3*	*6*	*ug/L*	*10*	*0*	*0*	*6*	*J*					
SVOA	97-280	Bis(2-ethylhexyl) phthalate	117-81-7	8	ug/L	10	8	80	U	U		0		U	U
SVOA	97-290	Bis(2-ethylhexyl) phthalate	117-81-7	14	ug/L	10		0	14			0	14		
SVOA	97-290	Butylbenzylphthalate	85-68-7	9	ug/L	10		0	9	J		0	9		J
SVOA	97-292	Bis(2-ethylhexyl) phthalate	117-81-7	8	ug/L	10	0	0	8	J		0	8		J
SVOA	97-292	Butylbenzylphthalate	85-68-7	9	ug/L	10	0	0	9	J		0	9		J
VOA	*96-102B*	*Chloroform*	*67-66-3*	*1*	*ug/L*	*10*	*0*	*0*	*1*	*J*					
VOA	*97-221*	*Chloroform*	*67-66-3*	*4*	*ug/L*	*10*	*0*	*0*	*4*	*J*					
VOA	97-230	Dichloromethane (Methylene Chloride)	75-09-2	1	ug/L	10	6	60	ND	U		0		U	U
VOA	97-250	2-Propanone (Acetone)	67-64-1	14	ug/L	10	35	350	14	U		0	14		U
VOA	97-250	Dichloromethane (Methylene Chloride)	75-09-2	2	ug/L	10	6	60	ND	U		0		U	U
VOA	*97-251*	*2-Propanone (Acetone)*	*67-64-1*	*12*	*ug/L*	*10*	*35*	*350*	*12*	*U*					
VOA	*97-251*	*Chloroform*	*67-66-3*	*2*	*ug/L*	*10*	*0*	*0*	*2*	*J*					
VOA	*97-251*	*Dichloromethane (Methylene Chloride)*	*75-09-2*	*1*	*ug/L*	*10*	*6*	*60*	*ND*	*U*					
VOA	97-270	Toluene	108-88-3	2	ug/L	10	0	0	2	J		0	2		J
VOA	*97-281*	*Chloroform*	*67-66-3*	*2*	*ug/L*	*10*	*0*	*0*	*2*	*J*					
VOA	*97-281*	*Toluene*	*108-88-3*	*4*	*ug/L*	*5*	*0*	*0*	*4*	*J*					
VOA	97-290	2-Propanone (Acetone)	67-64-1	17	ug/L	20		0	17	J		0	17		J
VOA	*97-291*	*2-Propanone (Acetone)*	*67-64-1*	*8*	*ug/L*	*20*	*10*	*100*	*ND*	*U*					
VOA	97-292	2-Propanone (Acetone)	67-64-1	9	ug/L	20	10	100	ND	U		0		U	U

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Table B4-2. ERDF Leachate Data, Final Results. (5 Sheets)

Sample ID	Constituent	CAS #	Unit	Field Blank Evaluated Result (Detections)	Validation Qualifier
96-106	Arsenic	7440-38-2	ug/L	26.2	
96-106	Barium	7440-39-3	ug/L	42	B
96-106	Beryllium	7440-41-7	ug/L	0.52	B
96-106	Calcium	7440-70-2	ug/L	75500	
96-106	Chromium	7440-47-3	ug/L	7.9	B
96-106	Copper	7440-50-8	ug/L	25	U
96-106	Iron	7439-89-6	ug/L	100	U
96-106	Magnesium	7439-95-4	ug/L	21000	
96-106	Manganese	7439-96-5	ug/L	5.1	B
96-106	Mercury	7439-97-6	ug/L	0.16	B
96-106	Nickel	7440-02-0	ug/L	10.2	B
96-106	Potassium	7440-09-7	ug/L	13800	
96-106	Sodium	7440-23-5	ug/L	207000	
96-106	Vanadium	7440-62-2	ug/L	52.9	
96-106	Zinc	7440-66-6	ug/L	20	U
97-200	Aluminum	7429-90-5	ug/L	200	U
97-200	Arsenic	7440-38-2	ug/L	18.8	
97-200	Barium	7440-39-3	ug/L	47.4	B
97-200	Beryllium	7440-41-7	ug/L	0.42	B
97-200	Calcium	7440-70-2	ug/L	151000	
97-200	Chromium	7440-47-3	ug/L	4.2	B
97-200	Copper	7440-50-8	ug/L	25	U
97-200	Iron	7439-89-6	ug/L	102	
97-200	Magnesium	7439-95-4	ug/L	42600	
97-200	Manganese	7439-96-5	ug/L	9	B
97-200	Mercury	7439-97-6	ug/L	0.16	B
97-200	Potassium	7440-09-7	ug/L	13900	
97-200	Sodium	7440-23-5	ug/L	249000	
97-200	Vanadium	7440-62-2	ug/L	39.9	B
97-200	Zinc	7440-66-6	ug/L	20	U
97-201	Barium	7440-39-3	ug/L	2	B
97-201	Calcium	7440-70-2	ug/L	5000	U
97-210	Aluminum	7429-90-5	ug/L	200	U
97-210	Arsenic	7440-38-2	ug/L	13.6	
97-210	Barium	7440-39-3	ug/L	63.3	B
97-210	Beryllium	7440-41-7	ug/L	0.71	B
97-210	Calcium	7440-70-2	ug/L	227000	

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Table B4-2. ERDF Leachate Data, Final Results. (5 Sheets)

Sample ID	Constituent	CAS #	Unit	Field Blank Evaluated Result (Detections)	Validation Qualifier
97-210	Copper	7440-50-8	ug/L	10.2	B
97-210	Iron	7439-89-6	ug/L	100	U
97-210	Magnesium	7439-95-4	ug/L	65300	
97-210	Manganese	7439-96-5	ug/L	6.2	B
97-210	Potassium	7440-09-7	ug/L	17000	
97-210	Sodium	7440-23-5	ug/L	247000	
97-210	Vanadium	7440-62-2	ug/L	27.9	B
97-210	Zinc	7440-66-6	ug/L	19.5	B
97-220	Arsenic	7440-38-2	ug/L	17.2	
97-220	Barium	7440-39-3	ug/L	39.3	B
97-220	Beryllium	7440-41-7	ug/L	0.33	B
97-220	Calcium	7440-70-2	ug/L	143000	
97-220	Copper	7440-50-8	ug/L	25	U
97-220	Iron	7439-89-6	ug/L	100	U
97-220	Magnesium	7439-95-4	ug/L	43000	
97-220	Manganese	7439-96-5	ug/L	4.4	B
97-220	Potassium	7440-09-7	ug/L	14000	
97-220	Sodium	7440-23-5	ug/L	248000	
97-220	Vanadium	7440-62-2	ug/L	27.3	B
97-220	Zinc	7440-66-6	ug/L	20	U
97-230	Aluminum	7429-90-5	ug/L	213	
97-230	Arsenic	7440-38-2	ug/L	32.6	
97-230	Barium	7440-39-3	ug/L	53.6	B
97-230	Beryllium	7440-41-7	ug/L	0.62	B
97-230	Calcium	7440-70-2	ug/L	110000	
97-230	Copper	7440-50-8	ug/L	25	U
97-230	Iron	7439-89-6	ug/L	353	
97-230	Magnesium	7439-95-4	ug/L	33500	
97-230	Manganese	7439-96-5	ug/L	11.6	B
97-230	Potassium	7440-09-7	ug/L	10600	
97-230	Sodium	7440-23-5	ug/L	179000	
97-230	Vanadium	7440-62-2	ug/L	34	B
97-230	Zinc	7440-66-6	ug/L	20	U
97-240	Arsenic	7440-38-2	ug/L	22.5	
97-240	Barium	7440-39-3	ug/L	29.4	B
97-240	Beryllium	7440-41-7	ug/L	0.73	B
97-240	Calcium	7440-70-2	ug/L	107000	

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Table B4-2. ERDF Leachate Data, Final Results. (5 Sheets)

Sample ID	Constituent	CAS #	Unit	Field Blank Evaluated Result (Detections)	Validation Qualifier
97-240	Chromium	7440-47-3	ug/L	3.8	B
97-240	Copper	7440-50-8	ug/L	25	U
97-240	Iron	7439-89-6	ug/L	100	U
97-240	Magnesium	7439-95-4	ug/L	32000	
97-240	Manganese	7439-96-5	ug/L	4.6	B
97-240	Potassium	7440-09-7	ug/L	11300	
97-240	Sodium	7440-23-5	ug/L	226000	
97-240	Vanadium	7440-62-2	ug/L	31.9	B
97-240	Zinc	7440-66-6	ug/L	20	U
97-250	Arsenic	7440-38-2	ug/L	22.8	
97-250	Barium	7440-39-3	ug/L	31.7	B
97-250	Beryllium	7440-41-7	ug/L	0.77	B
97-250	Calcium	7440-70-2	ug/L	113000	
97-250	Chromium	7440-47-3	ug/L	10	U
97-250	Copper	7440-50-8	ug/L	25	U
97-250	Iron	7439-89-6	ug/L	100	U
97-250	Magnesium	7439-95-4	ug/L	32900	
97-250	Manganese	7439-96-5	ug/L	15	U
97-250	Potassium	7440-09-7	ug/L	12700	
97-250	Sodium	7440-23-5	ug/L	228000	
97-250	Vanadium	7440-62-2	ug/L	50	U
97-250	Zinc	7440-66-6	ug/L	20	U
97-260	Aluminum	7429-90-5	ug/L	200	U
97-260	Arsenic	7440-38-2	ug/L	20.4	
97-260	Barium	7440-39-3	ug/L	35.9	B
97-260	Calcium	7440-70-2	ug/L	106000	
97-260	Chromium	7440-47-3	ug/L	12	
97-260	Copper	7440-50-8	ug/L	25	U
97-260	Iron	7439-89-6	ug/L	798	
97-260	Lead	7439-92-1	ug/L	3	U
97-260	Magnesium	7439-95-4	ug/L	32200	
97-260	Manganese	7439-96-5	ug/L	17.7	
97-260	Potassium	7440-09-7	ug/L	12800	
97-260	Sodium	7440-23-5	ug/L	191000	
97-260	Vanadium	7440-62-2	ug/L	28.9	B
97-260	Zinc	7440-66-6	ug/L	49.7	
97-270	Aluminum	7429-90-5	ug/L	422	B

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Table B4-2. ERDF Leachate Data, Final Results. (5 Sheets)

Sample ID	Constituent	CAS #	Unit	Field Blank Evaluated Result (Detections)	Validation Qualifier
97-270	Arsenic	7440-38-2	ug/L	22.1	
97-270	Barium	7440-39-3	ug/L	39.6	B
97-270	Beryllium	7440-41-7	ug/L	0.76	B
97-270	Calcium	7440-70-2	ug/L	110000	
97-270	Chromium	7440-47-3	ug/L	13.9	
97-270	Copper	7440-50-8	ug/L	25	U
97-270	Iron	7439-89-6	ug/L	666	
97-270	Magnesium	7439-95-4	ug/L	32700	
97-270	Manganese	7439-96-5	ug/L	17.5	
97-270	Potassium	7440-09-7	ug/L	12600	
97-270	Sodium	7440-23-5	ug/L	191000	
97-270	Vanadium	7440-62-2	ug/L	34.9	B
97-270	Zinc	7440-66-6	ug/L	20	U
97-280	Arsenic	7440-38-2	ug/L	18.8	
97-280	Barium	7440-39-3	ug/L	34.4	B
97-280	Beryllium	7440-41-7	ug/L	5	U
97-280	Calcium	7440-70-2	ug/L	113000	
97-280	Chromium	7440-47-3	ug/L	13.5	
97-280	Copper	7440-50-8	ug/L	25	U
97-280	Iron	7439-89-6	ug/L	100	U
97-280	Magnesium	7439-95-4	ug/L	34100	
97-280	Manganese	7439-96-5	ug/L	15	U
97-280	Potassium	7440-09-7	ug/L	14200	
97-280	Selenium	7782-49-2	ug/L	5	U
97-280	Sodium	7440-23-5	ug/L	191000	
97-280	Vanadium	7440-62-2	ug/L	38.4	B
97-280	Zinc	7440-66-6	ug/L	20	U
97-290	Arsenic	7440-38-2	ug/L	25.2	
97-290	Barium	7440-39-3	ug/L	44.3	B
97-290	Beryllium	7440-41-7	ug/L	5	U
97-290	Calcium	7440-70-2	ug/L	119000	
97-290	Chromium	7440-47-3	ug/L	7.2	B
97-290	Copper	7440-50-8	ug/L	25	U
97-290	Iron	7439-89-6	ug/L	100	U
97-290	Magnesium	7439-95-4	ug/L	36100	
97-290	Manganese	7439-96-5	ug/L	12.2	B
97-290	Potassium	7440-09-7	ug/L	14100	

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Table B4-2. ERDF Leachate Data, Final Results. (5 Sheets)

Sample ID	Constituent	CAS #	Unit	Field Blank Evaluated Result (Detections)	Validation Qualifier
97-290	Sodium	7440-23-5	ug/L	219000	
97-290	Vanadium	7440-62-2	ug/L	51.6	
97-290	Zinc	7440-66-6	ug/L	20	U
96-103	Bis(2-ethylhexyl) phthalate	117-81-7	ug/L	10	U
97-220	Bis(2-ethylhexyl) phthalate	117-81-7	ug/L	1	J
97-240	Bis(2-ethylhexyl) phthalate	117-81-7	ug/L	10	U
97-250	Bis(2-ethylhexyl) phthalate	117-81-7	ug/L	6	J
97-260	Bis(2-ethylhexyl) phthalate	117-81-7	ug/L	1	J
97-270	Bis(2-ethylhexyl) phthalate	117-81-7	ug/L	6	J
97-280	Bis(2-ethylhexyl) phthalate	117-81-7	ug/L	10	U
97-290	Bis(2-ethylhexyl) phthalate	117-81-7	ug/L	14	
97-290	Butylbenzylphthalate	85-68-7	ug/L	9	J
97-230	Dichloromethane (Methylene Chloride)	75-09-2	ug/L	10	U
97-250	2-Propanone (Acetone)	67-64-1	ug/L	14	U
97-250	Dichloromethane (Methylene Chloride)	75-09-2	ug/L	10	U
97-270	Toluene	108-88-3	ug/L	2	J
97-290	2-Propanone (Acetone)	67-64-1	ug/L	17	J

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B5.0 RESULTS

The validated results based on contamination found in the associated lab and field blanks, are presented in the two columns "Field Blank Evaluated Result (Detections/Non-detections)." The numerical values are presented separately from the alphabetic values due to later database applications. The associated data qualifiers are listed next to the sample results.

No unusual observations were made with the exception of acetone in sample 97-250. The detection of acetone in sample 97-250 was qualified as undetected (U), and the reporting limit was raised to the sample result based on the organic validation rule #3. However, only for this particulate sample, the laboratory reported a lower detection limit of 10 ug/L instead of the 20 ug/L for acetone than was used for the analyses of all the other samples. Acetone was reported at 14 ug/L, and after validation, the reporting limit was raised to 14 ug/L. If this sample had been analyzed at the same reporting limit as the other samples, no adjustment to the reporting limit would have been necessary.