Golder Associates Inc.

1630 Heritage Landing, Suite 103
St. Charles, MO USA 63303
Telephone (314) 936-1554
Fax (314) 936-1135

RECEIVED
FEB 14 1997
SUPERFUND DIVISION

Golder Associates

February 12, 1997

Our Ref: 943-2848

7ES
Site: West Lake
ID #: MBD079900932
Break: 3.3 OU2
Other: Golder Assoc
2-12-97
0714

US Environmental Protection Agency
Region VII
726 Minnesota Ave.
Kansas City, KS 66101

Attention: Mr. Steven Kinser

RE: UPDATED ANALYTICAL LABORATORY METHODS, WEST LAKE LANDFILL OPERABLE UNIT 2 RI/FS

Dear Mr. Kinser:

Consistent with our previous telephone conversation, environmental sampling for the West Lake Landfill Operable Unit 2 RI/FS was initiated on February 10, 1997. Prior to the sampling effort, the analytical laboratories supplied updated analytical methods designed to maximize the potential to meet the stringent health-based criteria for the site. Enclosed are revised tables listing the analytical methods proposed in the RI/FS Work Plan, as well as the updated methods, where appropriate. Both the primary laboratories and the split laboratories have committed to utilize the same methodologies, which should provide consistent results for all samples.

We look forward to receipt of initial results in early to mid-March, 1997.

If you have any questions or comments, please contact Mr. Doug Borro or the undersigned.

Sincerely,

GOLDER ASSOCIATES INC.

Ward Herst

Ward E. Herst
Operations Manager - St. Louis
Associate

40053030
SUPERFUND RECORDS

cc: Doug Borro
Diane Foster
Jalal El-Jayyousi

TABLE 6-1

AQUEOUS SAMPLE PARAMETER LIST

PARAMETER	WORK PLAN METHOD[1] Groundwater	REVISED METHOD[1] Groundwater	HEALTH-BASED CRITERIA[2] Limit	Unit
ORGANIC ANALYSIS SUMMARY				
Volatiles - RCRA Subtitle D Appendix I List	8260	8260A (20 ml purge)	See detailed listing	
1,2-Dibromoethane & 1,2,3-Trichloropropane	8260	8011	See detailed listing	
Semi-volatiles - CLP Target Compound List	8270	8270	See detailed listing	
Seclect TCL Semi-volatiles (see detail below)	8270	8000M (Ion trap)	See detailed listing	
Seclect TCL Semi-volatiles (see detail below)	8310	8310	See detailed listing	
Seclect TCL Semi-volatiles (see detail below)	8270	8081	See detailed listing	
Pesticides & PCBs - CLP Target Compound List	8080	8081	See detailed listing	
METALS - TOTAL				
RCRA SUBTITLE D APPENDIX I				
Antimony	7041	7041	6	ug/l
Arsenic	7060	7060	3.8	ug/l
Barium	6010	6010	2000	ug/l
Beryllium	6010	6010	1.6	ug/l
Cadmium	6010	6010	5	ug/l
Chromium	6010	6010	100	ug/l
Cobalt	6010	6010	6600	ug/l
Copper	6010	6010	1000	ug/l
Lead	7421	7421	--	--
Nickel	6010	6010	100	ug/l
Selenium	7740	7740	50	ug/l
Silver	6010	6010	180	ug/l
Thallium	7841	7841	2	ug/l
Vanadium	6010	6010	260	ug/l
Zinc	6010	6010	5000	ug/l
Plus Metals from CLP Target Analyte List				
Boron, Total	6010	6010	3300	ug/l
Calcium, Total	6010	6010	--	--
Iron, Total	6010	6010	--	--
Magnesium, Total	6010	6010	--	--
Manganese, Total	6010	6010	--	--
Mercury, Total	7470	7470	2	ug/l
Sodium, Total	6010	7770	--	--
RCRA SUBTITLE D APPENDIX I METALS - DISSOLVED				
Antimony	7041	7041	6	ug/l
Arsenic	7060	7060	3.8	ug/l
Barium	6010	6010	2000	ug/l
Beryllium	6010	6010	1.6	ug/l
Cadmium	6010	6010	5	ug/l
Chromium	6010	6010	100	ug/l
Cobalt	6010	6010	6600	ug/l
Copper	6010	6010	1000	ug/l
Lead	7421	7421	--	--
Nickel	6010	6010	100	ug/l
Selenium	7740	7740	50	ug/l
Silver	6010	6010	180	ug/l
Thallium	7841	7841	2	ug/l
Vanadium	6010	6010	260	ug/l
Zinc	6010	6010	5000	ug/l
Plus Metals from CLP Target Analyte List				
Boron, Dissolved	6010	6010	3300	ug/l
Calcium, Dissolved	6010	6010	--	--
Iron, Dissolved	6010	6010	--	--
Magnesium, Dissolved	6010	6010	--	--
Manganese, Dissolved	6010	6010	--	--
Mercury, Dissolved	7470	7470	2	ug/l
Sodium, Dissolved	6010	7770	--	--

Footnotes provided on page 4

TABLE 6-1

AQUEOUS SAMPLE PARAMETER LIST

PARAMETER	WORK PLAN METHOD[1] Groundwater	REVISED METHOD[1] Groundwater	HEALTH-BASED CRITERIA[2] Limit	Unit
CONVENTIONALS				
Ammonia as Nitrogen	350.1	350.1	-	-
Chemical Oxygen Demand (COD)	410.4	410.4	-	-
Chloride	325.2	325.2	250	mg/l
Cyanide, Total	9010	9010	200	ug/l
Fluoride	340.2	340.2	-	-
Hardness, Total	130.2	130.2	-	-
Iron	6010	6010	-	-
Nitrate/Nitrite	353.1	353.2	10	mg/l
Phosphorus, Total	365.2	365.2	-	-
Sulfate as SO_4	375.4	375.4	250	mg/l
Sulfide	9030	9030	-	-
Total Dissolved Solids (TDS)	160.1	160.1	500	mg/l
Total Organic Carbon (TOC)	415.1	415.1	-	-
Total Petroleum Hydrocarbons	8015M	8015M	-	-
FIELD MEASUREMENTS				
pH (Field)	150.1	150.1	-	-
Specific Conductance (Field)	120.1	120.1	-	-
Groundwater Elevation	Field	Field	-	-
Temperature	Field	Field	-	-
RCRA SUBTITLE D APPENDIX I VOLATILE ORGANIC COMPOUNDS				
Acetone	8260	8260A (20 ml purge)	3700.0	ug/l
Acrylonitrile	8260	8260A (20 ml purge)	12.0	ug/l
Benzene	8260	8260A (20 ml purge)	5.0	ug/l
Bromochloromethane	8260	8260A (20 ml purge)	-	-
Bromodichloromethane	8260	8260A (20 ml purge)	17.0	ug/l
Bromoform (Tribromomethane)	8260	8260A (20 ml purge)	100.0	ug/l
Bromomethane (Methyl bromide)	8260	8260A (20 ml purge)	8.7	ug/l
Carbon disulfide	8260	8260A (20 ml purge)	21.0	ug/l
Carbon tetrachloride	8260	8260A (20 ml purge)	5.0	ug/l
Chlorobenzene	8260	8260A (20 ml purge)	39.0	ug/l
Chloroethane	8260	8260A (20 ml purge)	8600.0	ug/l
Chloroform (Trichloromethane)	8260	8260A (20 ml purge)	15.0	ug/l
Chloromethane (Methyl chloride)	8260	8260A (20 ml purge)	140.0	ug/l
1,2-Dibromo-3-chloropropane	8260	8260A (20 ml purge)	4.8	ug/l
Dibromochloromethane	8260	8260A (20 ml purge)	13.0	ug/l
1,2-Dibromoethane (Ethylene dibromide)	8260	8011	0.075	ug/l
trans-1,4-Dichloro-2-butene	8260	8260A (20 ml purge)	-	-
1,2-Dichlorobenzene (o-DCB)	8260	8260A (20 ml purge)	370.0	ug/l
1,4-Dichlorobenzene (p-DCB)	8260	8260A (20 ml purge)	44.0	ug/l
1,1-Dichloroethane	8260	8260A (20 ml purge)	810.0	ug/l
1,2-Dichloroethane	8260	8260A (20 ml purge)	5.0	ug/l
1,1-Dichloroethene	8260	8260A (20 ml purge)	4.4	ug/l
cis-1,2-Dichloroethene	8260	8260A (20 ml purge)	61.0	ug/l
trans-1,2-Dichloroethene	8260	8260A (20 ml purge)	100.0	ug/l
1,2-Dichloropropane	8260	8260A (20 ml purge)	5.0	ug/l
cis-1,3-Dichloropropene	8260	8260A (20 ml purge)	-	-
trans-1,3-Dichloropropene	8260	8260A (20 ml purge)	-	-
Ethylbenzene	8260	8260A (20 ml purge)	700.0	ug/l
2-Hexanone	8260	8260A (20 ml purge)	-	-
Methyl ethyl ketone (2-Butanone)	8260	8260A (20 ml purge)	22000.0	ug/l
Methyl iodide (Iodomethane)	8260	8260A (20 ml purge)	-	-
Methyl isobutyl ketone (4-Methyl-2-pentanone)	8260	8260A (20 ml purge)	2900.0	ug/l
Methylene bromide	8260	8260A (20 ml purge)	61.0	ug/l
Methylene chloride	8260	8260A (20 ml purge)	5.0	ug/l
Styrene	8260	8260A (20 ml purge)	100.0	ug/l
1,1,1,2-Tetrachloroethane	8260	8260A (20 ml purge)	41.0	ug/l

Footnotes provided on page 4

TABLE 6-1

AQUEOUS SAMPLE PARAMETER LIST

PARAMETER	WORK PLAN METHOD[1] Groundwater	REVISED METHOD[1] Groundwater	HEALTH-BASED CRITERIA[2] Limit	Unit
1,1,2,2-Tetrachloroethane	8260	8260A (20 ml purge)	5.2	ug/l
Tetrachloroethene	8260	8260A (20 ml purge)	5.0	ug/l
Toluene	8260	8260A (20 ml purge)	750.0	ug/l
1,1,1-Trichloroethane	8260	8260A (20 ml purge)	200.0	ug/l
1,1,2-Trichloroethane	8260	8260A (20 ml purge)	5.0	ug/l
Trichloroethene	8260	8260A (20 ml purge)	5.0	ug/l
Trichlorofluoromethane (Freon 11)	8260	8260A (20 ml purge)	1300.0	ug/l
1,2,3-Trichloropropane	8260	8011	0.15	ug/l
Vinyl acetate	8260	8260A (20 ml purge)	37000.0	ug/l
Vinyl chloride	8260	8260A (20 ml purge)	1.9	ug/l
Xylenes	8260	8260A (20 ml purge)	10000.0	ug/l
TCL SEMIVOLATILE ORGANIC COMPOUNDS				
Acenaphthene	8270	8270	2200.0	ug/l
Acenaphthylene	8270	8270	-	-
Anthracene	8270	8270	11000	ug/l
Benzo(a)anthracene	8310	8310	9.2	ug/l
Benzo(a)pyrene	8270	8270	0.2	ug/l
Benzo(b)fluoranthene	8310	8310	9.2	ug/l
Benzo(ghi)perylene	8270	8270	-	-
Benzo(k)fluoranthene	8270	8270	92	ug/l
4-Bromophenyl phenyl ether	8270	8270	2100	ug/l
Butyl benzyl phthalate	8270	8270	7300	ug/l
Carbazole	8270	8270	-	-
p-Chloro-m-cresol	8270	8270	-	-
4-Chloroaniline	8270	8270	150	ug/l
bis(2-Chloroethoxy)methane	8270	8270	-	-
bis(2-Chloroethyl)ether	8270	8000M (Ion trap)	0.92	ug/l
bis(2-Chloroisopropyl)ether	8270	8270	96	ug/l
2-Chloronaphthalene	8270	8270	2900	ug/l
2-Chlorophenol	8270	8270	180	ug/l
4-Chlorophenyl phenyl ether	8270	8270	-	-
Chrysene	8270	8270	920	ug/l
m-Cresol	8270	8270	1800	ug/l
o-Cresol	8270	8270	1800	ug/l
p-Cresol	8270	8270	180	ug/l
Dibenzo(a,h)anthracene	8310	8270	0.92	ug/l
Dibenzofuran	8270	8270	-	-
1,3-Dichlorobenzene	8270	8270	540	ug/l
3,3'-Dichlorobenzidine	8270	8270	15	ug/l
2,4-Dichlorophenol	8270	8270	110	ug/l
Diethyl phthalate	8270	8270	29000	ug/l
Dimethyl phthalate	8270	8270	370000	ug/l
2,4-Dimethylphenol	8270	8270	730	ug/l
Di-n-butyl phthalate	8270	8270	3700	ug/l
4,6-Dinitro-o-cresol	8270	8270	-	-
2,4-Dinitrophenol	8270	8270	73	ug/l
2,4-Dinitrotoluene	8270	8270	73	ug/l
2,6-Dinitrotoluene	8270	8270	37	ug/l
Di-n-octyl phthalate	8270	8270	730	ug/l
bis(2-Ethylhexyl) phthalate	8270	8270	6	ug/l
Fluoranthene	8270	8270	1500	ug/l
Fluorene	8270	8270	1500	ug/l
Hexachlorobenzene	8270	8081	0.66	ug/l
Hexachlorobutadiene	8270	8270	14	ug/l
Hexachlorocyclopentadiene	8270	8081	0.15	ug/l
Hexachloroethane	8270	8270	75	ug/l
Indeno(1,2,3-cd)pyrene	8310	8310	9.2	ug/l
Isophorone	8270	8270	7100	ug/l

Footnotes provided on page 4

TABLE 6-1

AQUEOUS SAMPLE PARAMETER LIST

PARAMETER	WORK PLAN METHOD[1] Groundwater	REVISED METHOD[1] Groundwater	HEALTH-BASED CRITERIA[2] Limit	Unit
2-Methylnaphthalene	8270	8270	-	-
Naphthalene	8270	8270	1500	ug/l
2-Nitroaniline	8270	8000M (Ion trap)	2.2	ug/l
3-Nitroaniline	8270	8270	110	ug/l
4-Nitroaniline	8270	8270	110	ug/l
Nitrobenzene	8270	8000M (Ion trap)	3.4	ug/l
2-Nitrophenol	8270	8270	-	-
4-Nitrophenol	8270	8270	2300	ug/l
N-Nitrosodi-n-propylamine	8270	8000M (Ion trap)	0.96	ug/l
N-Nitrosodiphenylamine	8270	8270	1400	ug/l
Pentachlorophenol	8080	8081	1	ug/l
Phenanthrene	8270	8270	-	-
Phenol	8270	8270	22000	ug/l
Pyrene	8270	8270	1100	ug/l
1,2,4-Trichlorobenzene	8270	8270	70	ug/l
2,4,5-Trichlorophenol	8270	8270	3700	ug/l
2,4,6-Trichlorophenol	8270	8270	610	ug/l
TCL PESTICIDES & PCBs				
Aldrin	8080	8081	0.4	ug/l
alpha-BHC	8080	8081	1.1	ug/l
beta-BHC	8080	8081	3.7	ug/l
delta-BHC	8080	8081	-	-
gamma-BHC (Lindane)	8080	8081	0.2	ug/l
alpha-Chlordane	8080	8081	2	ug/l
gamma-Chlordane	8080	8081	2	ug/l
4,4'-DDD	8080	8081	20	ug/l
4,4'-DDE	8080	8081	20	ug/l
4,4'-DDT	8080	8081	20	ug/l
Dieldrin	8080	8081	0.42	ug/l
Endosulfan I	8080	8081	-	-
Endosulfan II	8080	8081	-	-
Endosulfan sulfate	8080	8081	-	-
Endrin	8080	8081	0.2	ug/l
Endrin aldehyde	8080	8081	-	-
Endrin ketone	8080	8081	-	-
Heptachlor	8080	8081	0.23	ug/l
Heptachlor epoxide	8080	8081	0.12	ug/l
Methoxychlor	8080	8081	40	ug/l
Toxaphene	8080	8081	3	ug/l
Aroclor-1016	8080	8081	0.5	ug/l
Aroclor-1221	8080	8081	0.5	ug/l
Aroclor-1232	8080	8081	0.5	ug/l
Aroclor-1242	8080	8081	0.5	ug/l
Aroclor-1248	8080	8081	0.5	ug/l
Aroclor-1254	8080	8081	0.5	ug/l
Aroclor-1260	8080	8081	0.5	ug/l

NOTES:
1. Analytical methods may be determined by the actual concentration detected and the health-based criteria.
2. Health-based criteria will be used as detection limits for groundwater and surface water samples, and do not apply to leachate or seep samples.

-- : Not applicable.
ug/L: micrograms per liter
mg/L: milligrams per liter
Groundwater samples will be analyzed for total and dissolved metals constituents.
Leachate and surface water samples will be analyzed for total metals constituents.
PCBs = Polychlorinated Biphenyls.
TCL = Target Compound List.

Footnotes provided on page 4

TABLE 6-3

SEDIMENT SAMPLE PARAMETER LIST

PARAMETER	WORK PLAN METHOD[1]	REVISED METHOD[1]	HEALTH-BASED CRITERIA LIMITS[2]	
			Limit	Units
ORGANIC ANALYSIS SUMMARY				
Volatiles - RCRA Subtitle D Appendix I List	8260	8260A	See detailed listing	
Semi-volatiles - CLP Target Compound List	8270	8270	See detailed listing	
Pesticides & PCB's - CLP Target Compound List	8080	8081	See detailed listing	
RCRA SUBTITLE D APPENDIX I - METALS, TOTAL				
Antimony	7041	6010	410	mg/kg
Arsenic	7060	7060	160	mg/kg
Barium	6010	6010	72000	mg/kg
Beryllium	6010	6010	67	mg/kg
Cadmium	6010	6010	510	mg/kg
Chromium	6010	6010	5100	mg/kg
Cobalt	6010	6010	180000	mg/kg
Copper	6010	6010	38000	mg/kg
Lead	7421	6010	--	--
Nickel	6010	6010	20000	mg/kg
Selenium	7740	6010	5100	mg/kg
Silver	6010	6010	5100	mg/kg
Thallium	7841	6010	--	--
Vanadium	6010	6010	7200	mg/kg
Zinc	6010	6010	310000	mg/kg
Plus Metals from CLP Target Analyte List				
Boron	6010	6010	92000	mg/kg
Calcium	6010	6010	--	--
Iron	6010	6010	--	--
Magnesium	6010	6010	--	--
Manganese	6010	6010	--	--
Mercury	7470	7471	310	mg/kg
Sodium	9030	7770	--	--
CONVENTIONALS				
Cyanide	9010	9010	20000	mg/kg
Sulfide	9030	9030	--	--
Total Petroleum Hydrocarbons	8015M	8015M	--	--
RCRA SUBTITLE D APPENDIX I VOLATILE ORGANIC COMPOUNDS				
Acetone	8260	8260A	100000	mg/kg
Acrylonitrile	8260	8260A	530	mg/kg
Benzene	8260	8260A	9900	mg/kg
Bromochloromethane	8260	8260A	--	--
Bromodichloromethane	8260	8260A	4600	mg/kg
Bromoform (Tribromomethane)	8260	8260A	36000	mg/kg
Bromomethane (Methyl bromide)	8260	8260A	1400	mg/kg
Carbon disulfide	8260	8260A	100000	mg/kg
Carbon tetrachloride	8260	8260A	2200	mg/kg
Chlorobenzene	8260	8260A	20000	mg/kg
Chloroethane	8260	8260A	410000	mg/kg
Chloroform (Trichloromethane)	8260	8260A	47000	mg/kg
Chloromethane (Methyl chloride)	8260	8260A	22000	mg/kg
1,2-Dibromo-3-chloropropane	8260	8260A	200	mg/kg
Dibromochloromethane	8260	8260A	3400	mg/kg
1,2-Dibromoethane (Ethylene dibromide)	8260	8260A	3.4	mg/kg
trans-1,4-Dichloro-2-butene	8260	8260A	-	-

Footnotes provided on page 4

TABLE 6-3

SEDIMENT SAMPLE PARAMETER LIST

PARAMETER	WORK PLAN METHOD[1]	REVISED METHOD[1]	HEALTH-BASED CRITERIA LIMITS[2]	
			Limit	Units
1,2-Dichlorobenzene (o-DCB)	8260	8260A	92000	mg/kg
1,4-Dichlorobenzene (p-DCB)	8260	8260A	12000	mg/kg
1,1-Dichloroethane	8260	8260A	100000	mg/kg
1,2-Dichloroethane	8260	8260A	3100	mg/kg
1,1-Dichloroethene	8260	8260A	480	mg/kg
cis-1,2-Dichloroethene	8260	8260A	10000	mg/kg
trans-1,2-Dichloroethene	8260	8260A	20000	mg/kg
1,2-Dichloropropane	8260	8260A	4200	mg/kg
cis-1,3-Dichloropropene	8260	8260A	--	--
trans-1,3-Dichloropropene	8260	8260A	--	--
Ethylbenzene	8260	8260A	100000	mg/kg
2-Hexanone	8260	8260A	--	--
Methyl ethyl ketone (2-Butanone)	8260	8260A	610000	mg/kg
Methyl iodide (Iodomethane)	8260	8260A	--	--
Methyl isobutyl ketone (4-Methyl-2-pentanone)	8260	8260A	82000	mg/kg
Methylene bromide (Dibromomethane)	8260	8260A	10000	mg/kg
Methylene chloride (Dichloromethane)	8260	8260A	38000	mg/kg
Styrene	8260	8260A	200000	mg/kg
1,1,1,2-Tetrachloroethane	8260	8260A	11000	mg/kg
1,1,2,2-Tetrachloroethane	8260	8260A	1400	mg/kg
Tetrachloroethene	8260	8260A	5500	mg/kg
Toluene	8260	8260A	200000	mg/kg
1,1,1-Trichloroethane	8260	8260A	92000	mg/kg
1,1,2-Trichloroethane	8260	8260A	5000	mg/kg
Trichloroethene	8260	8260A	26000	mg/kg
Trichlorofluoromethane (Freon 11)	8260	8260A	310000	mg/kg
1,2,3-Trichloropropane	8260	8260A	41	mg/kg
Vinyl acetate	8260	8260A	100000	mg/kg
Vinyl chloride	8260	8260A	150	mg/kg
Xylenes	8260	8260A	100000	mg/kg
TCL SEMIVOLATILE ORGANIC COMPOUNDS				
Acenaphthene	8270	8270	61000	mg/kg
Acenaphthylene	8270	8270	--	--
Anthracene	8270	8270	310000	mg/kg
Benzo(a)anthracene	8310	8270	390	mg/kg
Benzo(a)pyrene	8310	8270	39	mg/kg
Benzo(b)fluoranthene	8310	8270	390	mg/kg
Benzo(ghi)perylene	8270	8270	--	--
Benzo(k)fluoranthene	8270	8270	3900	mg/kg
4-Bromophenyl phenyl ether	8270	8270	59000	mg/kg
Butyl benzyl phthalate	8270	8270	200000	mg/kg
Carbazole	8270	8270	--	--
p-Chloro-m-cresol	8270	8270	--	--
4-Chloroaniline	8270	8270	4100	mg/kg
bis(2-Chloroethoxy)methane	8270	8270	--	--
bis(2-Chloroethyl)ether	8270	8270	260	mg/kg
bis(2-Chloroisopropyl)ether	8270	8270	4100	mg/kg
2-Chloronaphthalene	8270	8270	82000	mg/kg
2-Chlorophenol	8270	8270	5100	mg/kg
4-Chlorophenyl phenyl ether	8270	8270	--	--

Footnotes provided on page 4

TABLE 6-3

SEDIMENT SAMPLE PARAMETER LIST

PARAMETER	WORK PLAN METHOD[1]	REVISED METHOD[1]	HEALTH-BASED CRITERIA LIMITS[2]	
			Limit	Units
Chrysene	8270	8270	39000	mg/kg
m-Cresol	8270	8270	51000	mg/kg
o-Cresol	8270	8270	51000	mg/kg
p-Cresol	8270	8270	5100	mg/kg
Dibenzo(a,h)anthracene	8310	8270	39	mg/kg
Dibenzofuran	8270	8270	--	--
1,3-Dichlorobenzene (m-DCB)	8270	8270	91000	mg/kg
3,3'-Dichlorobenzidine	8270	8270	640	mg/kg
2,4-Dichlorophenol	8270	8270	3100	mg/kg
Diethyl phthalate	8270	8270	820000	mg/kg
Dimethyl phthalate	8270	8270	1000000	mg/kg
2,4-Dimethylphenol	8270	8270	20000	mg/kg
Di-n-butyl phthalate	8270	8270	100000	mg/kg
4,6-Dinitro-o-cresol	8270	8270	--	--
2,4-Dinitrophenol	8270	8270	2000	mg/kg
2,4-Dinitrotoluene	8270	8270	2000	mg/kg
2,6-Dinitrotoluene	8270	8270	1000	mg/kg
Di-n-octyl phthalate	8270	8270	20000	mg/kg
bis(2-Ethylhexyl) phthalate	8270	8270	20000	mg/kg
Fluoranthene	8270	8270	41000	mg/kg
Fluorene	8270	8270	41000	mg/kg
Hexachlorobenzene	8080	8270	180	mg/kg
Hexachlorobutadiene	8270	8270	3700	mg/kg
Hexachlorocyclopentadiene	8270	8270	7200	mg/kg
Hexachloroethane	8270	8270	20000	mg/kg
Indeno(1,2,3-cd)pyrene	8080	8270	390	mg/kg
Isophorone	8270	8270	300000	mg/kg
2-Methylnaphthalene	8270	8270	--	--
Naphthalene	8270	8270	41000	mg/kg
2-Nitroaniline	8270	8270	61	mg/kg
3-Nitroaniline	8270	8270	3100	mg/kg
4-Nitroaniline	8270	8270	3100	mg/kg
Nitrobenzene	8270	8270	510	mg/kg
2-Nitrophenol	8270	8270	--	--
4-Nitrophenol	8270	8270	63000	mg/kg
N-Nitrosodi-n-propylamine	8270	8270	41	mg/kg
N-Nitrosodiphenylamine	8270	8270	58000	mg/kg
Pentachlorophenol	8080	8270	2400	mg/kg
Phenanthrene	8270	8270	--	--
Phenol	8270	8270	610000	mg/kg
Pyrene	8270	8270	31000	mg/kg
1,2,4-Trichlorobenzene	8270	8270	10000	mg/kg
2,4,5-Trichlorophenol	8270	8270	100000	mg/kg
2,4,6-Trichlorophenol	8270	8270	26000	mg/kg
TCL PESTICIDES & PCBs				
Aldrin	8080	8081	17	mg/kg
alpha-BHC	8080	8081	45	mg/kg
beta-BHC	8080	8081	160	mg/kg

Footnotes provided on page 4

TABLE 6-3

SEDIMENT SAMPLE PARAMETER LIST

PARAMETER	WORK PLAN METHOD[1]	REVISED METHOD[1]	HEALTH-BASED CRITERIA LIMITS[2]	
			Limit	Units
delta-BHC	8080	8081	--	--
gamma-BHC (Lindane)	8080	8081	220	mg/kg
alpha-Chlordane	8080	8081	220	mg/kg
gamma-Chlordane	8080	8081	220	mg/kg
4,4'-DDD	8080	8081	1200	mg/kg
4,4'-DDE	8080	8081	840	mg/kg
4,4'-DDT	8080	8081	840	mg/kg
Dieldrin	8080	8081	18	mg/kg
Endosulfan I	8080	8081	--	--
Endosulfan II	8080	8081	--	--
Endosulfan sulfate	8080	8081	--	--
Endrin	8080	8081	310	mg/kg
Endrin aldehyde	8080	8081	--	--
Endrin ketone	8080	8081	--	--
Heptachlor	8080	8081	64	mg/kg
Heptachlor epoxide	8080	8081	31	mg/kg
Methoxychlor	8080	8081	5100	mg/kg
Toxaphene	8080	8081	260	mg/kg
Aroclor-1016	8080	8081	37	mg/kg
Aroclor-1221	8080	8081	37	mg/kg
Aroclor-1232	8080	8081	37	mg/kg
Aroclor-1242	8080	8081	37	mg/kg
Aroclor-1248	8080	8081	37	mg/kg
Aroclor-1254	8080	8081	37	mg/kg
Aroclor-1260	8080	8081	37	mg/kg

NOTES:

1. Analytical methods may be determined by actual concentrations detected and the health-based criteria.
2. Actual quantitation limits provided by the laboratory will be equal to or less than the health-based criteria.

-- : Not applicable
mg/kg: milligrams per kilogram
TCL: Target Compound List
PCBs: Polychlorinated Biphenyls

Footnotes provided on page 4

TABLE 6-4

LEACHATE SAMPLE ANALYSIS

PARAMETER	WORK PLAN METHOD[1]	REVISED METHOD	HEALTH-BASED CRITERIA[2]	
			Limit	Unit
ORGANIC ANALYSIS SUMMARY				
Volatiles - RCRA Subtitle D Appendix List	8260	8260A	--	--
Semi-volatiles - CLP Target Compound List	8270	8270	--	--
Pesticides & PCB's - CLP Target Compound List	8080	8081	--	--
RCRA SUBTITLE D APPENDIX I METALS				
Antimony, Total	7041	6010	--	--
Arsenic, Total	7060	7060	--	--
Barium, Total	6010	6010	--	--
Beryllium, Total	6010	6010	--	--
Cadmium, Total	6010	6010	--	--
Chromium, Total	6010	6010	--	--
Cobalt, Total	6010	6010	--	--
Copper, Total	6010	6010	--	--
Lead, Total	7421	6010	--	--
Nickel, Total	6010	6010	--	--
Selenium, Total	7740	6010	--	--
Silver, Total	6010	6010	--	--
Thallium, Total	7841	6010	--	--
Vanadium, Total	6010	6010	--	--
Zinc, Total	6010	6010	--	--
Plus Metals from CLP Target Analyte List				
Boron, Total	6010	6010	--	--
Calcium, Total	6010	6010	--	--
Iron, Total	6010	6010	--	--
Magnesium, Total	6010	6010	--	--
Manganese, Total	6010	6010	--	--
Mercury, Total	6010	7470	--	--
Sodium, Total	6010	7770	--	--
CONVENTIONALS				
Ammonia as Nitrogen	350.1	350.1	--	--
Chemical Oxygen Demand (COD)	410.4	410.4	--	--
Chloride	325.2	325.2	--	--
Cyanide, Total	9010	9010	--	--
Fluoride	340.2	340.2	--	--
Hardness, Total (Calculated)	130.2	130.2	--	--
Nitrate/Nitrite	353.1	353.1	--	--
Phosphorus, Total	365.2	365.2	--	--
Sulfate as SO_4	375.4	375.4	--	--
Sulfide	9030	9030	--	--
Total Dissolved Solids (TDS)	160.1	160.1	--	--
Total Organic Carbon (TOC)	415.1	415.1	--	--
Total Petroleum Hydrocarbons	8015M	8015M	--	--
FIELD MEASUREMENTS				
pH (Field)	150.1	150.1	--	--
Specific Conductance (Field)	120.1	120.1	--	--
Temperature	Field	Field	--	--
RCRA SUBTITLE D APPENDIX I VOLATILE ORGANIC COMPOUNDS				
Acetone	8260	8260A	--	--
Acrylonitrile	8260	8260A	--	--
Benzene	8260	8260A	--	--

Footnotes provided on page 4

TABLE 6-4

LEACHATE SAMPLE ANALYSIS

PARAMETER	WORK PLAN METHOD[1]	REVISED METHOD	HEALTH-BASED CRITERIA[2]	
			Limit	Unit
Bromochloromethane	8260	8260A	--	--
Bromodichloromethane	8260	8260A	--	--
Bromoform (Tribromomethane)	8260	8260A	--	--
Bromomethane (Methyl bromide)	8260	8260A	--	--
Carbon disulfide	8260	8260A	--	--
Carbon tetrachloride	8260	8260A	--	--
Chlorobenzene	8260	8260A	--	--
Chloroethane	8260	8260A	--	--
Chloroform (Trichloromethane)	8260	8260A	--	--
Chloromethane (Methyl chloride)	8260	8260A	--	--
1,2-Dibromo-3-chloropropane	8260	8260A	--	--
Dibromochloromethane	8260	8260A	--	--
1,2-Dibromoethane (Ethylene dibromide)	8260	8260A	--	--
trans-1,4-Dichloro-2-butene	8260	8260A	--	--
1,2-Dichlorobenzene (o-DCB)	8260	8260A	--	--
1,4-Dichlorobenzene (p-DCB)	8260	8260A	--	--
1,1-Dichloroethane	8260	8260A	--	--
1,2-Dichloroethane	8260	8260A	--	--
1,1-Dichloroethene	8260	8260A	--	--
cis-1,2-Dichloroethene	8260	8260A	--	--
trans-1,2-Dichloroethene	8260	8260A	--	--
1,2-Dichloropropane	8260	8260A	--	--
cis-1,3-Dichloropropene	8260	8260A	--	--
trans-1,3-Dichloropropene	8260	8260A	--	--
Ethylbenzene	8260	8260A	--	--
2-Hexanone	8260	8260A	--	--
Methyl ethyl ketone (2-Butanone)	8260	8260A	--	--
Methyl iodide (Iodomethane)	8260	8260A	--	--
Methyl isobutyl ketone (4-Methyl-2-pentanone)	8260	8260A	--	--
Methylene bromide	8260	8260A	--	--
Methylene chloride	8260	8260A	--	--
Styrene	8260	8260A	--	--
1,1,1,2-Tetrachloroethane	8260	8260A	--	--
1,1,2,2-Tetrachloroethane	8260	8260A	--	--
Tetrachloroethene	8260	8260A	--	--
Toluene	8260	8260A	--	--
1,1,1-Trichloroethane	8260	8260A	--	--
1,1,2-Trichloroethane	8260	8260A	--	--
Trichloroethene	8260	8260A	--	--
Trichlorofluoromethane (Freon 11)	8260	8260A	--	--
1,2,3-Trichloropropane	8260	8260A	--	--
Vinyl acetate	8260	8260A	--	--
Vinyl chloride	8260	8260A	--	--
Xylenes	8260	8260A	--	--
TCL SEMIVOLATILE ORGANIC COMPOUNDS				
Acenaphthene	8270	8270	--	--
Acenaphthylene	8270	8270	--	--
Anthracene	8270	8270	--	--
Benzo(a)anthracene	8310	8270	--	--
Benzo(a)pyrene	8310	8270	--	--
Benzo(b)fluoranthene	8310	8270	--	--

Footnotes provided on page 4

TABLE 6-4

LEACHATE SAMPLE ANALYSIS

PARAMETER	WORK PLAN METHOD[1]	REVISED METHOD	HEALTH-BASED CRITERIA[2]	
			Limit	Unit
Benzo(ghi)perylene	8270	8270	--	--
Benzo(k)fluoranthene	8270	8270	--	--
4-Bromophenyl phenyl ether	8270	8270	--	--
Butyl benzyl phthalate	8270	8270	--	--
Carbazole	8270	8270	--	--
p-Chloro-m-cresol	8270	8270	--	--
4-Chloroaniline	8270	8270	--	--
bis(2-Chloroethoxy)methane	8270	8270	--	--
bis(2-Chloroethyl)ether	8270	8270	--	--
bis(2-Chloroisopropyl)ether	8270	8270	--	--
2-Chloronaphthalene	8270	8270	--	--
2-Chlorophenol	8270	8270	--	--
4-Chlorophenyl phenyl ether	8270	8270	--	--
Chrysene	8270	8270	--	--
m-Cresol	8270	8270	--	--
o-Cresol	8270	8270	--	--
p-Cresol	8270	8270	--	--
Dibenzo(a,h)anthracene	8310	8270	--	--
Dibenzofuran	8270	8270	--	--
1,3-Dichlorobenzene (m-DCB)	8270	8270	--	--
3,3'-Dichlorobenzidine	8270	8270	--	--
2,4-Dichlorophenol	8270	8270	--	--
Diethyl phthalate	8270	8270	--	--
Dimethyl phthalate	8270	8270	--	--
2,4-Dimethylphenol	8270	8270	--	--
Di-n-butyl phthalate	8270	8270	--	--
4,6-Dinitro-o-cresol	8270	8270	--	--
2,4-Dinitrophenol	8270	8270	--	--
2,4-Dinitrotoluene	8270	8270	--	--
2,6-Dinitrotoluene	8270	8270	--	--
Di-n-octyl phthalate	8270	8270	--	--
bis(2-Ethylhexyl) phthalate	8270	8270	--	--
Fluoranthene	8270	8270	--	--
Fluorene	8270	8270	--	--
Hexachlorobenzene	8080	8270	--	--
Hexachlorobutadiene	8270	8270	--	--
Hexachlorocyclopentadiene	8270	8270	--	--
Hexachloroethane	8270	8270	--	--
Indeno(1,2,3-cd)pyrene	8310	8270	--	--
Isophorone	8270	8270	--	--
2-Methylnaphthalene	8270	8270	--	--
Naphthalene	8270	8270	--	--
2-Nitroaniline	8270	8270	--	--
3-Nitroaniline	8270	8270	--	--
4-Nitroaniline	8270	8270	--	--
Nitrobenzene	8270	8270	--	--
2-Nitrophenol	8270	8270	--	--
4-Nitrophenol	8270	8270	--	--
N-Nitrosodi-n-propylamine	8270	8270	--	--
N-Nitrosodiphenylamine	8270	8270	--	--
Pentachlorophenol	8080	8270	--	--

Footnotes provided on page 4

TABLE 6-4

LEACHATE SAMPLE ANALYSIS

PARAMETER	WORK PLAN METHOD[1]	REVISED METHOD	HEALTH-BASED CRITERIA[2]	
			Limit	Unit
Phenanthrene	8270	8270	--	--
Phenol	8270	8270	--	--
Pyrene	8270	8270	--	--
1,2,4-Trichlorobenzene	8270	8270	--	--
2,4,5-Trichlorophenol	8270	8270	--	--
2,4,6-Trichlorophenol	8270	8270	--	--
TCL PESTICIDES & PCBs				
Aldrin	8080	8081	--	--
alpha-BHC	8080	8081	--	--
beta-BHC	8080	8081	--	--
delta-BHC	8080	8081	--	--
gamma-BHC (Lindane)	8080	8081	--	--
alpha-Chlordane	8080	8081	--	--
gamma-Chlordane	8080	8081	--	--
4,4'-DDD	8080	8081	--	--
4,4'-DDE	8080	8081	--	--
4,4'-DDT	8080	8081	--	--
Dieldrin	8080	8081	--	--
Endosulfan I	8080	8081	--	--
Endosulfan II	8080	8081	--	--
Endosulfan sulfate	8080	8081	--	--
Endrin	8080	8081	--	--
Endrin aldehyde	8080	8081	--	--
Endrin ketone	8080	8081	--	--
Heptachlor	8080	8081	--	--
Heptachlor epoxide	8080	8081	--	--
Methoxychlor	8080	8081	--	--
Toxaphene	8080	8081	--	--
Aroclor-1016	8080	8081	--	--
Aroclor-1221	8080	8081	--	--
Aroclor-1232	8080	8081	--	--
Aroclor-1242	8080	8081	--	--
Aroclor-1248	8080	8081	--	--
Aroclor-1254	8080	8081	--	--
Aroclor-1260	8080	8081	--	--

NOTES:

1. Analytical methods may be determined by the actual concentration detected and the health-based criteria.
2. Health-based criteria will be used as detection limits for groundwater and surface water samples, and do not apply to leachate or seep samples.

-- : Not applicable.

Leachate and surface water samples will be analyzed for total metals constituents.

PCBs = Polychlorinated Biphenyls.

TCL = Target Compound List.

Footnotes provided on page 4