



APPENDIX TO
ENVIRONMENTAL STUDY
NIAGARA FRONTIER TRANSPORTATION AUTHORITY
DIKED DISPOSAL AREA
BUFFALO, NEW YORK

For

Niagara Frontier Transportation Authority
181 Ellicott Street
Buffalo, New York 14205

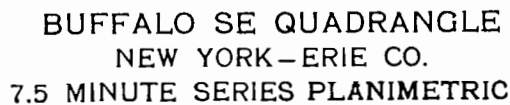
BTA-86-94
FEBRUARY 1987

APPENDIX A

DRAWINGS

Contents of Appendix A:

<u>Drawing No.</u>	<u>Title</u>
A.1	Site Location Plan
A.2	Monitoring Well Locations
A.3	Water Table Contour Map
A.4	Apparent Conductivity Contour Map
A.5	Total Magnetic Field Intensity Contour Map
A.6	Area of Demolition Debris Map



**CONSULTING GEOTECHNICAL
ENGINEERS & GEOLOGISTS**
Groton ■ Buffalo ■ Rochester ■ Syracuse ■ Albany
New York ■ Edison, New Jersey

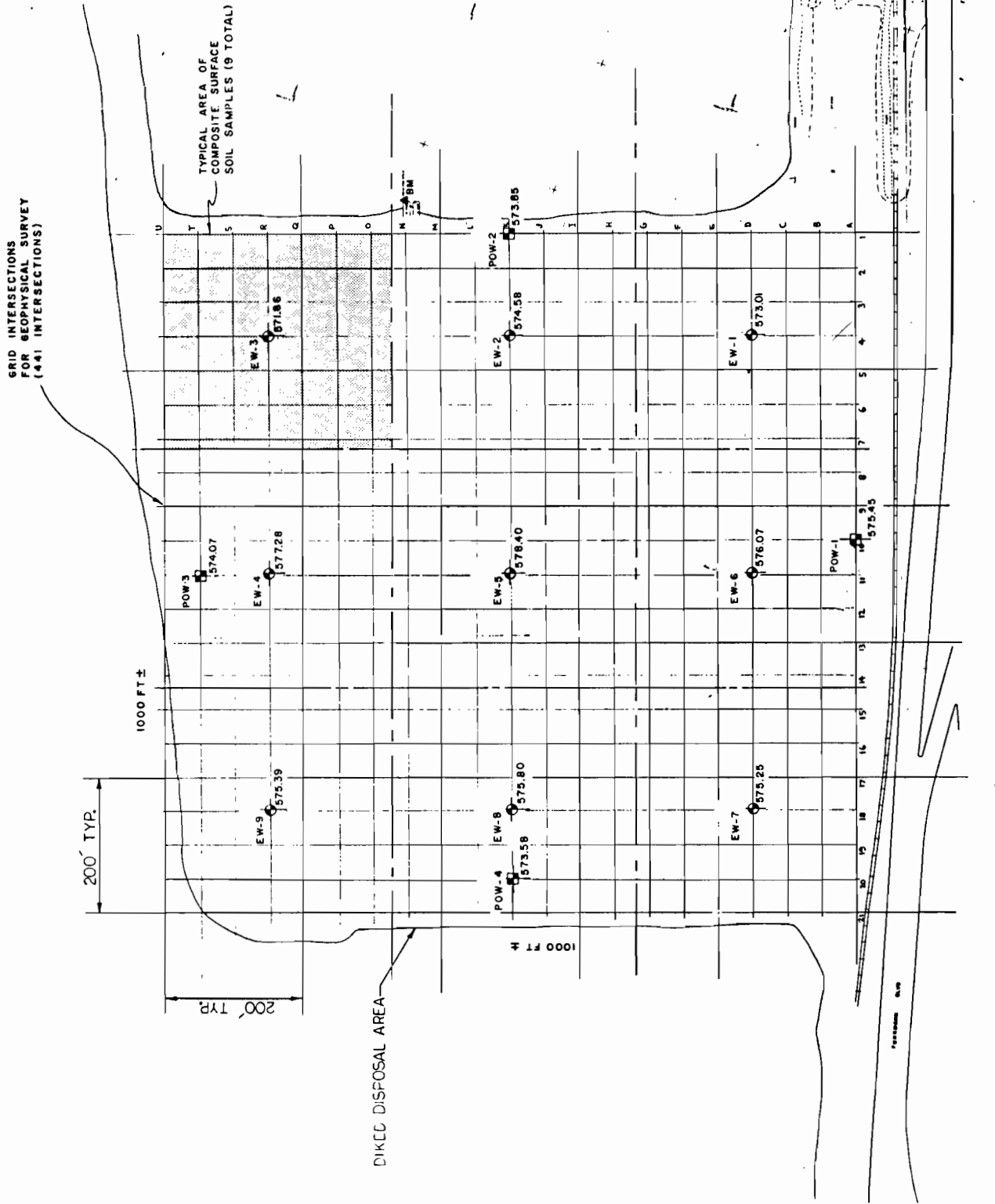
SITE LOCATION PLAN
NIAGARA FRONTIER TRANSPORTATION AUTHORITY
DIKED DISPOSAL AREA
BUFFALO, NEW YORK

DR. BY: ---	SCALE: 1" = 2000'	PROJ. NO. BTA-86-94
CK'D. BY:	DATE: Jan 1987	DRWG. NO.: A-1

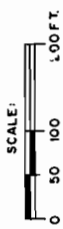
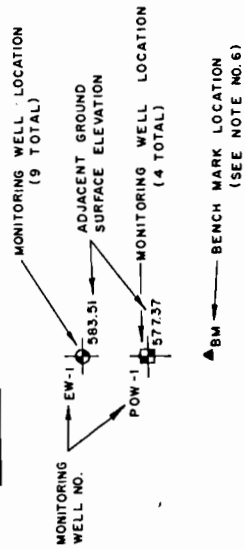


LAKE ERIE

November 1985 Mean Lake Level = 573.05
Highest Monthly Average for Period of 1860 thru 1980
(June 1973 at Buffalo Harbor) = 573.45
Lowest Monthly Average for period 1860 thru 1980
(February 1935 at Buffalo Harbor) = 567.60



LEGEND:



- NOTES:
- EW = Environmental monitoring well
 - POW = Percipimeter Observation well
 - This drawing is made from a base drawing supplied by NYTA
 - Elevations are given with respect to the International Great Lakes datum (IGLD, 1955)
 - Well locations and elevations were established in the field by a survey crew from Larsen Engineers in Rochester, New York
 - Benchmark is top of westerly 10 ft. Ø OWP, EL. 576.16

NIAGARA FRONTIER TRANSPORTATION AUTHORITY
DIKED DISPOSAL AREA
BUFFALO, NEW YORK

MONITORING WELL LOCATIONS

THOMSEN ASSOCIATES
CONSULTING ENGINEERS

DR. BY: DAW	SCALE: AS NOTED	PROJ. NO. 87A-66-94A
CK'D BY: SRP	DATE: 2-87	DRWG. NO. A.2

— SMALL BOAT HARBOR —

POW-2

NOTE - NOVEMBER 1986 MEAN LAKE
LEVEL = 573.05 (I.G.L.D.)

574.10

575

EW-3

574.94

EW-2

575.58

EW-1

576.01

576

577

POW-1

575.57

POW-3

574.15

EW-4

577.78

EW-5

578.15

EW-6

577.40

578

577

576

575

EW-9

573.97

EW-8

575.47

EW-7

576.33

POW-4

573.83

574

1000 FT. ±

LEGEND:

WELL NO.

EW-1

576.01

GROUND WATER
ELEVATION

POW-1

575.57

WELL NO.

GROUND WATER
CONTOUR

— 577 —

**THOMSEN
ASSOCIATES**

CONSULTING GEOTECHNICAL
ENGINEERS & GEOLOGISTS

WATER TABLE CONTOUR MAP
NIAGARA FRONTIER TRANSPORTATION AUTHORITY
DIKED DISPOSAL AREA
BUFFALO, NEW YORK

DR. BY: DAW

SCALE: N.T.S.

PROJ. NO. BTA-86-94A

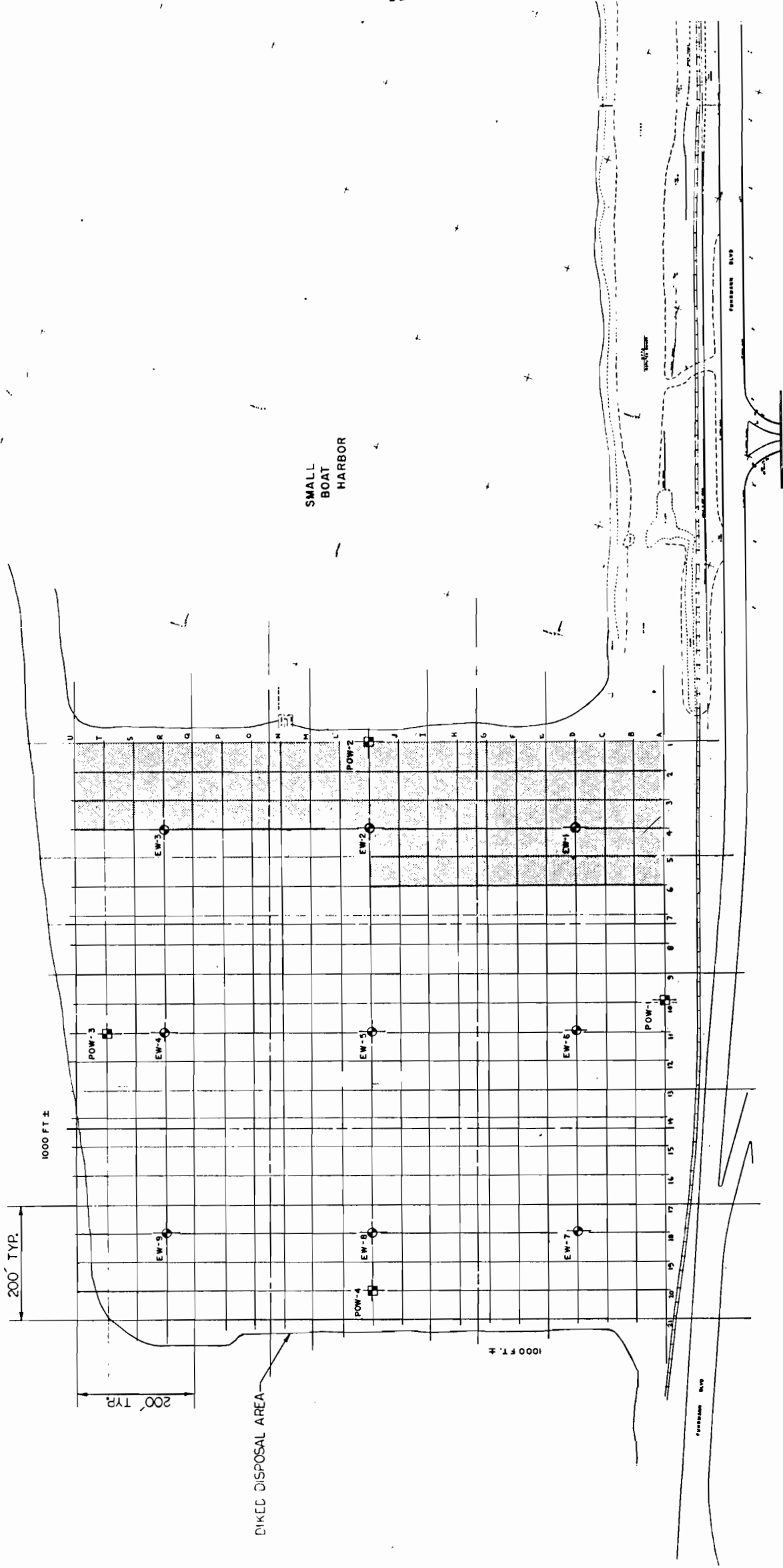
CK'D. BY: SRP

DATE: 2-87

DRWG. NO. A.3



LAKE ERIE



LEGEND:

MONITORING WELL NO. EW-1 ENVIRONMENTAL MONITORING WELL (9 TOTAL)
POW-1 PERIMETER OBSERVATION WELL (4 TOTAL)

AREA OF VISIBLE DEMOLITION DEBRIS W/HIGH METAL CONTACT AT SURFACE

SCALE: 0 50 100 200 FT.

NIAGARA FRONTIER TRANSPORTATION AUTHORITY
DIKED DISPOSAL AREA BUFFALO, NEW YORK

AREA OF DEMOLITION DEBRIS MAP

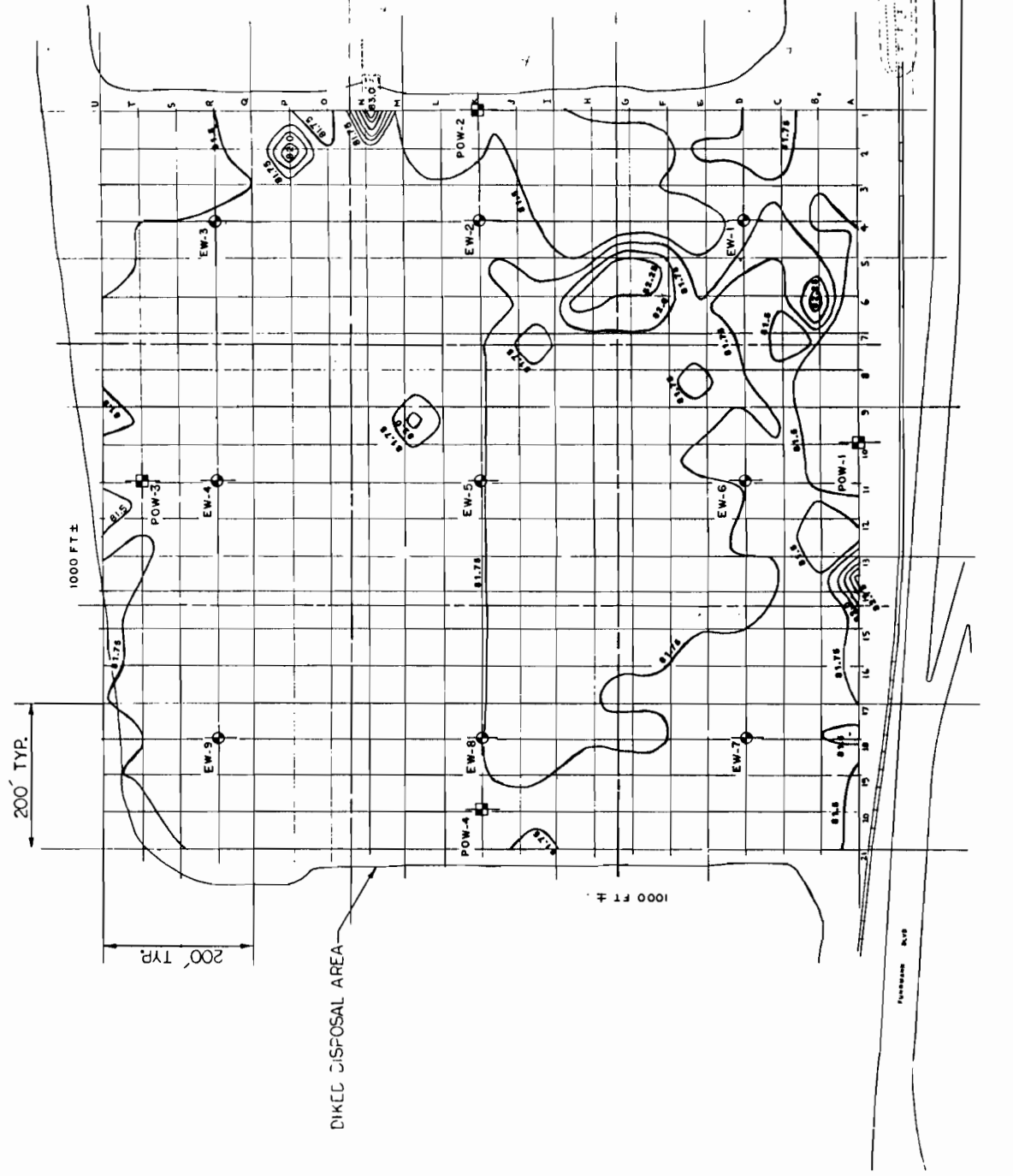
THOMSEN ASSOCIATES
CONSULTING ENGINEERS

DR. BY: DAW	SCALE: AS NOTED	PROJ. NO. 87A-86-94A
CK'D BY: SRP	DATE: 2-87	DRWG. NO. A.6

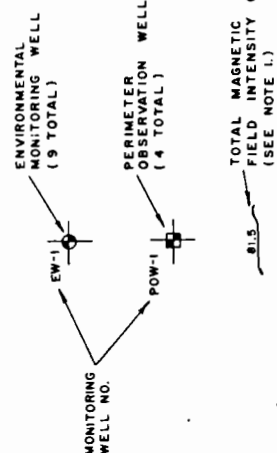
- NOTES:
- Area of demolition debris corresponds to conditions existing at time of geophysical field work on November 17, 18 & 19, 1986
 - This drawing is made from a base drawing supplied by NFTA



LAKE ERIE



LEGEND:



NOTES:

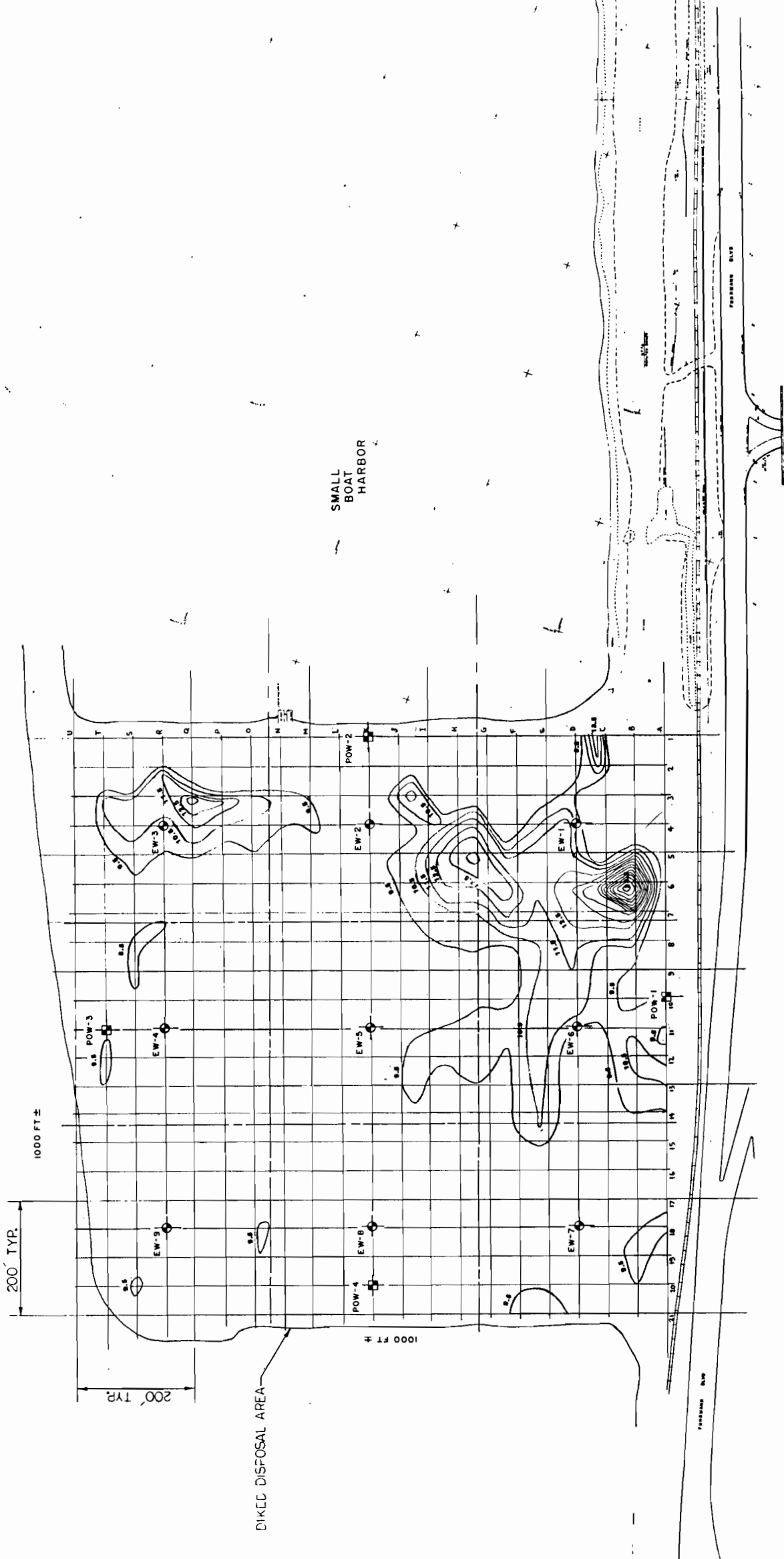
1. Contour interval is 0.25 kilogammas
2. This drawing is made from a base map supplied by NFTA
3. Magnetometer survey conducted on November 17, 18, & 19, 1986
4. Normal magnetic field intensity for diked disposal area is estimated at 56 kilogammas



NIAGARA FRONTIER TRANSPORTATION AUTHORITY	
DIKED DISPOSAL AREA	BUFFALO, NEW YORK
MAGNETOMETER SURVEY	
TOTAL MAGNETIC FIELD INTENSITY	
CONTOUR MAP	
THOMSEN ASSOCIATES	
CONSULTING ENGINEERS	
DR. BY: DAW	SCALE: AS NOTED
CK'D BY: SRP	DATE: 2-87
PROJ. NO. 87A-86-94A	
DRWG. NO. A.5	

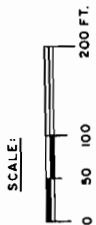


LAKE ERIE



LEGEND:

- ENVIRONMENTAL MONITORING WELL (9 TOTAL)
- MONITORING WELL NO.
- PERIMETER OBSERVATION WELL (4 TOTAL)
- APPARENT CONDUCTIVITY CONTOUR (SEE NOTES 2 AND 4)



- NOTES:
1. Data reduced using a mean background of 16.7 millimhos per meter from baselines F through T, Station No. 1
 2. Contour units are 20 log10; Background Conductivity in decibels (db) using a mean background value of 16.7 millimhos per meter
 3. Contour interval: 10 meters
 4. Contour interval 1.0 decibel
 5. This drawing is made from a base drawing supplied by NFTA
 6. Conductivity survey conducted on November 17, 18 & 19, 1986

NIAGARA FRONTIER TRANSPORTATION AUTHORITY		BUFFALO, NEW YORK	
DIKED DISPOSAL AREA		EM CONDUCTIVITY SURVEY	
APPARENT CONDUCTIVITY CONTOUR MAP			
THOMSEN ASSOCIATES			
CONSULTING ENGINEERS			
DR. BY: DAW	SCALE: AS NOTED	PROJ. NO. BTA-86-94A	
CK'D BY: SRP	DATE: 2-87	DRWG. NO. A.4	

APPENDIX B

BOREHOLE LOGS

Contents of Appendix B:

Borehole logs P.O.W.-1 through
P.O.W.-4 and E.W.-1 through E.W.-9

GENERAL INFORMATION & KEY TO SUBSURFACE LOGS

The Subsurface Logs attached to this report present the observations and mechanical data collected by the driller while at the site, supplemented by classification of the materials removed from the borings as determined through visual identification by technicians in the laboratory. It is cautioned that the materials removed from the borings represent only a fraction of the total volume of the deposits at the site and may not necessarily be representative of the subsurface conditions between adjacent borings or between the sampled intervals. The data presented on the Subsurface Logs together with the recovered samples will provide a basis for evaluating the character of the subsurface conditions relative to the proposed construction. The evaluation must consider all the recorded details and their significance relative to each other. Often analyses of standard boring data indicate the need for additional testing and sampling procedures to more accurately evaluate the subsurface conditions. Any evaluations of the contents of this report and the recovered samples must be performed by Professionals having experience in Soil Mechanics and Foundation Engineering. The information presented in the following defines some of the procedures and terms used on the Subsurface Logs to describe the conditions encountered.

- The figures in the Depth column defines the scale of the Subsurface Log.
- The Sample column shows, graphically, the exact depth range from which a sample was recovered. See Table I for a description of the symbols used to signify the various types of samples.
- The Sample No. is used for identification on sample containers and/or Laboratory Test Reports.
- Blows on Sampler—shows the results of the "Penetration Test", recording the number of blows required to drive a split spoon sampler into the soil beneath the casing. The number of blows required for each six inches penetration is recorded. The total number of blows required for the last 12 inches of penetration are summarized in the "N" Column. The outside diameter of the sampler, the hammer weight and the length of drop are noted at the bottom of the Subsurface Log.
- Blows on Casing—shows the number of blows required to advance the casing a distance of 12 inches. The casing size, the hammer weight and the length of drop are noted at the bottom of the Subsurface Log. If the casing is advanced by means other than driving, the method of advancement will be indicated in the Notes column or under Method of Investigation at the bottom of the Subsurface Log.
- All recovered soil samples are reviewed in the laboratory by technicians. The visual descriptions are made on basis of the sample as recovered and in accordance with the Unified Classification System. Guide Lines for the terms used in descriptions are presented in Tables II and III. The description of the relative soil compactness or consistency is based upon the penetration records as defined in Table IV. The description of the soil moisture is based upon the condition of the sample as recovered. The moisture condition is described as dry, damp, moist or wet. Water used to advance the boring may have affected the in-situ moisture content of the sample. Special terms are used as required to describe materials in greater detail; several such terms are listed in Table V. When sampling gravelly soils with a standard two-inch diameter split spoon, the true percentage of gravel is often not recovered due to the relatively small sampler diameter. The presence of boulders and large gravel is sometimes, but not necessarily, detected by an evaluation of the casing and sampler blows or through the "action" of the drill rig as reported by the driller.

- The description of rock shown is based upon the recovered rock core. Terms frequently used in the description are included in Table VI.

- Miscellaneous observation and procedures noted by the driller are shown in this column, including water level observations. It is important to realize that the reliability of the water level observations depend upon the soil type (water does not readily stabilize in a hole through fine grained soils), and that drill water used to advance the borings may have influenced the observations. The ground water level typically will fluctuate seasonally. One or more perched or trapped water levels may exist in the ground seasonally. All the available readings should be evaluated. If definite conclusions cannot be made, it is often prudent to examine the conditions more thoroughly through test pit excavations or water observation installations.

- The length of core run is defined as length of penetration between retrievals of the core barrel from the bore hole, expressed in feet and tenths of feet. The core recovery expresses the length of core recovered from the core barrel per core run, in percent. The size core barrel used is also noted. The more commonly used sizes of core barrels are denoted "AX" and "NX". The "NX" core, being larger in diameter than "AX" core, often produces better recovery, and is frequently utilized where accurate information regarding the geologic conditions and engineering properties is needed. The "NX" core barrel requires the use of four inch diameter casing.

DATE STARTED 5-1-70 FINISHED 5-1-70 SHEET 1 OF 1		EMPIRE SOILS INVESTIGATIONS, INC. SUBSURFACE LOG		HOLE NO. B-175 SURF. ELEV. 325.6 C. W. DATA-See Note #1	
PROJECT XXX		LOCATION YYY			
DEPTH		SOIL OR ROCK CLASSIFICATION		NOTES	
0		TOPSOIL 3"		Note #1	
1		Brown SILT, some Sand, loose clay (Moist - Loose)		G.W. at 2.2, 2.4 hrs. after completion	
2		Gray SHALE, medium hard weathered, thin bedded some fractures		Cored 2.5'-5.0', Run #1	
3				95% Recovery	
4				AX Core	
5					

TABLE I

	Split Spoon Sample
	Shelby Tube Sample
	Auger or Pit Sample
	Rock Core

TABLE II

Soil Type	Soil Particle Size
Boulder	>12"
Cobble	3"-12"
Gravel-Coarse	3/4"-3/4"
Gravel-Fine	3/4"-1/4"
Sand-Coarse	1/4"-1/10"
Sand-Medium	1/10"-1/40"
Sand-Fine	1/40"-1/200"
Silt-Non Plastic (Granular)	<1/200"
Clay-Plastic (Cohesive)	<1/200"

TABLE III

Term	Percent of Total Sample
"Sand"	35-50
"Silt"	20-35
"Gravel"	10-20
"Clay"	less than 10

(When sampling gravelly soils with a standard split spoon, the true percentage of gravel is often not recovered due to the relatively small sampler diameter.)

TABLE IV

Term	Granular Soils	Cohesive Soils
Loose	1-10	Very Soft
Medium	11-30	Soft
Compact	31-50	Medium
Very Compact	>51	Stiff
		Hard

(Larger particles in the soils will often significantly influence the blows per foot recorded during the Penetration Test.)

TABLE V

Varved - Alternating layers, seams, and beddings of soils.
Layer - Soil deposit more than 6" thick.
Seam - Soil deposit less than 6" thick.
Perling - Soil deposit less than 1/8" thick.
Uniform - All grains are of about the same diameter.

TABLE VI

Rock Classification	Term	Meaning
Hardest	Very Hard	Scratched by finger nail
	Hard	Scratched with difficulty by penknife
	Medium Hard	Scratched with difficulty by penknife
Weathering	Very Weathered	Cannot be scratched by penknife
	Weathered	Judged from the relative amounts of disintegrating iron staining, core recovery, clay seams, etc
Braking	Comminuted	Natural breaks in Rock Layers
	Bedded	(1"-4")
	Thick bedded	(4"-12")
	Massive	(12"-36")

(Fracturing refers to natural breaks in the rock oriented at some angle to the rock layers.)

REF. = Sampler refusal which is generally taken as 100 blows for less than 6-inches of penetration

STARTED 11/20/86
FINISHED 11/20/86
SHEET 1 OF 1



HOLE NO. P.O.W.-1
SURF. ELEV. 577.37
G. W. DEPTH See Note

PROJECT N.F.T.A. - Port of Buffalo
Diked Disposal Area (BTA-86-94)

LOCATION Fuhrmann Blvd.
Buffalo, NY

[illegible]

N = No blows to drive 2 " spoon 12 " with 140 lb. pin wt. falling 30 " per blow.

C = No blows to drive _____" casing _____" with _____lb. weight falling _____"per blow.

METHOD OF INVESTIGATION ASTM D-1586 Using hollow stem augers

CLASSIFICATION Civil Engineer

Visual by

Civil Engineer

DATE
STARTED 11/18/86
FINISHED 11/18/86
SHEET 1 OF 1



SUBSURFACE LOG

HOLE NO. P.O.W. -2
SURF. ELEV. 584.10
G. W. DEPTH See Notes

PROJECT N.F.T.A Port of Buffalo
Diked Disposal Area (BTA-86-94)

LOCATION Fuhrmann Blvd.
Buffal, NY

DEPTH-FT	SAMPLES	SAMPLE NO	BLOWS ON SAMPLER					BLOW ON CASING C	SOIL OR ROCK CLASSIFICATION	NOTES
			0	6	12	18	N			
0		1	16	62					Slag FILL, (moist, very comp.) (GP)	
			39	49			101			
		2	61	36						
			39	37			75			
5		3	94	34					Slag FILL changing to Silty Sand "and" fine Gravel (GP-SM)	
			64	88			126			
		4	38	100	.4		Ref.			
		5	100	.2			Ref.		Slag FILL (wet, very compact) (GP)	
10		6	46	12						
			100	.4			Ref.			
		7	100	.2			Ref.			
									Coarse Sand (wet, very comp.) (SP) Coarse SAND changing to fine sand at 15' (wet, very compact) (SP)	
15		8	67	47						
			52	22			99			
									Boring Complete at 16'	Water encountered at 12' upon Boring Completion G.W. reading at 11' at 8:30 a.m. on 11/19/86

N = No. blows to drive 2 " spoon 12 " with 140 lb. pin wt. falling 30 " per blow. CLASSIFICATION Civil Engineer
C = No. blows to drive " casing " with " lb. weight falling " per blow.
METHOD OF INVESTIGATION ASTM D-1586 Using drilled in casing

Visual by

STARTED 11/19/86
FINISHED 11/19/86
SHEET 1 OF 1



HOLE NO. P.O.W.-3
SURF. ELEV. 580.98
G. W. DEPTH See Note

LOCATION Fuhrmann Blvd.
Buffalo, NY

[illegible]

Visual by
CLASSIFICATION Civil Engineer

METHOD OF INVESTIGATION: ASTM D-1586 Using drilled in casing

DATE
STARTED 11/26/86
FINISHED 11/26/86
SHEET 1 OF 1



SUBSURFACE LOG

HOLE NO. E.W.-2
SURF. ELEV. 583.58
G. W. DEPTH See Note

PROJECT N.F.T.A.- Port of Buffalo

LOCATION Furhmann Blvd.

Diked Disposal Area (BTA-86-94)

Buffalo, NY

DEPTH-FT	SAMPLE NO	BLOWS ON SAMPLER					BLOW ON CASING C	SOIL OR ROCK CLASSIFICATION	NOTES
		0	6	12	18	N			
0	1	4	2					Brn. Sandy SILT, tr. roots (moist, loose) (ML)	Organic decay odor noted -Sample #2- petroleum odor noted
	3	3				5			
	2	3	1					Brn. Silty CLAY, occ. Silt partings tr. roots (moist, stiff) (CL)	
	3	4				4			
5	3	5	5					Brn.-blk. Clayey SAND, tr. roots (moist, loose) (SC)	
	4	4				9			
	4	1	1					Blk. CLAY, tr. silt (moist, very soft) (CL)	
	1	1				2			
	5	WOH/12"						Becomes brown-black	
		WOH/12"					WOH		
10	6	2	2					Contains little f-c Sand	Organic decay odor noted in samples #7, 8, 9 and 10
	1	2				3			
	7	WOH/24"					WOH	Blk. Sandy CLAY (wet, very soft) (CL)	
15	8	WOH/24"					WOH	Blk. SILT, tr. sand (wet, loose) (ML)	
	9	WOH/24"					WOH		
	10	WOH/24"					WOH		
20	11	WOH 2						Brn. f-c SAND, some Silt (moist, loose) (SW)	
	5	11				7			
	12	1	2					Becomes f-c SAND (wet)	
	5	8				7			
25								Boring Complete at 24.0'	Water encountered at 12' upon Boring Completion

N = No blows to drive 2 " spoon 12 " with 140 lb. pin wt. falling 30 "per blow.

C = No blows to drive " casing " with lb. weight falling "per blow.

METHOD OF INVESTIGATION ASTM D-1586 Using hollow stem augers

Visual by
Geologist

STARTED 12/1/86
FINISHED 12/1/86
SHEET 1 OF 1



HOLE NO. E.W.-3
SURF. ELEV. 580.77
G. W. DEPTH See Note

PROJECT N.F.T.A. - Port of Buffalo
Diked Disposal Area (BTA-86-94)

LOCATION Fuhrmann Blvd.
Buffalo, NY

[illegible]

N = No blows to drive 2 " spoon 12 " with 140 lb. pin wt. falling 30 " per blow.

C = No blows to drive _____ " casing _____ " with _____ lb. weight falling _____ " per blow.

METHOD OF INVESTIGATION ASTM D-1586 Using hollow stem augers

CLASSIFICATION Civil Engineer

Visual by

STARTED 11/21/86
FINISHED 11/21/86
SHEET 1 OF 1



HOLE NO. E.W.-6
SURF. ELEV. 578.49
G. W. DEPTH See Note

LOCATION Fuhrmann Blvd.
Buffalo, NY

[illegible]

Visual by _____
CLASSIFICATION Civil Engineer

METHOD OF INVESTIGATION: ASTM D-1586 Using hollow stem augers

R/T Form H

HOLE NO. E.W.-8
SURF. ELEV. 580.47
G. W. DEPTH See Notes

DATE

STARTED 12/3/86

FINISHED 12/3/86

SHEET 1 OF 1



SUBSURFACE LOG

HOLE NO. E.W. -9

SURF. ELEV. 582.64

G. W. DEPTH See Notes

PROJECT N.F.T.A.-Port of Buffalo

LOCATION Fuhrmann Blvd.

Diked Disposal Area (BTA-86-94)

Buffalo, NY

DEPTH-FT	SAMPLE NO	BLOWS ON SAMPLER					BLOW ON CASING C	SOIL OR ROCK CLASSIFICATION	NOTES
		0	6	12	18	N			
0	1	1	1					Brn. Clayey SAND (moist, loose)(SC)	
		1	2			2			Tr. to moderate petroleum odor
	2	1	1					Blk. Silty SAND, tr. clay (moist, loose) (SM)	
		1	2			2			
5	3	3	5					Blk. f-m SAND (moist, loose) (SP)	Tr. petroleum odor
		4	2			9			
	4	1	1						Tr. petroleum odor
		1	1			2			Poor sample recovery
	5	1	1						-possible cobble obstruction
		1	1			2			
10	6	1	1					Blk. Clayey SAND (moist, loose)(SC)	Tr. petroleum odor
		7	1			8		"some" wood frags.	
	7	1	2						
		2	1			4		(wet, loose)	Tr. petroleum odor
15	8	1	1					Blk. Silty CLAY (wet, very soft) (CL)	Moderate to heavy petroleum odor
		1	1			2			
	9	1	2					Blk. Clayey SILT (wet, soft) (SM)	Moderate to heavy petroleum odor
		1	1			3			
	10	WOH	WOH					(moist, very soft)	Moderate to heavy petroleum odor
20		1	1			1			
	11	WOH	WOH						
		1	1			1		Gray Silty CLAY (moist, very soft) (CL)	
	12	2	3						
		3	2			6		Blk. Silty SAND (wet, loose) (SM)	Heavy petroleum odor
25	13	5	8						
		9	13			17		Gy. SILT, little clay (moist, firm) (ML)	
	14	9	11					Gray Clayey SILT (wet, hard)	
		12	13			23			
30								Boring Complete at 28'	Water encountered at 14' upon Boring Completion

Visual by

N = No blows to drive 2 " spoon 12 " with 140 lb. pin wt. falling 30 "per blow.

CLASSIFICATION Civil Engineer

C = No blows to drive " casing " with lb. weight falling "per blow.

METHOD OF INVESTIGATION: ASTM D-1586 Using hollow stem augers

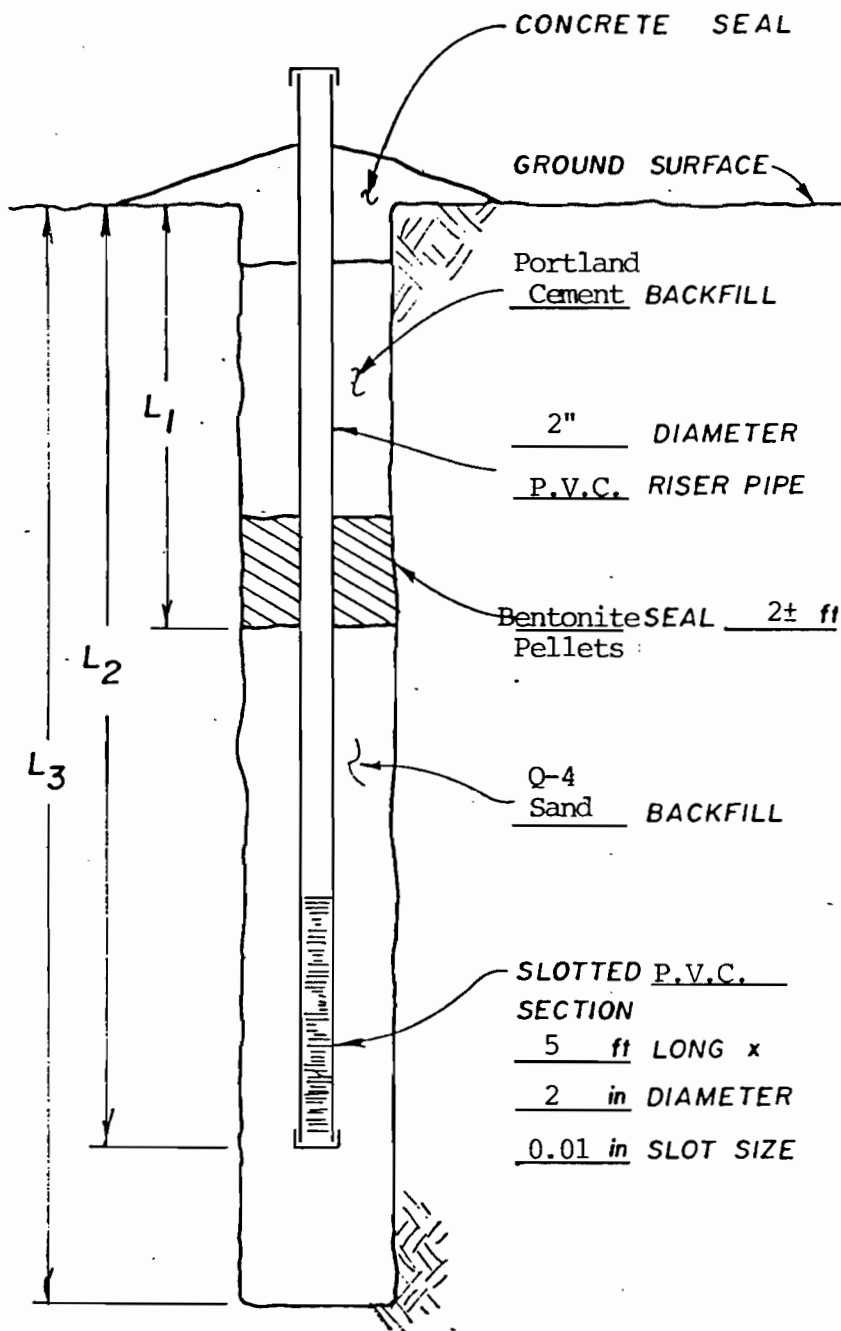
APPENDIX C

MONITORING WELL DETAILS

Contents of Appendix C:

Drawing C.1 - Well Details

Table C.1 - Well Characteristics



WELL N°	L ₁	L ₂	L ₃
POW-1	3'	9'	10'
POW-2	7'	14'	16'
POW-3	4'	11'	12'
POW-4	5.7'	19'	20'
E.W.-1	6'	13'	14'
E.W.-2	9.2'	16.2'	24'
E.W.-3	6'	13'	13'
E.W.-4	7'	14'	14'
E.W.-5	7.7'	14.7'	16'
E.W.-6	3.4'	10.4'	10.5'
E.W.-7	5'	13'	16'
E.W.-8	9'	20'	20'
E.W.-9	16.25'	23.25'	28'



WELL DETAILS

Environmental Engineering Study at
Port of Buffalo
Niagara Frontier Transportation Authority
Diked Disposal Area

DR.BY: EJB

SCALE: None

PROJ. NO. BTA-86-94

CK'D.BY:

DATE: 12/9/86

DRWG. NO. C.1

TABLE C.1. WELL CHARACTERISTICS

Well No.	Grid Location	Date Completed/Drilled/Installed	Date & Time Developed	Date & Time Purged & Sampled	Depth (B.O.W.) From Grade (ft.)	Stick Up (ft.)	Water Level Before Developing (ft.)	Well Volumes Withdrawn During Developing	Water Level Before Purging (ft.)	Well Volumes Withdrawn During Purging	Remarks
P.O.W.-1	A-10 (+10'W.)	11/20/86 11/20/86	11/26/86 10 a.m.	12/2/86 7 p.m.	9.00	2.87	4.79	2	4.67	3	Well dry after developing 2 vols. Well dry after purging 3 vols. Well allowed to recharge before sampling.
P.O.W.-2	K-1	11/18/86 11/18/86	11/25/86 2:30 p.m.	12/2/86 8:30 a.m.	14.00	2.67	12.92	10	12.67	5	Sampled after purging 5 vols.
P.O.W.-3	T-11	11/19/86 11/19/86	11/25/86 5:00 p.m.	12/2/86 4:30 p.m.	11.00	3.67	10.58	10	10.50	5	Sampled after purging 5 vols.
P.O.W.-4	K-20	11/20/86 11/20/86	11/26/86 8:00 a.m.	12/2/86 5:30 p.m.	19.00	2.83	11.12	10	10.87	5	Sampled after purging 5 vols.
E.W.-1	D-4	11/25/86 11/25/86	12/1/86 9:30 a.m.	12/4/86 5:30 p.m.	13.00	2.25	12.75	10	9.75	5	Sampled after purging 5 vols.
E.W.-2	K-4	11/26/86 11/26/86	12/1/86 4:30 p.m.	12/5/86 7:00 a.m.	16.20	1.83	10.83	5	9.83	5	Sampled after purging 5 vols.
E.W.-3	R-4	12/1/86 12/1/86	12/2/86 7:45 a.m.	12/8/86 5:00 p.m.	13.00	3.17	12.08	3	9.00	1.3	Well dry after developing 3 vols. Well dry after purging 1.3 vols. Well allowed to recharge before sampling
E.W.-4	R-11	12/1/86 12/1/86	12/2/86 2:30 p.m.	12/5/86 12:30 p.m.	14.00	1.75	9.33	9.4	8.83	5	Sampled after purging 5 vols.
E.W.-5	K-11	12/2/86 12/2/86	12/3/86 11:00 a.m.	12/8/86 11:45 a.m.	14.70	1.50	5.75	7.5	6.00	3	Well dry after developing 7.5 vols. Sampled after purging 3 vols.
E.W.-6	D-11	11/21/86 11/21/86	12/2/86 1:00 p.m.	12/5/86 3:00 p.m.	10.40	2.58	5.00	2.3	4.67	4.5	Well dry after developing 2.3 vols. Sampled after purging 4.5 vols.
E.W.-7	D-18	12/2/86 12/2/86	12/4/86 9:30 a.m.	12/8/86 3:00 p.m.	13.00	2.50	4.75	3.25	3.67	1.6	Well dry after developing 3.25 vols. Well dry after purging 1.6 vols. Allowed to recharge before sampling
E.W.-8	K-18	12/2/86 12/3/86	12/4/86 1:00 p.m.	12/8/86 1:30 p.m.	20.00	2.33	7.00	6	7.33	4.1	Sampled after purging 4.1 vols.
E.W.-9	R-18	12/3/86 12/3/86	12/4/86 3:30 p.m.	12/8/86 11:00 a.m.	23.25	1.75	9.00	5.8	10.42	4.6	Sampled after purging 4.6 vols.

NOTE 1: Developing & Purging conducted through bailing.

NOTE 2: Water levels measured from top of the PVC (i.e. subtract stickup from water level to obtain depth below ground surface).

APPENDIX D

GEOPHYSICAL DATA

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Table D.1 - Conductivity Survey

Table D.2 - Magnetometer Survey

Table D.3 - Interpretation of Magnetic Intensity
Results

Table D.4a- Group I EM Conductivity Anomalies Due to
Demolition Debris at Surface

Table D.4b- Group II EM Conductivity Anomalies from
Unknown Sources

Table D.5a- Group I Magnetometer Anomalies Due to
Demolition Debris at Surface

Table D.5b- Group II Magnetometer Anomalies Due to
Unknown Sources

Table No. D.1
1986 MTA CONDUCTIVITY SURVEY
FOR 10 METER COIL SPACING WITH HORIZONTAL DIPOLES
NOVEMBER 17 AND 18, 1986

SYMBOL KEY

- - ANOMALIES DUE TO DEMOLITION DEBRIS AND FILL W/HIGH VISIBLE METAL CONTENT
- ▲ - ANOMALIES FROM UNKNOWN SOURCES

BASELINE	STATION NO.	DIRECT READING milliamps/meter	NORMALIZED READINGS	NOTES
A	1.00	36.0	ERR 6.67	Surface Rubble, Some Metals TX at Sta. 1+00
	2.00	52.0	■ 9.87	
	3.00	42.0	8.01	
	4.00	39.5	7.48	
	5.00	47.0	■ 8.99	
	6.00	41.0	7.80	
	7.00	33.0	5.92	
	8.00	40.0	7.59	
	9.00	46.0	▲ 8.80	
	10.00	52.0	▲ 9.87	
	11.00	48.0	▲ 9.17	
	12.00	59.0	▲ 10.96	
	13.00	52.0	▲ 9.87	
	14.00	43.0	8.22	
	15.00	40.0	7.59	
	16.00	45.0	8.61	
	17.00	52.0	▲ 9.87	
	18.00	47.0	▲ 8.99	
	19.00	45.0	8.61	
	20.00	40.0	7.59	
B	1.00	6.7	-7.93	TX at Sta. 1+00; RX toward line C
	2.00	31.0	5.37	
	3.00	31.0	5.37	
	4.00	30.0	5.09	
	5.00	69.0	▲ 12.32	
	6.00	250.0	▲ 23.50	
	7.00	80.0	▲ 13.61	
	8.00	55.0	▲ 10.35	
	9.00	48.0	9.17	
	10.00	49.0	9.35	
	11.00	58.0	▲ 10.81	
	12.00	56.0	▲ 10.51	
	13.00	54.0	▲ 10.19	
	14.00	46.0	8.80	
	15.00	44.0	8.41	
	16.00	43.0	8.22	
	17.00	46.0	8.80	
	18.00	54.0	▲ 10.19	
	19.00	51.0	▲ 9.70	
	20.00	46.0	8.60	
C	1.00	86.0	■ 14.24	TX at Sta. 1+00; RX toward line C
	2.00	67.0	■ 12.07	
	3.00	35.0	6.43	
	4.00	31.0	5.37	
	5.00	40.0	7.59	

Table No. D. 1(continued)

SYMBOL KEY

■ - ANOMALIES DUE TO DEMOLITION DEBRIS
AND FILL W/HIGH VISABLE METAL CONTENT

▲ - ANOMALIES FROM UNKNOWN SOURCES

6.00 101.0
7.00 77.0
8.00 54.0
9.00 52.0
10.00 51.0
11.00 47.0
12.00 45.0
13.00 44.0
14.00 46.0
15.00 46.0
16.00 45.0
17.00 45.0
18.00 44.0
19.00 43.0
20.00 42.0

TX at Sta. 20+00; RX toward D line

D

1.00 25.5
2.00 34.0
3.00 52.0
4.00 71.0
5.00 66.0
6.00 78.0
7.00 71.0
8.00 65.0
9.00 62.0
10.00 62.0
11.00 47.0
12.00 46.0
13.00 47.0
14.00 44.0
15.00 49.0
16.00 48.0
17.00 48.0
18.00 50.0
19.00 44.0
20.00 41.0

TX at Sta. 1+00; RX toward line E

3.68
6.18
9.87
12.57
11.94
13.39
12.57
11.80
11.39
11.39
8.99
8.80
8.99
8.41
9.35
9.17
9.17
9.53
8.41
7.80

Junk at surface

E

1.00 27.5
2.00 42.0
3.00 45.0
4.00 56.0
5.00 70.0
6.00 64.0
7.00 59.0
8.00 55.0
9.00 56.0
10.00 60.0
11.00 60.0
12.00 60.0
13.00 57.0
14.00 56.0
15.00 46.0
16.00 43.0
17.00 46.0
18.00 47.0
19.00 44.0

Junk at surface

4.33
8.01
8.61
10.51
12.45
11.67
10.76
10.35
10.51
11.71
11.11
11.11
10.66
10.51
8.80
8.22
8.80
8.99
8.41

Table No. D.1 (continued)

F	20.00	TX at Sta. 20+00; RX toward line F		SYMBOL KEY
		8.61	TX at Sta. 1+00; RX toward line 6	
	1.00	-1.23	8.01	■ - ANOMALIES DUE TO DEMOLITION DEBRIS
	2.00	3.68	7.59	■ - ANOMALIES DUE TO DEMOLITION DEBRIS
	3.00	42.0	11.25	▲ - ANOMALIES FROM UNKNOWN SOURCES
	4.00	40.0	14.24	
	5.00	61.0	12.45	
	6.00	86.0	8.80	
	7.00	70.0	8.22	
	8.00	46.0	8.01	
	9.00	43.0	8.22	
	10.00	50.0	▲ 9.53	
	11.00	50.0	▲ 9.53	
	12.00	48.0	9.17	
	13.00	49.0	9.35	
	14.00	48.0	9.17	
	15.00	44.0	8.41	
	16.00	44.0	8.41	
	17.00	44.0	8.41	
	18.00	43.0	8.22	
	19.00	45.0	8.61	
	20.00	42.0	8.01	
Junk at surface				
	1.00	18.0	0.65	
	2.00	34.0	6.18	
	3.00	44.0	8.41	
	4.00	77.0	13.28	
	5.00	93.0	14.92	
	6.00	68.0	12.20	
	7.00	52.0	▲ 9.87	
	8.00	50.0	▲ 9.53	
	9.00	49.0	▲ 9.35	
	10.00	50.0	▲ 9.53	
	11.00	54.0	▲ 10.19	
	12.00	52.0	▲ 9.87	
	13.00	47.0	8.99	
	14.00	44.0	8.41	
	15.00	45.0	8.61	
	16.00	45.0	8.61	
	17.00	45.0	8.61	
	18.00	45.0	8.61	
	19.00	44.0	8.41	
	20.00	46.0	8.80	
TX at Sta. 20+00; RX toward line H				
H	1.00	15.0	-0.93	
	2.00	27.0	4.17	
	3.00	43.0	8.22	
	4.00	56.0	10.51	
	5.00	78.0	13.39	
	6.00	69.0	12.92	
	7.00	53.0	10.03	
	8.00	49.0	9.35	
	9.00	48.0	9.17	
	10.00	48.0	9.17	
	11.00	52.0	▲ 9.87	
	12.00	50.0	▲ 9.59	
Galvanized pipe at surface				

Table No. D.1 (continued)

		SYMBOL KEY	
		■ -	ANOMALIES DUE TO DEMOLITION DEBRIS AND FILL W/HIGH VISIBLE METAL CONTENT
		▲ -	ANOMALIES FROM UNKNOWN SOURCES
I	13.00	48.0	9.17
	14.00	48.0	9.17
	15.00	47.0	8.99
	16.00	46.0	8.80
	17.00	45.0	8.61
	18.00	44.0	8.41
	19.00	45.0	8.61
	20.00	41.0	7.80
	1.00	19.0	1.12
	2.00	48.0	9.17
	3.00	68.0	12.20
	4.00	63.0	11.53
	5.00	56.0	10.51
	6.00	52.0	9.87
	7.00	50.0	9.53
	8.00	49.0	9.35
	9.00	48.0	9.17
	10.00	49.0	9.35
	11.00	50.0	9.53
	12.00	51.0	9.70
	13.00	50.0	9.53
	14.00	49.0	9.35
J	15.00	49.0	9.35
	16.00	47.0	8.99
	17.00	45.0	8.61
	18.00	46.0	8.80
	19.00	42.0	8.01
	20.00	41.0	7.80
	TX at Sta. 20+00; RX toward line J		
	1.00	15.5	-0.65
	2.00	32.0	5.65
	3.00	46.0	8.80
	4.00	NR	ERR
	5.00	49.0	9.35
	6.00	47.0	8.99
	7.00	48.0	9.17
	8.00	47.0	8.99
	9.00	48.0	9.17
	10.00	49.0	9.35
	11.00	47.0	8.99
	12.00	48.0	9.17
	13.00	48.0	9.17
	14.00	48.0	9.17
	15.00	47.0	8.99
	16.00	48.0	9.17
	17.00	46.0	8.80
	18.00	45.0	8.61
K	19.00	46.0	8.80
	20.00	41.0	7.80
	TX at Sta. 1+00; RX toward line K		
	1.00	21.0	1.99
	2.00	51.0	9.70
	3.00	46.0	8.80
	4.00	48.0	9.17
	5.00	46.0	8.80
	6.00	46.0	8.80
	7.00	46.0	8.80
	8.00	46.0	8.80
	9.00	46.0	8.80
	10.00	46.0	8.80
	11.00	46.0	8.80
	12.00	46.0	8.80
	13.00	46.0	8.80
	14.00	46.0	8.80
	15.00	46.0	8.80
	16.00	46.0	8.80
	17.00	46.0	8.80
	18.00	46.0	8.80
	19.00	46.0	8.80
	20.00	46.0	8.80

Junk at surface

Junk at surface

Table No. D.1 1 (continued)

		SYMBOL KEY	
		■ -	ANOMALIES DUE TO DEMOLITION DEBRIS AND FILL W/HIGH VISIBLE METAL CONTENT
		▲ -	ANOMALIES FROM UNKNOWN SOURCES
TX at Sta. 20+00; RX toward line L			
L	6.00	8.61	
	7.00	9.17	
	8.00	▲ 9.53	
	9.00	9.17	
	10.00	8.80	
	11.00	8.99	
	12.00	8.80	
	13.00	8.61	
	14.00	8.99	
	15.00	8.80	
	16.00	9.35	
	17.00	8.80	
	18.00	8.41	
	19.00	8.22	
	20.00	7.14	
TX at Sta. 1+00; RX toward line N			
N	1.00	0.15	
	2.00	6.67	
	3.00	9.17	
	4.00	■ 9.53	
	5.00	8.80	
	6.00	8.80	
	7.00	8.99	
	8.00	9.17	
	9.00	9.44	
	10.00	9.17	
	11.00	8.32	
	12.00	7.37	
	13.00	8.99	
	14.00	8.61	
	15.00	8.99	
	16.00	9.08	
	17.00	9.17	
	18.00	8.61	
	19.00	8.41	
	20.00	7.37	
Rubble at surface-concrete & rebar			
N	1.00	2.39	
	2.00	■ 11.80	
	3.00	■ 10.19	
	4.00	9.17	
	5.00	8.99	
	6.00	9.35	
	7.00	8.99	
	8.00	8.80	
	9.00	9.17	
	10.00	8.99	
	11.00	7.80	
	12.00	7.59	
	13.00	8.61	
	14.00	8.99	
	15.00	8.99	
	16.00	9.17	
	17.00	9.44	
	18.00	8.71	
	19.00	7.59	
	20.00	7.59	

Table No. D.1 (continued)

N	20.00	40.0	7.59 TX at Sta.20+00;RX toward line N		SYMBOL KEY
			ERR	TX at Sta.1+00;RX toward line D Rubble -concrete	
1.00	17.5	NR	0.41		
2.00	58.0	NR	10.81		■ - ANOMALIES DUE TO DEMOLITION DEBRIS
3.00	54.0		10.19		AND FILL W/HIGH VISABLE METAL CONTENT
4.00	47.5		9.08		▲ - ANOMALIES FROM UNKNOWN SOURCES
5.00	46.5		8.89		
6.00	45.0		8.61		
7.00	46.0		8.80		
8.00	45.0		8.61		
9.00	46.5		8.89		
10.00	40.0		7.59		
11.00	38.0		7.14		
12.00	41.0		7.80		
13.00	43.0		8.22		
14.00	43.0		8.99		
15.00	47.0		8.99		
16.00	50.0		9.53		
17.00	50.0		9.53		
18.00	48.0		9.17		
19.00	38.0		7.14		
20.00					
Demolition debris					
1.00	15.0		-0.93		
2.00	NR		ERR		
3.00	74.0		12.93		
4.00	51.0		9.70		
5.00	47.0		8.99		
6.00	47.0		8.99		
7.00	47.0		8.99		
8.00	44.0		8.99		
9.00	40.0		8.41		
10.00	40.0		7.59		
11.00	34.0		6.18		
12.00	36.0		6.67		
13.00	38.0		7.14		
14.00	40.0		7.59		
15.00	42.0		8.01		
16.00	45.0		8.61		
17.00	45.0		8.61		
18.00	45.0		8.61		
19.00	40.0		7.59		
20.00	36.0		6.67		
TX at Sta.20+00;RX toward line P					
P					
1.00	15.0		-0.93		
2.00	31.0		5.37		
3.00	81.0		13.72		
4.00	62.0		11.39		
5.00	48.0		9.17		
6.00	45.0		8.61		
7.00	49.0		9.35		
8.00	48.0		9.17		
9.00	44.0		8.41		
10.00	40.0		7.59		
11.00	38.0		7.14		
12.00	31.0		5.37		

Table No. D.1(continued)

		SYMBOL KEY	
		■ - ANOMALIES DUE TO DEMOLITION DEBRIS AND FILL W/HIGH VISIBLE METAL CONTENT	
		▲ - ANOMALIES FROM UNKNOWN SOURCES	
Q	13.00	28.0	4.49
	14.00	33.0	5.92
	15.00	36.0	6.67
	16.00	38.0	7.14
	17.00	44.0	8.41
	18.00	46.0	8.80
	19.00	44.0	8.41
	20.00	36.0	6.67
	1.00	12.0	-2.87
	2.00	64.0	■ 11.67
	3.00	59.0	■ 10.96
	4.00	51.0	■ 9.70
	5.00	49.0	■ 9.35
	6.00	47.0	■ 8.99
	7.00	50.0	▲ 9.53
	8.00	44.0	■ 8.41
	9.00	41.0	7.80
	10.00	39.0	7.37
	11.00	36.0	6.67
	12.00	30.0	5.09
	13.00	28.5	4.64
	14.00	33.0	5.92
	15.00	35.5	6.55
	16.00	39.0	7.37
	17.00	44.0	8.41
	18.00	43.0	8.22
	19.00	40.5	7.69
	20.00	40.0	7.59
TX at Sta. 20+00; RX toward line R			
R	1.00	16.0	-0.37
	2.00	28.5	4.64
	3.00	60.0	■ 11.11
	4.00	58.0	■ 10.81
	5.00	51.0	■ 9.70
	6.00	48.0	9.17
	7.00	49.0	9.35
	8.00	51.0	▲ 9.70
	9.00	51.0	▲ 9.70
	10.00	42.0	8.01
	11.00	39.0	7.37
	12.00	38.0	7.14
	13.00	32.0	5.65
	14.00	31.0	5.37
	15.00	34.0	6.18
	16.00	36.0	6.67
	17.00	38.0	7.14
	18.00	41.0	7.80
	19.00	55.0	▲ 10.35
	20.00	44.0	■ 9.41
TX at Sta. 1+00; RX toward line S			
S	1.00	15.0	-0.93
	2.00	49.0	■ 9.35
	3.00	60.0	■ 11.11
	4.00	53.0	■ 10.03
	5.00	47.0	8.99
Demolition debris			

Table No. D.1

SYMBOL KEY			
-----		-----	
■	-	ANOMALIES DUE TO DEMOLITION DEBRIS AND FILL W/HIGH VISABLE METAL CONTENT	
▲	-	ANOMALIES FROM UNKNOWN SOURCES	
6.00	43.00	8.22	
7.00	40.00	7.59	
8.00	43.00	8.22	
9.00	39.00	7.37	
10.00	39.00	7.37	
11.00	54.00	▲ 10.19	
12.00	52.00	▲ 9.87	
13.00	33.00	5.92	
14.00	28.5	4.64	
15.00	28.5	4.64	
16.00	36.00	6.67	
17.00	37.00	6.91	
18.00	18.5	0.89	
19.00	16.5	-0.10	
20.00	12.5	-2.52 TX at Sta. 20+00; RX toward rip-rap wall	
1.00	17.5	0.41 TX at Sta. 1+00; RX toward lake	
2.00	NR	ERR	
3.00	43.00	8.22	
4.00	42.00	8.01	
5.00	44.00	8.41	
6.00	41.00	7.80	
7.00	39.00	7.37	
8.00	39.00	7.37	
9.00	32.00	5.65	
10.00	28.00	4.99	
11.00	20.00	1.57	
12.00	22.00	2.39	
13.00	17.00	0.15	
14.00	15.00	-0.93	

NOTES:

RX -- RECEIVER --
TX - TRANSMITTER
NR - NO READING
10 RANGE - RECEIVE

10 RANGE - RECEIVER SET ON 10 millimhos/meter SENSITIVITY RANGE

SYMBOL KEY

■ - ANOMALIES DUE TO SURFACE
DEMOLITION DEBRIS OR
JUNK FILL.

▲ - ANOMALIES DUE TO
UNKNOWN MATERIAL

Table No. D.2
1986 NFA MAGNETOMETER SURVEY
BUFFALO, NEW YORK
November 18 & 19, 1986

BASELINE	STATION NO	TIME	READINGS				AVERAGE	CONVERSION TOTAL FIELD GAMMAS	CORRECTION FACTOR GAMMAS	CORRECTED READINGS TOTAL FIELD GAMMAS	NOTES
			1	2	3	4					
A	1.0	9:10	25507	25508	25510		25508	81377	6.1	81383	
	2.0		25561	25568	25571		25567	81382	12.2	81404	
	3.0		29248	29948	29778		29658	82415	18.3	82433	Large metal pontoon near station
	4.0		26073	26068	26075		26072	81518	24.4	81542	
	5.0		24934	25000	24983		24992	81248	30.5	81279	
	6.0		24172	24177	24172		24174	81043	36.6	81080	
	7.0		23783	23794	23797		23791	80948	42.7	80991	
	8.0		22603	22592	22595		22597	80649	48.8	80698	
	9.0		24625	24622	24627		24625	81156	54.9	81211	
	10.0		25073	25062	25066		25064	81266	61.0	81327	
	11.0		27130	27110	27119		27120	81780	67.1	81847	
	12.0		24842	24834	24847		24841	81210	73.2	81283	
	13.0		30842	30845	30847		30845	82711	79.3	82790	
	14.0		26984	26977	26970		26977	81744	85.4	81830	
	15.0		27064	27062	27058		27061	81765	91.5	81857	
	16.0		26715	26701	26704		26707	81677	97.6	81774	
	17.0		25081	25084	25076		25080	81270	103.7	81374	
	18.0		26896	26887	26878		26887	81722	109.8	81832	
	19.0		27276	27274	27264		27271	81818	115.9	81934	
	20.0	9:29	27177	27176	27181		27178	81795	122.0	81917	
B	1.0	9:51	24602	24638	24615		24618	81155	244.0	81399	
	2.0		25367	25201	25170		25246	81312	237.9	81549	
	3.0		24946	24948	24952		24949	81237	231.8	81469	
	4.0		24665	24664	24654		24661	81165	225.7	81391	
	5.0		26805	26815	26825		26815	81704	219.6	81923	
	6.0		29080	29015	29002		29032	82258	213.5	82472	No visible metal
	7.0		25048	25042	25043		25044	81261	207.4	81468	
	8.0		24546	24548	24547		24547	81137	201.3	81338	
	9.0		24577	24576	24576		24576	81144	195.2	81339	
	10.0		24972	24973	24973		24973	81243	189.1	81432	
	11.0		25432	25439	25432		25434	81359	183.0	81542	
	12.0		23996	23996	23996		23996	80999	176.9	81176	
	13.0		25302	25302	25303		25302	81326	170.8	81496	
	14.0		25557	25556	25556		25556	81389	164.7	81554	
	15.0		25509	25510	25532		25517	81379	158.6	81538	
	16.0		25302	25302	25302		25302	81326	152.5	81478	
	17.0		25228	25229	25228		25228	81307	146.4	81453	
	18.0		25525	25532	25532		25530	81382	140.3	81523	
	19.0		25416	25418	25420		25418	81355	134.2	81489	
	20.0	9:30	24553	24550	24552		24552	81138	128.1	81266	
C	1.0	9:45	27127	27728	27727		27727	81932	243.9	82176	
	2.0		27153	27150	27147		27150	81788	243.8	82031	
	3.0		26033	26023	26008		26021	81505	243.7	81749	
	4.0		27037	27034	27027		27033	81758	243.6	82002	

No visible metal

SYMBOL KEY

■ - ANOMALIES DUE TO SURFACE
DEMOLITION DEBRIS OR
JUNK FILL.

▲ - ANOMALIES DUE TO
UNKNOWN MATERIAL

Table No. D.2 (continued)

5.0	25925	25927	25925	25926	81481	243.5	■ 81725
6.0	25127	25131	25133	25130	81283	243.4	81526
7.0	24708	24707	24706	24707	81177	243.3	81420
8.0	25470	25463	25470	25468	81367	243.2	81610
9.0	26029	26029	26029	26029	81602	243.1	▲ 81750
10.0	25658	25658	25658	25658	81415	243.0	81658
11.0	25320	25318	25317	25318	81330	242.9	81572
12.0	25970	25972	25969	25970	81493	242.8	▲ 81735
13.0	26064	26063	26064	26064	81516	242.7	▲ 81759
14.0	25910	25910	25911	25910	81478	242.6	▲ 81720
15.0	25709	25706	25703	25706	81427	242.5	81669
16.0	25668	25665	25664	25666	81416	242.4	81659
17.0	25588	25587	25588	25588	81397	242.3	81638
18.0	25585	25581	25585	25584	81396	242.2	81638
19.0	25541	25542	25541	25541	81385	242.1	81627
20.0	25282	25272	25273	25276	81319	242.0	81561
D							
1.0	25435	25435	25434	25435	81559	240.0	81599
2.0	26232	26237	26241	26237	81559	240.1	■ 81799
3.0	25394	25394	25396	25395	81349	240.2	81589
4.0	24893	24996	24888	24922	81231	240.3	81471
5.0	26387	26388	26389	26388	81597	240.4	■ 81837
6.0	25513	25515	25518	25515	81379	240.5	81619
7.0	26094	26093	26094	26094	81523	240.6	▲ 81764
8.0	26060	26060	26062	26061	81515	240.7	▲ 81756
9.0	25651	25651	25650	25651	81413	240.8	81653
10.0	25696	25696	25695	25696	81424	240.9	81665
11.0	26160	26163	26165	26163	81473	241.0	▲ 81782
12.0	25893	25887	25893	25891	81473	241.1	▲ 81714
13.0	26419	26422	26418	26420	81605	241.2	▲ 81846
14.0	25932	25935	25927	25928	81482	241.3	▲ 81723
15.0	25906	25907	25906	25906	81477	241.4	▲ 81718
16.0	25852	25848	25848	25849	81482	241.5	▲ 81704
17.0	25809	25804	25807	25807	81452	241.6	81693
18.0	25777	25776	25761	25771	81443	241.7	81685
19.0	25742	25744	25742	25743	81436	241.8	81677
20.0	25330	25331	25334	25332	81333	241.9	81575
E							
1.0	25319	25319	25318	25319	81330	240.1	81570
2.0	26432	26431	26423	26429	81607	240.2	■ 81847
3.0	25298	25325	25329	25317	81329	240.3	81570
4.0	24428	24429	24430	24429	81107	240.4	81348
5.0	25072	25061	25113	25082	81271	240.5	81511
6.0	26042	26036	26036	26038	81510	240.6	■ 81750
7.0	26239	26241	26246	26242	81561	240.7	▲ 81801
8.0	26016	26015	26016	26015	81504	240.8	▲ 81745
9.0	26110	26108	26109	26109	81527	240.9	▲ 81768
10.0	26024	26027	26028	26025	81507	241.0	▲ 81749
11.0	26299	26300	26299	26299	81575	241.1	▲ 81816
12.0	26440	26440	26440	26440	81610	241.2	▲ 81851
13.0	26209	26209	26206	26208	81552	241.3	▲ 81793
14.0	26044	26044	26043	26044	81511	241.4	▲ 81752
15.0	26002	26003	26002	26002	81501	241.5	▲ 81742
16.0	25935	25934	25935	25935	81484	241.6	▲ 81725
17.0	25881	25879	25882	25881	81470	241.7	▲ 81712
18.0	25882	25880	25880	25881	81470	241.8	▲ 81712

Fill placed in this area

Fill placed in area from
station 1 though 5

SYMBOL KEY

■ - ANOMALIES DUE TO SURFACE
DEMOLITION DEBRIS OR
JUNK FILL.

▲ - ANOMALIES DUE TO
UNKNOWN MATERIAL

Table No. D.2 (continued)

F	19.0	20.0	11:01	25862	25862	25857	25860	81455	241.9	▲ 81707
				25590	25589	25589	25589	81397	242.0	81639
	1.0	1.0	11:28	25351	25351	25348	25350	81338	244.0	81582
	2.0	2.0		26448	26445	26445	26446	81612	243.9	81655
	3.0	3.0		25551	25559	25560	25557	81389	243.8	81633
	4.0	4.0		24605	24597	24591	24598	81149	243.7	81393
	5.0	5.0		24942	24946	24948	24945	81236	243.6	81490
	6.0	6.0		26729	26728	26727	26728	81682	243.5	81926
	7.0	7.0		26417	26420	26421	26419	81605	243.4	81848
	8.0	8.0		26085	26086	26087	26086	81522	243.3	81765
	9.0	9.0		25921	25920	25918	25920	81480	243.2	81723
	10.0	10.0		26257	26259	26261	26259	81565	243.1	81808
	11.0	11.0		26335	26334	26334	26334	81584	243.0	81827
	12.0	12.0		26235	26234	26232	26234	81558	242.9	81801
	13.0	13.0		26429	26429	26427	26428	81607	242.8	81850
	14.0	14.0		26138	26138	26137	26138	81534	242.7	81777
	15.0	15.0		26037	26037	26036	26037	81509	242.6	81752
	16.0	16.0		25960	25959	25957	25959	81490	242.5	81732
	17.0	17.0		25991	25992	25992	25992	81498	242.4	81740
	18.0	18.0		25951	25949	25946	25943	81487	242.3	81728
	19.0	19.0		25898	25899	25899	25899	81475	242.2	81717
	20.0	20.0	11:04	25945	25944	25944	25944	81486	242.1	81726
Fill placed in area near station 1 through 5										
	1.0	1.0	11:34	25688	25681	25679	25683	81421	243.6	81684
	2.0	2.0		23815	22954	21975	22915	80979	243.2	80972
	3.0	3.0		24849	24853	24852	24851	81213	242.8	81456
	4.0	4.0		24287	24329	24404	24340	81085	242.4	81327
	5.0	5.0		28620	28602	28616	28613	82153	242.0	82395
	6.0	6.0		27691	27658	27626	27658	81915	241.6	82156
	7.0	7.0		26545	26540	26542	26542	81636	241.2	81877
	8.0	8.0		26054	26058	26058	26057	81514	240.8	81755
	9.0	9.0		26065	26064	26062	26064	81516	240.4	81756
	10.0	10.0		26238	26237	26236	26237	81559	240.0	81799
	11.0	11.0		26479	26480	26477	26479	81620	239.6	81859
	12.0	12.0		26478	26478	26478	26478	81620	239.2	81859
	13.0	13.0		26228	26227	26226	26227	81557	238.8	81796
	14.0	14.0		26192	26194	26195	26194	81548	238.4	81787
	15.0	15.0		26058	26060	26060	26059	81515	238.0	81753
	16.0	16.0		26031	26031	26031	26031	81508	237.6	81745
	17.0	17.0		26053	26051	26053	26052	81513	237.2	81750
	18.0	18.0		25984	25984	25983	25984	81496	236.8	81733
	19.0	19.0		25986	25985	25987	25986	81497	236.4	81733
	20.0	20.0	11:59	26003	26005	26005	26004	81501	236.0	81737
Fill placed in area near station 1 through 6										
	1.0	1.0	12:25	25593	25599	25603	25598	81400	228.0	81628
	2.0	2.0		22805	22779	22804	22796	80699	228.4	80927
	3.0	3.0		23298	23301	23297	23298	80825	228.8	81053
	4.0	4.0		21336	21407	21426	21390	80347	229.2	80577
	5.0	5.0		25225	25208	25215	25216	81304	229.6	81534
	6.0	6.0		28852	28859	28863	28858	82215	230.0	82145
	7.0	7.0		26149	26147	26151	26149	81537	230.4	81768
	8.0	8.0		26183	26184	26184	26184	81546	230.8	81777
	9.0	9.0		26057	26058	26059	26058	81515	231.2	81746
	10.0	10.0		26318	26316	26316	26317	81579	231.6	81811
	11.0	11.0		26422	26422	26420	26421	81605	232.0	81837
Edge of fill area with large amount of metal pipe										
	1.0	1.0		25593	25599	25603	25598	81400	228.0	81628
	2.0	2.0		22805	22779	22804	22796	80699	228.4	80927
	3.0	3.0		23298	23301	23297	23298	80825	228.8	81053
	4.0	4.0		21336	21407	21426	21390	80347	229.2	80577
	5.0	5.0		25225	25208	25215	25216	81304	229.6	81534
	6.0	6.0		28852	28859	28863	28858	82215	230.0	82145
	7.0	7.0		26149	26147	26151	26149	81537	230.4	81768
	8.0	8.0		26183	26184	26184	26184	81546	230.8	81777
	9.0	9.0		26057	26058	26059	26058	81515	231.2	81746
	10.0	10.0		26318	26316	26316	26317	81579	231.6	81811
	11.0	11.0		26422	26422	26420	26421	81605	232.0	81837

■ - ANOMALIES DUE TO SURFACE
DEMOLITION DEBRIS OR
JUNK FILL.

■ 80428 Demolition dibris near stations 2 and 3

2

Table No. D.2 (continued)

SYMBOL KEY

■ - ANOMALIES DUE TO SURFACE
DEMOLITION DEBRIS OR
JUNK FILL.

▲ - ANOMALIES DUE TO
UNKNOWN MATERIAL

3.0	27939	27941	27948	27943	81986	60.4	82046
4.0	26244	26247	26248	26246	81562	60.5	81562
5.0	26015	26014	26015	26015	81504	60.6	81564
6.0	26161	26160	26159	26160	81540	60.7	81601
7.0	26174	26174	26172	26173	81543	60.8	81604
8.0	26233	26234	26233	26233	81558	60.9	81619
9.0	26247	26247	26247	26247	81562	61.0	81623
10.0	26136	26137	26136	26136	81534	61.1	81595
11.0	26320	26321	26320	26320	81580	61.2	81641
12.0	26177	26175	26173	26175	81544	61.3	81605
13.0	26210	26208	26204	26207	81552	61.4	81613
14.0	26323	26324	26326	26324	81581	61.5	81643
15.0	26210	26208	26208	26209	81552	61.6	81614
16.0	26139	26140	26140	26140	81535	61.7	81597
17.0	26161	26162	26153	26159	81540	61.8	81601
18.0	26237	26238	26239	26238	81560	61.9	81621
19.0	26125	26129	26125	26126	81532	62.0	81594
20.0	26125	26124	26126	26125	81531	62.1	81593
1.0	NR						
2.0	24049	24047	24042	24046	81012	64.0	81076
3.0	25996	26011	26017	26008	81566	63.9	81566
4.0	25951	25950	25951	25951	81463	63.8	81526
5.0	26008	26089	26088	26062	81515	63.7	81579
6.0	26250	26250	26251	26250	81563	63.6	81626
7.0	26215	26215	26215	26215	81554	63.5	81617
8.0	26215	26216	26215	26215	81554	63.4	81617
9.0	26288	26286	26286	26287	82072	63.3	82135
10.0	26307	26308	26310	26308	81577	63.2	81540
11.0	26261	26260	26158	26226	81557	63.1	81620
12.0	26272	26271	26271	26271	81568	63.0	81631
13.0	26242	26241	26239	26241	81560	62.9	81623
14.0	26306	26305	26304	26305	81576	62.8	81639
15.0	26314	26313	26311	26313	81578	62.7	81641
16.0	26219	26221	26224	26221	81555	62.6	81618
17.0	26113	26111	26111	26112	81528	62.5	81590
18.0	26157	26158	26155	26157	81539	62.4	81602
19.0	26184	26181	26179	26181	81545	62.3	81608
20.0	26115	26115	26113	26114	81529	62.2	81591
1.0							
2.0	22791	22793	22798	22794	80699	64.20	80763
3.0	23710	23779	23759	23749	80937	63.92	81001
4.0	25847	25851	25852	25850	81463	63.64	81526
5.0	26057	26055	26055	26056	81514	63.36	81577
6.0	26026	26025	26025	26025	81506	63.08	81569
7.0	26219	26218	26218	26218	81555	62.80	81617
8.0	26258	26256	26255	26256	81564	62.52	81627
9.0	26098	26098	26098	26098	81525	62.24	81587
10.0	26204	26205	26205	26205	81551	61.96	81613
11.0	26281	26279	26279	26280	81570	61.68	81632
12.0	26224	26225	26225	26225	81556	61.40	81618
13.0	26152	26151	26151	26151	81538	61.12	81599
14.0	26240	26237	26237	26238	81560	60.84	81620
15.0	26082	26081	26080	26081	81520	60.56	81581
16.0	26314	26314	26315	26314	81579	60.28	81639
	26245	26245	26246	26245	81561	60.00	81621

SYMBOL KEY

■ - ANOMALIES DUE TO SURFACE
DEMOLITION DEBRIS OR
JUNK FILL.

▲ - ANOMALIES DUE TO
UNKNOWN MATERIAL

Table No. D.2 (continued)

N	17.0	18.0	19.0	20.0	3:20	2:54	33151	33126	26171	26107	26196	26054	26170	81543	59.72	81602
							26171	26171	26171	26107	26196	26054	26170	81543	59.72	81602
							26108	26108	26108	26107	26196	26054	26195	81549	59.44	81596
							26193	26193	26193	26195	26196	26054	26195	81549	59.16	81608
							26054	26054	26054	26054	26054	26054	26054	81514	58.88	81572
							33151	33126	33126	33132	33132	33132	33136	83284	53.28	83337
							NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
							26051	26051	26051	26051	26051	26051	26053	81713	0.28	81714
							26057	26057	26057	26057	26057	26057	26057	81514	0.56	81515
							26023	26023	26023	26023	26023	26023	26023	81506	0.84	81507
							26064	26064	26064	26064	26064	26064	26062	81516	1.12	81517
							26204	26204	26204	26204	26204	26204	26204	81551	1.40	81552
							26069	26069	26069	26069	26069	26069	26069	81516	1.68	81518
							26134	26134	26134	26134	26134	26134	26134	81517	1.96	81519
							26090	26090	26090	26090	26090	26090	26090	81534	2.24	81536
							26110	26110	26110	26110	26110	26110	26108	81522	2.52	81525
							26142	26142	26142	26142	26142	26142	26108	81535	2.80	81530
							26073	26073	26073	26073	26073	26073	26141	81535	3.08	81536
							26207	26207	26207	26207	26207	26207	26207	81518	3.36	81522
							26202	26202	26202	26202	26202	26202	26202	81552	3.64	81556
							26220	26220	26220	26220	26220	26220	26202	81551	3.92	81554
							26192	26192	26192	26192	26192	26192	26220	81555	4.20	81559
							26099	26099	26099	26099	26099	26099	26099	81548	4.48	81553
							26351	26351	26351	26351	26351	26351	26099	81525	4.76	81530
							24759	24759	24759	24759	24759	24759	26351	81588	5.04	81593
							NR	NR	NR	NR	NR	NR	24763	81191	53.0	81244
							25618	25618	25618	25618	25618	25618	25618	81405	53.0	81458
							25936	25936	25936	25936	25936	25936	25937	81484	53.0	81537
							25932	25932	25932	25932	25932	25932	25932	81483	53.0	81536
							26216	26216	26216	26216	26216	26216	26214	81554	53.0	81607
							26120	26120	26120	26120	26120	26120	26120	81530	53.0	81583
							26192	26192	26192	26192	26192	26192	26191	81548	53.0	81601
							26294	26294	26294	26294	26294	26294	26293	81573	53.0	81626
							26123	26123	26123	26123	26123	26123	26123	81531	53.0	81584
							26402	26402	26402	26402	26402	26402	26400	81600	53.0	81653
							25961	25961	25961	25961	25961	25961	25960	81490	53.0	81543
							26076	26076	26076	26076	26076	26076	26075	81519	53.0	81572
							26033	26033	26033	26033	26033	26033	26032	81508	53.0	81561
							26254	26254	26254	26254	26254	26254	26252	81583	53.0	81616
							26277	26277	26277	26277	26277	26277	26278	81528	53.0	81623
							26109	26109	26109	26110	26112	26112	26110	81545	53.0	81581
							26180	26180	26180	26180	26181	26181	26180	81545	53.0	81598
							26226	26226	26226	26228	26228	26228	26227	81557	53.0	81610
							26188	26188	26188	26187	26186	26186	26187	81547	53.0	81600
							25588	25588	25588	25588	25588	25588	25585	81396	53.0	81449
							30272	30272	30272	29513	29660	29660	29615	82454	53.0	82507
							25719	25719	25719	25721	25721	25721	25720	81430	53.0	81483
							26016	26016	26016	26016	26016	26016	26016	81504	53.0	81557
							26011	26011	26011	26010	26009	26010	26010	81503	53.0	81556
							26016	26016	26016	26015	26015	26015	26015	81504	53.0	81557
							26323	26323	26322	26322	26321	26321	26322	81581	53.0	81634
							26296	26296	26296	26294	26293	26293	26294	81574	53.0	81627
							26199	26199	26197	26197	26195	26195	26197	81549	53.0	81602
							25588	25588	25588	25588	25588	25588	25585	81396	53.0	81449
							30272	30272	30272	29513	29660	29660	29615	82454	53.0	82507
							25719	25719	25719	25721	25721	25721	25720	81430	53.0	81483
							26016	26016	26016	26016	26016	26016	26016	81504	53.0	81557
							26011	26011	26011	26010	26009	26010	26010	81503	53.0	81556
							26016	26016	26016	26015	26015	26015	26015	81504	53.0	81557
							26323	26323	26322	26322	26321	26321	26322	81581	53.0	81634
							26296	26296	26296	26294	26293	26293	26294	81574	53.0	81627
							26199	26199	26197	26197	26195	26195	26197	81549	53.0	81602

■ 82507 Demolition debris-erratic readings

Table No. D.2 (continued)

SYMBOL KEY

■ - ANOMALIES DUE TO SURFACE
DEMOLITION DEBRIS OR
JUNK FILL.

▲ - ANOMALIES DUE TO
UNKNOWN MATERIAL

10.0	25958	25957	25962	25959	81490	53.0	81543
11.0	26016	26014	26013	26014	81504	53.0	81557
12.0	25785	25783	25782	25783	81446	53.0	81499
13.0	26139	26134	26135	26136	81536	53.0	81587
14.0	26235	26235	26236	26235	81559	53.0	81612
15.0	26123	26121	26121	26122	81530	53.0	81583
16.0	26169	26164	26167	26168	81542	53.0	81595
17.0	26277	26277	26277	26277	81569	53.0	81622
18.0	26364	26365	26364	26364	81591	53.0	81644
19.0	26243	26245	26245	26244	81561	53.0	81614
20.0	26195	26195	26196	26195	81549	53.0	81602
0							
1.0	25929	25925	25921	25925	81481	53.0	81534
2.0	25019	23640	25019	24559	81140	52.1	81192 Demolition debris-erratic readings
3.0	25591	25592	25591	25591	81398	51.4	81449
4.0	26039	26037	26036	26037	81509	50.0	81559
5.0	26246	26246	26244	26245	81561	49.0	81610
6.0	26231	26231	26233	26232	81558	48.3	81606
7.0	26197	26198	26200	26198	81550	47.6	81597
8.0	26093	26086	26088	26086	81521	46.9	81568
9.0	25903	25902	25902	25902	81476	46.2	81522
10.0	26222	26219	26220	26220	81555	45.5	81601
11.0	26146	26145	26144	26145	81536	44.8	81581
12.0	25908	25808	25809	25808	81452	44.1	81496
13.0	25815	25812	25811	25813	81453	43.4	81497
14.0	26469	26465	26466	26467	81617	42.7	81659
15.0	26271	26272	26271	26271	81568	42.0	81610
16.0	26178	26179	26179	26179	81545	41.3	81586
17.0	26260	26262	26262	26261	81585	40.6	81606
18.0	26133	26132	26131	26132	81533	39.9	81573
19.0	26002	26000	25998	26000	81500	39.2	81539
20.0	26261	26259	26258	26259	81565	38.5	81603
R							
1.0	25507	25506	25505	25506	81377	24.5	81401
2.0	25766	25288	25909	25654	81414	25.2	81439 Demolition debris-erratic readings
3.0	25675	25673	25673	25674	81418	25.9	81444
4.0	25751	25752	25748	25750	81436	26.6	81464
5.0	26061	26060	26079	26080	81520	27.3	81547
6.0	26165	26164	26162	26164	81541	28.0	81569
7.0	26269	26271	26270	26270	81568	28.7	81596
8.0	26235	26234	26232	26234	81558	29.4	81588
9.0	26172	26169	26169	26170	81543	30.1	81573
10.0	26341	26341	26340	26341	81585	30.8	81616
11.0	26138	26137	26137	26137	81534	31.5	81566
12.0	26609	26609	26609	26609	81652	32.2	81684
13.0	26059	26057	26060	26059	81515	32.9	81548
14.0	26176	26177	26177	26177	81544	33.6	81578
15.0	26416	26416	26416	26416	81604	34.3	81638
16.0	26095	26094	26092	26094	81523	35.0	81558
17.0	26021	26022	26024	26022	81506	35.7	81541
18.0	26080	26078	26076	26078	81520	36.4	81556
19.0	26327	26328	26325	26327	81582	37.1	81619
20.0	27121	27123	27125	27123	81781	37.8	81819
S							
1.0	24302	24303	24302	24302	81076	23.8	81099
2.0	23660	23662	23634	23652	80763	23.1	80786 Demolition debris-erratic readings

Table No. D.2 (continued)

SYMBOL KEY

■ - ANOMALIES DUE TO SURFACE
DEMOLITION DEBRIS OR
JUNK FILL.

▲ - ANOMALIES DUE TO
UNKNOWN MATERIAL

3.0	25110	25118	25117	25115	81279	22.4	81301
4.0	25979	25982	25990	25984	81496	21.7	81518
5.0	26046	26045	26045	26045	81511	21.0	81532
6.0	26012	26010	26009	26010	81503	20.3	81523
7.0	25846	25845	25844	25845	81461	19.6	81481
8.0	25927	25926	25924	25926	81481	18.9	81500
9.0	26087	26087	26086	26087	81522	18.2	81540
10.0	25905	25903	25905	25904	81476	17.5	81494
11.0	25989	26002	26008	26003	81501	16.8	81518
12.0	27027	27031	27033	27030	81758	16.1	▲ 81774
13.0	27074	27067	27070	27070	81768	15.4	▲ 81783
14.0	26533	26532	26532	26532	81633	14.7	81648
15.0	26562	26574	26572	26569	81642	14.0	81656
16.0	26343	26345	26345	26344	81586	13.3	81599
17.0	27277	27276	27279	27277	81819	12.6	▲ 81832
18.0	26589	26589	26588	26589	81647	11.9	81659
19.0	27540	27533	27533	27535	81884	11.2	▲ 81885
20.0	12:11	27171	27149	27191	81798	10.5	▲ 81808
1.0	11:52	23298	23302	23298	80825	0.7	80825
2.0	NR						
3.0	25329	25340	25342	25337	81334	0.7	81335
4.0	25829	25831	25828	25829	81457	1.4	81459
5.0	25360	25359	25343	25354	81339	2.1	81341
6.0	25817	25820	25819	25819	81455	2.8	81457
7.0	26016	26017	26012	26015	81504	3.5	81507
8.0	25985	25983	25985	25984	81496	4.2	81500
9.0	25599	25595	25595	25596	81399	4.9	81404
10.0	26744	26744	26746	26745	81686	5.6	81692
11.0	25736	25763	25762	25754	81438	6.3	81445
12.0	26136	26151	26137	26141	81535	7.0	81542
13.0	27650	27635	27629	27638	81910	7.7	▲ 81917
14.0	12:09	27861	27865	27865	81965	8.4	▲ 81975

DETERMINATION OF DAILY VARIATIONS FOR MAGNETOMETER SURVEY AT BASE POINT A1

11-18-86: START AT 11:46

A1

11:46	25310	25311	25311	25311	81328	81328
12:43	25462	25440	25448	25450	81363	81363
1:43	25522	25526	25524	25524	81381	81381
2:48	25513	25530	25525	25523	81381	81381
3:44	25585	25585	25570	25567	81392	81392
4:37	25551	25554	25554	25553	81388	81388
9:10	24495	24496	24497	24496	81124	81124
9:51	25476	25470	25476	25474	81369	81369
10:37	25458	25462	25457	25459	81365	81365
11:30	25473	25477	25475	25471	81369	81369
12:28	25419	25416	25417	25417	81354	81354
1:58	25486	25483	25481	25483	81371	81371

TABLE D.3

INTERPRETATION OF MAGNETIC INTENSITY RESULTS

When the instrument is used with a sensitivity of 0.25 gammas the first significant digit is not displayed. With an instrument display beginning with 2, and a total magnetic intensity greater than 50,000 gammas, the missing significant digit is 3. Putting the missing digit in front of the instrument display reading and dividing by 4 results in the total magnetic intensity of each station as shown below. (EG&G Geometrics)

<u>Instrument Sensitivity</u>	<u>Instrument Display</u>	<u>Missing Significant Digit</u>	<u>Total Magnetic Intensity</u>
0.25	22,208	3	80,552

TABLE D.4a

GROUP I

EM CONDUCTIVITY ANOMALIES DUE TO DEMOLITION DEBRIS AT SURFACE

<u>BASELINE</u>	<u>STATION NOS.</u>	<u>PROBABLE SOURCE</u>
A	2	Large metal pontoon at surface
C	1,2	Metal in demolition debris
D	3,4,5,6	Metal in demolition debris
E	4,5,6	Metal in demolition debris
F	5,6,7	Metal in demolition debris
G	4,5,6	Metal in demolition debris
H	4,5,6,7	Galvanized pipes in demolition debris
I	3,4,5	Metal in demolition debris
J	5	Metal in demolition debris
K	2	Metal in demolition debris
L	4	Metal in demolition debris
M	2,3	Reinforced concrete in demolition debris
N	3,4	Reinforced concrete in demolition debris
O	3,4	Reinforced concrete and metal in demolition debris
P	3,4	Metal in demolition debris
Q	2,3,4	Metal in demolition debris
R	3,4,5	Metal in demolition debris
S	2,3,4	Metal in demolition debris
T	3	Slag at surface

TABLE D.4b

GROUP II

EM CONDUCTIVITY ANOMALIES FROM UNKNOWN SOURCES

<u>BASELINE</u>	<u>STATION NOS.</u>	<u>PROBABLE SOURCE</u>
A	10,12,13,17	Underground pipe or more intensive iron fill area
B	5,6,7,8,11,12,13,18,19	Buried pipes, drums or more intensive iron fill area
C	6,7,8,9,10	Buried pipes, drums or more intensive iron fill area
D	7,8,9,10,18	Buried metal or slag fill
E	7,8,9,10,11,12,13,14	More intensive iron or slag fill area
F	10,11	More intensive iron or slag fill area
G	7,8,9,10,11,12	More intensive iron or slag fill area
H	11,12	More intensive iron or slag fill area
I	6,7,11,12,13	More intensive iron or slag fill area
K	8	
N	17,18	
Q	7	
R	8,9,19	More intensive iron or slag fill area
S	11,12	More intensive iron or slag fill area

TABLE D.5a

GROUP I

MAGNETOMETER ANOMALIES DUE TO DEMOLITION DEBRIS AT SURFACE

<u>BASELINE</u>	<u>STATION NOS.</u>	<u>PROBABLE SOURCE</u>
A	3	Large metal pontoon on surface
C	1,2,3,4,5	Metal in demolition debris
D	2,5	Metal in demolition debris
E	2,6	Metal in demolition debris
F	2,6,7	Metal in demolition debris
G	5,6,7	Metal in demolition debris
H	6,7	Galvanized pipes in demolition debris at surface
I	5,6,7	Metal in demolition debris
J	5,6,7	Metal in demolition debris
K	3	Metal in demolition debris
N	1	2 underground pipes into small boat harbor
P	2	Metal in demolition debris

TABLE D.5b
GROUP II

MAGNETOMETER ANOMALIES DUE TO UNKNOWN SOURCES

<u>BASELINE</u>	<u>STATION NOS.</u>	<u>PROBABLE SOURCE</u>
A	11,13,14,15,16, 18,19,20	Underground pipe(s) or more intensive iron fill area
B	5,6	Buried pipes, drums or more intensive iron fill area
C	9,12,13,14	Buried pipes, drums or more intensive iron fill area
D	7,8,11,12,13, 14,15,16	Buried metal or more intensive iron or slag fill area
E	7,8,9,10,11,12,13, 14,15,16,17,18,19	More intensive iron or slag fill area
F	8,9,10,11,12,13,14, 15,16,17,18,19,20	More intensive iron or slag fill area
G	8,9,10,11,12,13,14, 15,16,17,18,19,20	More intensive iron or slag fill area
H,I and J	8,9,10,11,12,13,14, 15,16,17,18,19,20	More intensive iron or slag fill area
L	9	Buried metal or slag fill
R	20	Buried metal or slag fill
S	12,13,17,19,20	More intensive iron or slag fill area
T	13,14	More intensive iron or slag fill area

APPENDIX F

SUMMARY TABLES OF CHEMICAL TEST RESULTS

Contents of Appendix F:

- Table F.1 - Summary of Pesticides Detected in Soil & Water Samples
- Table F.2 - Summary of Volatile Organics Detected in Soil & Water Samples
- Table F.3 - Summary of Inorganic Compounds Detected in Soil & Water Samples
- Table F.4 - Summary of Extractable Organic Compounds Detected in Soil & Water Samples
- Table F.5 - Summary of Water Sample Analysis for Pesticides
- Table F.6 - Summary of Water Sample Analysis for Volatile Organics
- Table F.7 - Summary of Water Sample Analysis for Inorganic Compounds
- Table F.8 - Summary of Water Sample Analysis for Extractable Organics
- Table F.9 - Summary of Soil Sample Analysis for Pesticides
- Table F.10- Summary of Soil Sample Analysis for Volatile Organics
- Table F.11- Summary of Soil Sample Analysis for Extractable Organics

TABLE F.1

SUMMARY OF PESTICIDES DETECTED IN SOIL & WATER SAMPLES

Compound	Water Quality Guidance Criteria (ug/l)	Water Samples		Soil Samples	
		Well/Boring	Concentration (ug/l)	Boring	Concentration (ug/l)
Aldrin	0.002*	POW-3	0.01	EW-5	0.36
Alpha-BHC	0.02 *	EW-4	0.24	SS-2	0.031
	0.02 *	T	0.046		
Beta-BHC	0.02 *	POW-1	3.2	EW-2	0.14
		POW-2	0.32	EW-3	0.034
		POW-3	0.23		
		POW-4	0.72		
		EW-4	0.16		
		T	0.10		
Delta-BHC	0.02 *	EW-4	0.044	EW-7	0.21
		T	0.03	EW-8	0.067
				EW-9	0.099
Gamma-BHC	0.02 *	EW-2	0.10		
		EW-4	0.012		
4,4'-DDD	0.001 (A)	EW-1	0.28	EW-3	0.16
	*	EW-2	0.85	EW-4	0.055
	**	EW-4	0.038	EW-6	0.39
		EW-6	0.12	SS-5	0.028
		EW-7	0.27		
		EW-8	0.46		
4,4-DDE	0.1 *			EW-5	0.27
4,4-DDT	0.01 *			EW-5	0.43
Dieldren	0.009*	POW-4	0.24		
		EW-4	0.0081		
Endosulfan-I	0.009 (A)	POW-3	0.032	SS-6	0.41
		POW-4	0.25		
		EW-3	0.27		
		EW-9	0.12		
Endosulfan-II	0.009 (A) **			EW-6	0.39
Endosulfan Sulfate --				SS-1	0.20
				SS-2	0.11
				SS-3	0.21
				SS-5	0.0091

- Note: 1. Guidance criteria listed are the same as the regulatory standards for class GA groundwater unless otherwise noted.
2. T is for transfer blank
3. * Regulatory Criteria is "non-detectable" (i.e. 0.0 ug/l)
4. **DDD and Endosulfan-II coelute, reported values could be either compound.
5. (A)- Aquatic criteria

TABLE F.1 CONT'D

SUMMARY OF PESTICIDES DETECTED IN SOIL & WATER SAMPLES

Compound	Water Quality Guidance Criteria (ug/l)	Water Sample		Soil Sample	
		Well/Boring	Concentration (ug/l)	Boring	Concentration (ug/l)
Endrin	0.2 *	EW-7	0.13	EW-7	3.5
				SS-5	0.034
				SS-6	0.39
Endrin Aldehyde -		EW-2	2.1		
		EW-3	1.1		
		EW-4	0.072		
		EW-5	0.83		
		EW-6	0.67		
		EW-7	0.86		
		EW-8	0.64		
Heptachlor	.009 0.009 *			EW-7	0.31
				EW-8	0.17
				SS-2	0.049
				SS-4	0.14
				EW-8	0.6
PCB-1016	0.1 0.01 ***				
PCB-1248	0.1 0.01 ***			EW-2	9.4
				EW-3	5.4
				EW-4	0.97
PCB-1254	0.1 0.01 ***			SS-2	0.38
				SS-2	0.38
PCB-1260	0.1 0.01 ***			EW-5	2.0
				SS-7	0.38
				SS-8	0.37
				SS-9	0.41

Note: 1. * Regulatory Criteria is "non-detectable" (i.e. 0.0 ug/l)
 2. ***Regulatory criteria

TABLE F.2

SUMMARY OF VOLATILE ORGANICS DETECTED IN SOIL & WATER SAMPLES

<u>Compound</u>	<u>Water Quality Guidance Criteria (ug/l)</u>	<u>Water Sample</u>		<u>Soil Sample</u>	
		<u>Well/Boring</u>	<u>Concentration (ug/l)</u>	<u>Boring</u>	<u>Concentration (ug/l)</u>
Benzene	1.0 *	POW-4	110		
		EW-1	34		
		EW-2	820		
		EW-3	400		
		EW-4	100		
		EW-5	490		
		EW-6	790		
		EW-7	790		
		EW-8	1000		
Chlorobenzene	20 **	EW-9	37		
		POW-1	1100	EW-6	7.3
		POW-2	47		
		POW-3	56		
		POW-4	1300		
		EW-1	150		
		EW-2	3800		
		EW-3	220		
		EW-4	660		
		EW-5	4700		
		EW-6	3300		
		EW-7	9400		
		EW-8	2600		
		EW-9	220		
1,2-Dichloro- Benzene	4.7	POW-1	160	EW-2	320
		POW-4	510	EW-6	4.4
		EW-1	170		
		EW-2	790		
		EW-3	1700		
		EW-4	57		
		EW-5	190		
		EW-6	320		
		EW-7	630		

- Notes: 1. Guidance criteria listed are the same as the regulatory standards for class GA groundwater unless otherwise stated.
2. T is transfer blank
3. * Regulatory Criteria is "non-detectable" (i.e. 0.0 ug/l)
4. [50] Default guidance criteria.
5. ** No regulatory standard for groundwater, only guidance criteria.

TABLE F.2 CONT'D

SUMMARY OF VOLATILE ORGANICS DETECTED IN SOIL & WATER SAMPLES

Compound	Water Quality Guidance Criteria (ug/l)	Water Sample		Soil Sample	
		Well/Boring	Concentration (ug/l)	Boring	Concentration (ug/l)
1,3-Dichloro- Benzene	20	POW-1	23	EW-2	3.6
		POW-4	31		
		EW-1	36		
		EW-2	25		
		EW-6	30		
Ethylbene- zene	[50]**	POW-1	9.2		
		POW-4	54		
		EW-2	180		
		EW-3	140		
Methylene Chloride	[50]**	POW-2	21		
Toluene	[50]**	POW-4	47	EW-1	6.5
		EW-2	510	EW-2	10
		EW-3	44		
1,1,1-Trichlo- roethane	[50]**	EW-9	100		
Trichloro- ethylene	3 10 (Reg)	Transfer Blank	18.		

- Notes: 1. [50] Default guidance criteria.
 2. ** No regulatory standard for groundwater, only guidance criteria.
 3. (Reg) Regulatory standard.

TABLE F.3

SUMMARY OF INORGANIC COMPOUNDS DETECTED IN SOIL & WATER SAMPLES

Compound	Water Quality Guidance Criteria (ug/l)	Water Sample		Soil Sample	
		Well/Boring	Concentration (ug/l)	Boring	Concentration (ug/l)
Total Cyanide	200	POW-1	605	EW-1	6.5
		POW-2	18	EW-2	4.5
		POW-3	100	EW-3	13
		POW-4	190	EW-4	5.6
		EW-1	87	EW-5	12
		EW-2	9,000	EW-6	6.3
		EW-3	48	EW-7	24
		EW-4	50	EW-8	9.8
		EW-5	223	EW-9	8.5
		EW-6	40	SS-5	1.2
		EW-7	32	SS-6	4.1
		EW-8	148	SS-7	1.4
		EW-9	190	SS-8	3.9
		Ponded Water	15	SS-9	1.9
Total Antimony	3 *	EW-1	30	EW-2	2.8
		EW-2	79	EW-5	2.4
		EW-3	9	EW-7	4.7
		EW-5	11		
		EW-6	31		
		EW-7	11		
		EW-8	26		
		EW-9	6		
Total Arsenic	50 25 (Reg.)	POW-1	76	EW-1	38
		POW-3	658	EW-2	139
		POW-4	692	EW-3	60
		EW-1	956	EW-4	29
		EW-2	7,600	EW-5	7.3
		EW-3	190	EW-6	53
		EW-4	229	EW-7	95
		EW-5	1,750	EW-8	58
		EW-6	190	EW-9	53
		EW-7	593	SS-1	55
		EW-8	552	SS-2	6.6
		EW-9	712	SS-3	16
				SS-4	13
				SS-5	16
				SS-6	47
				SS-7	13
				SS-8	43
				SS-9	11

Notes: 1. Guidance criteria listed are the same as the regulatory standards for class GA groundwater unless otherwise noted.

2. *No regulatory standard for groundwater, only guidance criteria

3. (Reg.) Regulatory Standard

TABLE F.3 CONT'D

SUMMARY OF INORGANIC COMPOUNDS DETECTED IN SOIL & WATER SAMPLES

Compound	Water Quality Guidance Criteria (ug/l)	Water Sample		Soil Sample	
		Well/Boring	Concentration (ug/l)	Boring	Concentration (ug/l)
Total Beryllium	3*	POW-3	28	EW-5	1.3
		POW-4	7	EW-6	1.4
		EW-1	8	EW-7	1.0
		EW-2	31	EW-9	0.75
		EW-3	5	SS-1	3.6
		EW-5	12	SS-2	3.2
		EW-7	5	SS-3	2.4
		EW-8	5	SS-6	0.86
		EW-9	10		
		Ponded Water	10		
Total Cadmium	10	POW-1	10	EW-1	1.7
		POW-3	13	EW-2	14
		POW-4	81	EW-3	5.4
		EW-1	32	EW-4	6.1
		EW-2	650	EW-5	4.9
		EW-3	18	EW-6	3.3
		EW-4	29	EW-7	9.1
		EW-5	113	EW-8	5.2
		EW-6	11	SS-9	2.7
		EW-7	54	SS-1	1.8
		EW-8	51	SS-3	1.4
		EW-9	35	SS-5	1.3
		Ponded Water	51	SS-6	3.7
				SS-8	3.0
Total Chromium	50	POW-1	164	EW-1	116
		POW-3	857	EW-2	511
		POW-4	2,830	EW-3	158
		EW-1	2,160	EW-4	69
		EW-2	27,000	EW-5	280
		EW-3	629	EW-6	234
		EW-4	570	EW-7	334
		EW-5	9,890	EW-8	230
		EW-6	330	EW-9	190
		EW-7	1,610	SS-1	66
		EW-8	1,390	SS-2	43
		EW-9	1,150	SS-3	75
		Ponded Water	1,590	SS-4	78
				SS-5	62
				SS-6	145
				SS-7	89
				SS-8	116
				SS-9	50

Note: 1. *No regulatory standard for groundwater, only guidance criteria

TABLE F.3 CONT'D

SUMMARY OF INORGANIC COMPOUNDS DETECTED IN SOIL & WATER SAMPLES

Compound	Water Quality Guidance Criteria (ug/l)	Well Sample		Soil Sample	
		Well/Boring	Concentration (ug/l)	Boring	Concentration (ug/l)
Total Copper	1,000	POW-1	82	EW-1	133
		POW-3	609	EW-2	445
		POW-4	2,080	EW-3	176
		EW-1	2,500	EW-4	111
		EW-2	23,000	EW-5	236
		EW-3	478	EW-6	211
		EW-4	785	EW-7	344
		EW-5	5,710	EW-8	214
		EW-6	472	EW-9	143
		EW-7	1,940	SS-1	55
		EW-8	1,330	SS-2	39
		EW-9	1,340	SS-3	48
		Ponded Water	1,550	SS-4	59
				SS-5	51
				SS-6	139
				SS-7	74
Total Lead	50 25 (Reg.)	POW-1	47	EW-1	202
		POW-3	649	EW-2	980
		POW-4	753	EW-3	309
		EW-1	788	EW-4	277
		EW-2	38	EW-5	454
		EW-3	618	EW-6	431
		EW-4	1,570	EW-7	591
		EW-5	6,360	EW-8	487
		EW-6	1,570	EW-9	345
		EW-7	3,370	SS-1	134
		EW-8	3,430	SS-2	87
		EW-9	5,100	SS-3	112
		Ponded Water	1,020	SS-4	129
		Transfer	12	SS-5	111
				SS-6	213
				SS-7	151
Total Mercury	0.2 2 (Reg.)	POW-1	1.2	EW-1	1.79
		POW-3	1.1	EW-2	7.14
		POW-4	1.3	EW-3	2.65
		EW-1	14	EW-4	1.16
		EW-2	1,440	EW-5	5.38
		EW-3	8.1	EW-6	2.03

Note: 1. (Reg.) Regulatory Standard

TABLE F.3 CONT'D

SUMMARY OF INORGANIC COMPOUNDS DETECTED IN SOIL & WATER SAMPLES

Compound	Water Quality Guidance Criteria (ug/l)	Well Sample		Soil Sample	
		Well/Boring	Concentration (ug/l)	Boring	Concentration (ug/l)
Total Mercury	0.2 2 (Reg.)	EW-4	6.5	EW-7	5.87
		EW-5	302	EW-8	3.90
		EW-6	7.4	EW-9	4.41
		EW-7	19	SS-1	0.198
		EW-8	16	SS-2	0.406
		EW-9	20	SS-3	0.554
		Ponded Water	9.4	SS-4	0.825
				SS-5	0.859
				SS-6	2.74
				SS-7	0.805
				SS-8	1.21
				SS-9	0.867
Total Nickel	7.1 (A)	POW-4	340	EW-1	41
		EW-1	900	EW-2	67
		EW-2	2,790	EW-3	42
		EW-3	30	EW-4	31
		EW-4	140	EW-5	39
		EW-5	920	EW-6	63
		EW-6	80	EW-7	47
		EW-7	290	EW-8	40
		EW-8	210	EW-9	27
		EW-9	480	SS-1	20
		Ponded Water	520	SS-2	14
		Lake	20	SS-3	20
				SS-4	22
				SS-5	21
				SS-6	35
				SS-7	24
				SS-8	29
				SS-9	16
Total Silver	50	POW-1	6	EW-1	0.66
		POW-2	9	EW-2	2.0
		POW-3	11	EW-3	1.8
		POW-4	15	EW-4	2.5
		EW-1	8	EW-5	2.4
		EW-2	37	EW-6	0.8
		EW-4	7	EW-7	2.0
		EW-5	13	EW-8	1.0
		EW-7	6	SS-1	1.5
		Ponded Water	19		
Total Thallium	4*	EW-2	27		
		EW-5	7		

Notes: 1. (Reg.) Regulatory Standard

2. (A) Aquatic Standard

3. *No regulatory standard for groundwater, only guidance criteria

TABLE F.3 CONT'D

SUMMARY OF INORGANIC COMPOUNDS DETECTED IN SOIL & WATER SAMPLES

Compound	Water Quality Guidance Criteria (ug/l)	Well Sample		Soil Sample	
		Well/Boring	Concentration (ug/l)	Boring	Concentration (ug/g)
Total Zinc	5,000	POW-1	350	EW-1	452
		POW-2	40	EW-2	602
		POW-3	2,950	EW-3	723
		POW-4	12,000	EW-4	477
		EW-1	7,560	EW-5	1,100
		EW-2	87,000	EW-6	893
		EW-3	2,050	EW-7	1,310
		EW-4	3,920	EW-8	1,110
		EW-5	20,000	EW-9	538
		EW-6	3,400	SS-1	337
		EW-7	8,470	SS-2	231
		EW-8	1,020	SS-3	332
		EW-9	7,840	SS-4	246
		Ponded Water	9,920	SS-5	255
		Lake	40	SS-6	679
				SS-7	371
				SS-8	504
				SS-9	227

TABLE F.4

SUMMARY OF EXTRACTABLE ORGANIC COMPOUNDS DETECTED IN SOIL & WATER SAMPLES

Compound	Water Quality Guidance Criteria (ug/l)	Water Sample		Soil Sample	
		Well/Boring	Concentration (ug/l)	Boring	Concentration (ug/l)
Total Phenolics	1.0	POW-1	60	EW-2	4.5
		POW-2	31	EW-5	3.5
		POW-3	34	EW-6	2.7
		POW-4	420	EW-7	13
		EW-1	120	EW-8	2.1
		EW-2	3,630	EW-9	2.2
		EW-3	85	SS-3	1.4
		EW-4	27		
		EW-5	311		
		EW-6	187		
		EW-7	135		
		EW-8	259		
		EW-9	180		
Acenaphthene	20	EW-2	19	EW-2	39
		EW-4	6.7		
		EW-6	40		
		EW-7	6.2		
		EW-8	20		
		EW-9	28		
Anthracene	[50]	POW-1	4.0	EW-2	25
		POW-4	4.6	EW-7	4.1
		EW-2	45		
		EW-5	7.0		
		EW-6	10.0		
		EW-7	13		
		EW-8	7.9		
		EW-9	9.5		
Bis (2-Chloroethly)ether	0.03	EW-6	14		
	1.0 (Reg.)				
Benzo(a)anthracene	0.002*	EW-2	7.9		
2-Chloronaphthalene	10	POW-2	6.8		
Chrysene	0.002*	EW-2	13		
1,2-Dichlorobenzene	4.7	POW-2	7.2	EW-2	5.7
		POW-3	4.3	SS-7	4.3
		POW-4	76		
		EW-2	160		
		EW-4	6.0		
		EW-6	50		
		EW-7	330		
		EW-9	190		

- Notes: 1. [50] Default guidance criteria, no regulatory standard for groundwater
 2. *No regulatory standard for groundwater, only guidance criteria
 3. (Reg.) Regulatory Standard

TABLE F.4 CONT'D

SUMMARY OF EXTRACTABLE ORGANIC COMPOUNDS DETECTED IN SOIL & WATER SAMPLES

Compound	Water Quality Guidance Criteria (ug/l)	Water Sample		Soil Sample	
		Well/Boring	Concentration (ug/l)	Boring	Concentration (ug/l)
1,3-Dichlorobenzene	20	POW-1	32	EW-2	5.8
		POW-4	15		
		EW-1	4.0		
		EW-2	46		
		EW-4	8.1		
		EW-6	44		
1,4-Dichlorobenzene	30 4.7 (Reg.)	POW-1	160	EW-2	63
		POW-2	35	EW-6	5.9
		POW-3	18	EW-7	8.1
		POW-4	140		
		EW-1	14		
		EW-2	620		
		EW-3	130		
		EW-4	50		
		EW-5	190		
		EW-6	430		
		EW-7	770		
		EW-8	330		
		EW-9	150		
2,4-Dinitrotoluene	-	POW-4	6.5		
Fluoranthene	[50]	POW-4	5.4	EW-2	17
		EW-2	44	EW-4	6.3
				SS-7	3.4
				SS-9	11
Fluorene	[50]	POW-1	22	EW-2	28
		EW-4	3.9		
		EW-6	27		
Naphthalene	10	POW-1	360	EW-2	100
		POW-2	13	EW-6	8.1
		POW-3	5.3	EW-7	4.2
		POW-4	150	SS-7	3.8
		EW-2	2,600	SS-8	3.4
		EW-3	28		
		EW-4	3.3		
		EW-5	9.1		
		EW-6	450		
		EW-7	120		
		EW-8	240		
		EW-9	500		
		Ponded Water	2.0		
Nitrobenzene	30	POW-2	9.7		

Notes: 1. [50] Default guidance criteria, no regulatory standard for groundwater
 2. (Reg.) Regulatory Standard

TABLE F.4 CONT'D

SUMMARY OF EXTRACTABLE ORGANIC COMPOUNDS DETECTED IN SOIL & WATER SAMPLES

Compound	Water Quality Guidance Criteria (ug/l)	Water Sample		Soil Sample	
		Well/Boring	Concentration (ug/l)	Boring	Concentration (ug/l)
N-nitrosodiphenylamine	[50]	POW-1	1,900	EW-2	12
		EW-1	13	SS-6	19
		EW-3	23		
		EW-4	10		
		EW-5	160		
		EW-7	130		
		EW-8	130		
		EW-9	130		
Phenanthrene	[50]	POW-1	28	EW-2	44
		POW-4	15	EW-4	7.8
		EW-2	88	SS-1	3.7
		EW-6	22	SS-9	7.8
		EW-7	10		
		EW-8	13		
		EW-9	18		
Pyrene	[50]	POW-4	3.6	EW-2	13
		EW-2	33	EW-4	4.4
				SS-7	5.9
				SS-7	5.0
1,2,4-Trichlorobenzene	10	POW-1	8.6	EW-2	16
		POW-2	4.5	EW-6	26
		POW-4	8.6	EW-9	5.4
		EW-2	2.0		
		EW-6	160		
		EW-7	15		
		EW-9	60		
2-Chlorophenol	1.0*	EW-2	95		
		EW-4	12		
		EW-6	26		
2,4-Dichlorophenol	0.3	EW-6	9.3		
2,4-Dinitrophenol	1.0**	POW-4	560		
2-Nitrophenol	1.0**	POW-2	20		
Phenol	1.0**	POW-1	42		

Notes: 1. [50] Default guidance criteria, no regulatory standard for groundwater

2. **Criteria for total phenolic compounds is 1.0 ug/l

TABLE F.5

SUMMARY OF WATER SAMPLE ANALYSIS FOR PESTICIDES

Well	Compound	Concentration (ug/l)	Concentration Exceeds Guidance Criteria
POW-1	Beta-BHC	3.2	X
POW-2	Beta-BHC	0.32	X
POW-3	Aldrin	0.01	X
	Beta-BHC	0.23	X
	Endosulfan I	0.032	X (Aquatic)
POW-4	Beta-BHC	0.72	X
	Dieldrin	0.24	X
	Endosulfan I	0.25	X (Aquatic)
EW-1	4,4'-DDD/Endosulfan II	0.28	X
EW-2	Gamma-BHC	0.10	
	4,4'-DDD/Endosulfan II	0.85	X
	Endrin Aldehyde	2.1	
EW-3	Endosulfan I	0.23	X (Aquatic)
	Endrin Aldehyde	1.1	
EW-4	Alpha-BHC	0.24	X
	Beta-BHC	0.16	X
	Delta-BHC	0.044	X
	Gamma-BHC	0.012	
	4,4'-DDD/Endosulfan II	0.038	X
	Dieldrin	0.0081	X
	Endrin Aldehyde	0.072	
EW-5	Endrin Aldehyde	0.83	
EW-6	4,4'-DDD/Endosulfan II	0.12	X
	Endrin Aldehyde	0.67	
EW-7	4,4'-DDD/Endosulfan II	0.27	X
	Endrin	0.13	
	Endrin Aldehyde	0.86	
EW-8	4,4'-DDD/Endosulfan II	0.46	X
EW-9	Endosulfan I	0.12	X (Aquatic)
	Endrin Aldehyde	0.19	
Transfer Blank	Alpha-BHC	0.046	X
	Beta-BHC	0.10	X
	Delta-BHC	0.03	X
Lake	-		.
Ponded Water	-		
Field Blank	-		

Note: 1. "-" indicates no detectable pesticides found in sample

TABLE F.6

SUMMARY OF WATER SAMPLE ANALYSIS FOR VOLATILE ORGANICS

Well	Compound	Concentration (ug/l)	Concentration Exceeds Guidance Criteria
POW-1	Chlorobenzene	1,100	X
	1,2-Dichlorobenzene	160	X
	1,3-Dichlorobenzene	23	X
	Ethylbenzene	9.2	
POW-2	Chlorobenzene	47	X
	Methylene Chloride	21	X
POW-3	Chlorobenzene	56	X
POW-4	Benzene	110	X
	Chlorobenzene	1,300	X
	1,2-Dichlorobenzene	510	X
	1,3-Dichlorobenzene	31	X
	Ethylbenzene	54	X
	Toluene	47	
EW-1	Benzene	34	X
	Chlorobenzene	150	X
	1,2-Dichlorobenzene	170	X
	1,3-Dichlorobenzene	36	X
EW-2	Benzene	820	X
	Chlorobenzene	3,800	X
	1,2-Dichlorobenzene	790	X
	1,3-Dichlorobenzene	25	X
	Ethylbenzene	180	X
	Toluene	510	X
EW-3	Benzene	400	X
	Chlorobenzene	220	X
	1,2-Dichlorobenzene	1,700	X
	Ethylbenzene	140	X
	Toluene	44	
EW-4	Benzene	100	X
	Chlorobenzene	660	X
	1,2-Dichlorobenzene	57	X
EW-5	Benzene	490	X
	Chlorobenzene	4,700	X
	1,2-Dichlorobenzene	190	X
EW-6	Benzene	790	X
	Chlorobenzene	3,300	X
	1,2-Dichlorobenzene	320	X
	1,3-Dichlorobenzene	30	X

TABLE F.6 CONT'D

SUMMARY OF WATER SAMPLE ANALYSIS FOR VOLATILE ORGANICS

Well	Compound	Concentration (ug/l)	Concentration Exceeds Guidance Criteria
EW-7	Benzene	790	X
	Chlorobenzene	9,400	X
	1,2-Dichlorobenzene	630	X
EW-8	Benzene	1,000	X
	Chlorobenzene	2,600	X
EW-9	Benzene	37	X
	Chlorobenzene	220	X
	1,1,1-Trichloroethane	100	X
Ponded Water	-		
Lake	-		
Field Blank	-		
Transfer Blank	Trichloroethylene	18	

Note: 1. "-" indicates no detectable volatile organics found in sample

TABLE F.7

SUMMARY OF WATER SAMPLE ANALYSIS FOR INORGANIC COMPOUNDS

<u>Well</u>	<u>Compound</u>	<u>Concentration (ug/l)</u>	<u>Concentration Exceeds Guidance Criteria</u>
POW-1	Cyanide	605	X
	Arsenic	76	X
	Cadmium	10	
	Chromium	164	X
	Copper	82	
	Lead	47	
	Mercury	1.2	X
	Silver	6	
	Zinc	350	
POW-2	Cyanide	18	
	Silver	9	
	Zinc	40	
POW-3	Cyanide	100	
	Arsenic	658	X
	Beryllium	28	X
	Cadmium	13	
	Chromium	857	X
	Copper	609	
	Lead	649	X
	Mercury	11	X
	Silver	11	
	Zinc	2,950	
POW-4	Cyanide	190	
	Arsenic	692	X
	Beryllium	7	X
	Cadmium	81	X
	Chromium	2,830	X
	Copper	2,080	X
	Lead	753	X
	Mercury	13	X
	Nickel	340	X
	Silver	15	
	Zinc	12,000	X
EW-1	Cyanide	87	
	Antimony	30	X
	Arsenic	956	X
	Beryllium	8	X
	Cadmium	32	X
	Chromium	2,160	X
	Copper	2,500	X
	Lead	788	X
	Mercury	14	X
	Nickel	900	X
	Silver	8	X
	Zinc	7,560	X

TABLE F.7 CONT'D

SUMMARY OF WATER SAMPLE ANALYSIS FOR INORGANIC COMPOUNDS

<u>Well</u>	<u>Compound</u>	<u>Concentration (ug/l)</u>	<u>Concentration Exceeds Guidance Criteria</u>
EW-2	Cyanide	9,000	X
	Antimony	79	X
	Arsenic	7,600	X
	Beryllium	31	X
	Cadmium	650	X
	Chromium	27,000	X
	Copper	23,000	X
	Lead	38,000	X
	Mercury	1,440	X
	Nickel	2,790	X
	Silver	37	
	Thallium	27	X
	Zinc	87,000	X
EW-3	Cyanide	48	
	Antimony	9	X
	Arsenic	190	X
	Beryllium	5	X
	Cadmium	18	
	Chromium	629	X
	Copper	478	
	Lead	618	X
	Mercury	8.1	X
	Nickel	30	X
	Zinc	2,050	
EW-4	Cyanide	50	
	Arsenic	229	X
	Cadmium	29	X
	Chromium	570	X
	Copper	785	
	lead	1,570	X
	Mercury	6.5	X
	Nickel	140	X
	Silver	7	
	Zinc	3,920	
EW-5	Cyanide	223	X
	Antimony	11	X
	Arsenic	1,750	X
	Beryllium	12	X
	Cadmium	113	X
	Chromium	9,890	X
	Copper	5,710	X
	Lead	6,360	X
	Mercury	302	X
	Nickel	920	X
	Silver	13	
	Thallium	7	X
	Zinc	20,000	X

TABLE F.7 CONT'D

SUMMARY OF WATER SAMPLE ANALYSIS FOR INORGANIC COMPOUNDS

<u>Well</u>	<u>Compound</u>	<u>Concentration (ug/l)</u>	<u>Concentration Exceeds Guidance Criteria</u>
EW-6	Cyanide	40	X
	Antimony	31	X
	Arsenic	190	X
	Cadmium	11	X
	Chromium	330	X
	Copper	472	
	Lead	1,570	X
	Mercury	7.4	X
	Nickel	80	X
	Zinc	3,400	
EW-7	Cyanide	32	
	Antimony	11	X
	Arsenic	593	X
	Beryllium	5	X
	Cadmium	54	X
	Chromium	1,610	X
	Copper	1,940	X
	Lead	3,370	X
	Mercury	19	X
	Nickel	290	X
	Silver	6	
	Zinc	8,470	X
EW-8	Cyanide	148	
	Antimony	26	X
	Arsenic	552	X
	Beryllium	5	X
	Cadmium	51	X
	Chromium	1,390	X
	Copper	1,330	X
	Lead	3,430	X
	Mercury	16	X
	Nickel	210	X
	Zinc	1,020	
EW-9	Cyanide	190	
	Antimony	6	X
	Arsenic	712	X
	Beryllium	10	X
	Cadmium	35	X
	Chromium	1,150	X
	Copper	1,340	X
	Lead	5,100	X
	Mercury	20	X
	Nickel	480	X
	Zinc	7,840	X

TABLE F.8

SUMMARY OF WATER SAMPLE ANALYSIS FOR EXTRACTABLE ORGANICS

Well	Compound	Concentration (ug/l)	Concentration Exceeds Guidance Criteria
POW-1	Anthracene	4.0	
	1,2-Dichlorobenzene	32	X
	1,4-Dichlorobenzene	160	X
	Fluorene	22	
	Naphthalene	366	X
	N-nitrosodiphenylamine	1,900	X
	Phenanthrene	28	
	1,2,4-Trichlorobenzene	8.6	
	Phenol	42	X
POW-2	2-Chloronaphthalene	6.8	
	1,2-Dichlorobenzene	7.2	X
	1,4-Dichlorobenzene	35	X
	Naphthalene	13	X
	Nitrobenzene	9.7	
	1,2,4-Trichlorobenzene	4.5	
	2-Nitrophenol	20	X
POW-3	1,2-Dichlorobenzene	4.3	
	1,4-Dichlorobenzene	18	
	Naphthalene	5.3	
POW-4	Anthracene	4.6	
	1,2-Dichlorobenzene	76	X
	1,3-Dichlorobenzene	15	
	1,4-Dichlorobenzene	140	X
	2,4-Dinitrotoluene	6.5	
	Fluoranthene	5.4	
	Naphthalene	150	X
	Phenanthrene	15	
	Pyrene	3.6	
	1,2,4-Trichlorobenzene	8.6	
	2,4-Dinitrophenol	560	X
EW-1	1,3-Dichlorobenzene	4.0	
	1,4-Dichlorobenzene	14	
	N-nitrosodiphenylamine	13	
EW-2	Anthracene	45	
	Benzo (a) anthracene	7.9	X
	Chrysene	13	X
	1,2-Dichlorobenzene	160	X
	1,3-Dichlorobenzene	46	X
	1,4-Dichlorobenzene	620	X
	Fluoranthene	44	
	Naphthalene	2,600	X
	Phenanthrene	88	X
	Pyrene	33	
	1,2,4-Trichlorobenzene	2.0	
	2-Chlorophenol	95	X

TABLE F.8 CONT'D

SUMMARY OF WATER SAMPLE ANALYSIS FOR EXTRACTABLE ORGANICS

Well	Compound	Concentration (ug/l)	Concentration Exceeds Guidance Criteria
EW-3	1,4-Dichlorobenzene	130	X
	Naphthalene	28	X
	N-nitrosodiphenylamine	23	
EW-4	Acenaphthene	6.7	
	1,2-Dichlorobenzene	6.0	X
	1,3-Dichlorobenzene	8.1	
	1,4-Dichlorobenzene	50	X
	Fluorene	3.9	
	Naphthalene	3.3	
	N-nitrosodiphenylamine	10	
	2-Chlorophenol	12	X
EW-5	Anthracene	7.0	
	1,4-Dichlorobenzene	190	X
	Naphthalene	9.1	
	N-nitrosodiphenylamine	160	X
EW-6	Acenaphthene	40	X
	Anthracene	10	
	Bis(2-Chloroethyl)ether	14	X
	1,2-Dichlorobenzene	50	X
	1,3-Dichlorobenzene	44	X
	1,4-Dichlorobenzene	430	X
	Fluorene	27	
	Naphthalene	450	X
	Phenanthrene	22	
	1,2,4-Trichlorobenzene	160	X
	2-Chlorophenol	26	X
	2,4-Dichlorophenol	9.3	X
EW-7	Acenaphthene	6.2	
	Anthracene	13	
	1,2-Dichlorobenzene	330	X
	1,4-Dichlorobenzene	770	X
	Naphthalene	120	X
	N-nitrosodiphenylamine	130	X
	Phenanthrene	10	
	1,2,4-Trichlorobenzene	15	X
EW-8	Acenaphthene	20	
	Anthracene	7.9	
	1,4-Dichlorobenzene	330	X
	Naphthalene	240	X
	N-nitrosodiphenylamine	130	X
	Phenanthrene	13	
EW-9	Acenaphthene	28	X
	Anthracene	9.5	
	1,2-Dichlorobenzene	190	X
	1,4-Dichlorobenzene	150	X
	Naphthalene	500	X
	N-nitrosodiphenylamine	130	X
	Phenanthrene	18	
	1,2,4-Trichlorobenzene	60	X

TABLE F.8 CONT'D

SUMMARY OF WATER SAMPLE ANALYSIS FOR EXTRACTABLE ORGANICS

Well	Compound	Concentration (ug/l)	Concentration
			Exceeds Guidance Criteria
Ponded Water	Naphthalene	2.0	
Lake Water	-		
Field Blank	-		
Transfer Blank	-		

Notes: 1. "-" no detectable extractable organics found in sample.

TABLE F.9
SUMMARY OF SOIL SAMPLE ANALYSIS FOR PESTICIDES

<u>Boring</u>	<u>Compound</u>	<u>Concentration (ug/g)</u>
EW-1	-	
EW-2	Beta-BHC	0.14
	PCB-1248	9.4
EW-3	Beta-BHC	0.34
	4,4'-DDD/Endosulfan II	0.16
	4,4'-DDT	0.43
	PCB-1248	5.4
EW-4	4,4'-DDD	0.055
	PCB-1248	0.97
EW-5	Aldrin	0.36
	4,4'-DDE	0.27
	PCB-1260	2.0
EW-6	4,4'-DDD/Endosulfan II	0.39
EW-7	Delta-BHC	0.21
	Endrin	3.5
	Heptachlor	0.31
EW-8	Delta-BHC	0.067
	Heptachlor	0.17
	PCB-1016	0.6
EW-9	Delta-BHC	0.099
	Heptachlor	0.12
SS-1	Endosulfan Sulfate	0.20
SS-2	Aldrin	0.031
	Endosulfan Sulfate	0.11
	Heptachlor	0.049
	PCB-1254	0.38
SS-3	Endosulfan Sulfate	0.21
SS-4	Heptachlor	0.14
SS-5	4,4'-DDD/Endosulfan II	0.028
	4,4'-DDT	0.054
	Endosulfan Sulfate	0.091
	Endrin	0.034
SS-6	Endosulfan I	0.41
	Endrin	0.39
SS-7	PCB-1260	0.38
SS-8	PCB-1260	0.37
SS-9	PCB-1260	0.41

Notes: 1. "-" indicates no detectable pesticides found in sample

TABLE F.10

SUMMARY OF SOIL SAMPLE ANALYSIS FOR VOLATILE ORGANICS

<u>Boring</u>	<u>Compound</u>	<u>Concentrations (ug/g)</u>
EW-1	Toluene	6.5
EW-2	Chlorobenzene	69
	1,2-Dichlorobenzene	320
	1,3-Dichlorobenzene	3.6
	Toluene	10
EW-3	-	
EW-4	-	
EW-5	-	
EW-6	Chlorobenzene	7.3
	1,2-Dichlorobenzene	4.4
EW-7	-	
EW-8	-	
EW-9	-	
SS-1	-	
SS-2	-	
SS-3	-	
SS-4	-	
SS-5	-	
SS-6	-	
SS-7	-	
SS-8	-	
SS-9	-	

Notes: 1. "-" indicates no detectable volatile organics found in sample.

TABLE F.11

SUMMARY OF SOIL SAMPLE ANALYSIS FOR EXTRACTABLE ORGANICS

<u>Boring</u>	<u>Compound</u>	<u>Concentration (ug/l)</u>
EW-1	-	
EW-2	Acenaphthene	39
	Anthracene	25
	1,2-Dichlorobenzene	5.7
	1,3-Dichlorobenzene	5.8
	1,4-Dichlorobenzene	63
	Fluoranthene	17
	Fluorene	28
	Naphthalene	100
	N-nitrosodiphenylamine	12
	Phenanthrene	44
	Pyrene	13
	1,2,4-Trichlorobenzene	16
EW-3	-	
EW-4	Fluoranthene	6.3
	Phenanthrene	7.8
	Pyrene	4.4
EW-5	-	
EW-6	1,4-Dichlorobenzene	5.9
	Naphthalene	8.1
	1,2,4-Trichlorobenzene	26
EW-7	Naphthalene	4.2
EW-8	-	
EW-9	1,2,4-Trichlorobenzene	5.4
	Fluoranthene	4.3
	Phenanthrene	3.7
SS-2	-	
SS-3	-	
SS-4	-	
SS-5	-	
SS-6	N-nitrosodiphenylamine	19
SS-7	Fluoranthene	3.4
	Naphthalene	3.8
	Pyrene	5.9
SS-8	Fluoranthene	3.5
	Naphthalene	3.4
	Pyrene	5.0
SS-9	Fluoranthene	11
	Phenanthrene	7.8

Note: 1. "-" No detectable extractable organics found in sample.

APPENDIX E

LABORATORY CHEMICAL DATA

Contents of Appendix E:

Appendix E.1 - Inorganic Priority Pollutants

Appendix E.2 - Volatile Organic Priority Pollutants

Appendix E.3 - Extractable Organic Priority Pollutants

Appendix E.4 - Pesticides and PCB's

Appendix E.5 - Chain of Custody Records

APPENDIX E.1

INORGANIC PRIORITY POLLUTANTS

ANALYTICAL RESULTS

Prepared For

Empire Soils Investigation
P.O. Box 0913
Hamburg, NY 14075

Prepared By

Recra Environmental, Inc.
4248 Ridge Lea Road
Amherst, New York 14226

METHODOLOGIES

Specific methodologies employed in obtaining the enclosed analytical results are indicated on the specific data table. The method numbers presented refer to the following U.S. Environmental Protection Agency references.

- o 40 CFR Part 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act" October 26, 1984 (Federal Register) U.S. Environmental Protection Agency.
- o U.S. Environmental Protection Agency "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods". Office of Solid Waste and Emergency Response. July 1982, SW-846, Second Edition.

COMMENTS

Comments pertain to data on one or all pages of this report.

Values reported as "less than" (<) indicate the working detection limit for the particular sample and/or parameter.



AQUEOUS MATRIX
WATER QUALITY/METALS TESTING

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION	
		POW-1	POW-2
Total Cyanide	mg/l	0.605	0.018
Total Recoverable Phenolics	mg/l	0.060	0.031
Total Antimony	mg/l	<0.05	<0.05
Total Arsenic	mg/l	0.076	<0.005
Total Beryllium	mg/l	<0.003	<0.003
Total Cadmium	mg/l	0.010	<0.009
Total Chromium	mg/l	0.164	<0.005
Total Copper	mg/l	0.082	<0.005
Total Lead	mg/l	0.047	<0.005
Total Mercury	mg/l	0.0012	<0.0003
Total Nickel	mg/l	<0.04	<0.04
Total Selenium	mg/l	<0.005	<0.005
Total Silver	mg/l	0.006	0.009
Total Thallium	mg/l	<0.005	<0.005
Total Zinc	mg/l	0.35	0.04



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AQUEOUS MATRIX
WATER QUALITY/METALS TESTING

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION	
		POW-3	POW-4
Total Cyanide	mg/l	0.100	0.190
Total Recoverable Phenolics	mg/l	0.034	0.420
Total Antimony	mg/l	<0.05	<0.05
Total Arsenic	mg/l	0.658	0.692
Total Beryllium	mg/l	0.028	0.007
Total Cadmium	mg/l	0.013	0.081
Total Chromium	mg/l	0.857	2.83
Total Copper	mg/l	0.609	2.08
Total Lead	mg/l	0.649	0.753
Total Mercury	mg/l	0.011	0.013
Total Nickel	mg/l	<0.04	0.34
Total Selenium	mg/l	<0.005	<0.005
Total Silver	mg/l	0.011	0.015
Total Thallium	mg/l	<0.005	<0.005
Total Zinc	mg/l	2.95	12



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AQUEOUS MATRIX
WATER QUALITY/METALS TESTING

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION
		PONDED H ₂ O
Total Cyanide	mg/l	0.015
Total Recoverable Phenolics	mg/l	<0.01
Total Antimony	mg/l	<0.005
Total Arsenic	mg/l	<0.005
Total Beryllium	mg/l	0.010
Total Cadmium	mg/l	0.051
Total Chromium	mg/l	1.59
Total Copper	mg/l	1.55
Total Lead	mg/l	1.02
Total Mercury	mg/l	0.0094
Total Nickel	mg/l	0.52
Total Selenium	mg/l	<0.005
Total Silver	mg/l	0.019
Total Thallium	mg/l	<0.005
Total Zinc	mg/l	9.92



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AQUEOUS MATRIX
WATER QUALITY/METALS TESTING

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION	
		LAKE SAMPLE	FIELD BLANK
Total Cyanide	mg/l	<0.01	<0.01
Total Recoverable Phenolics	mg/l	<0.01	<0.01
Total Antimony	mg/l	<0.005	<0.005
Total Arsenic	mg/l	<0.005	<0.005
Total Beryllium	mg/l	<0.003	<0.003
Total Cadmium	mg/l	<0.009	<0.009
Total Chromium	mg/l	<0.005	<0.005
Total Copper	mg/l	<0.005	<0.005
Total Lead	mg/l	<0.005	<0.005
Total Mercury	mg/l	<0.0003	<0.0003
Total Nickel	mg/l	0.020	<0.02
Total Selenium	mg/l	<0.005	<0.005
Total Silver	mg/l	<0.005	<0.005
Total Thallium	mg/l	<0.005	<0.005
Total Zinc	mg/l	0.040	<0.01



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AQUEOUS MATRIX
WATER QUALITY/METALS TESTING

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION		
		EW-1	EW-2	EW-3
Total Cyanide	mg/l	0.087	9.0	0.048
Total Recoverable Phenolics	mg/l	0.120	3.63	0.085
Total Antimony	mg/l	0.030	0.079	0.009
Total Arsenic	mg/l	0.956	7.60	0.190
Total Beryllium	mg/l	0.008	0.031	0.005
Total Cadmium	mg/l	0.032	0.650	0.018
Total Chromium	mg/l	2.16	27	0.629
Total Copper	mg/l	2.50	23	0.478
Total Lead	mg/l	0.788	38	0.618
Total Mercury	mg/l	0.014	1.44	0.0081
Total Nickel	mg/l	0.90	2.79	0.030
Total Selenium	mg/l	<0.005	<0.005	<0.005
Total Silver	mg/l	0.008	0.037	<0.005
Total Thallium	mg/l	<0.005	0.027	<0.005
Total Zinc	mg/l	7.56	87	2.05



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AQUEOUS MATRIX
WATER QUALITY/METALS TESTING

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION		
		EW-4	EW-5	EW-6
Total Cyanide	mg/l	0.050	0.223	0.040
Total Recoverable Phenolics	mg/l	0.027	0.311	0.187
Total Antimony	mg/l	<0.005	0.011	0.031
Total Arsenic	mg/l	0.229	1.75	0.190
Total Beryllium	mg/l	<0.005	0.012	<0.005
Total Cadmium	mg/l	0.029	0.113	0.011
Total Chromium	mg/l	0.570	9.89	0.330
Total Copper	mg/l	0.785	5.71	0.472
Total Lead	mg/l	1.57	6.36	1.57
Total Mercury	mg/l	0.0065	0.302	0.0074
Total Nickel	mg/l	0.140	0.920	0.080
Total Selenium	mg/l	<0.005	<0.005	<0.005
Total Silver	mg/l	0.007	0.013	<0.006
Total Thallium	mg/l	<0.005	0.007	<0.005
Total Zinc	mg/l	3.92	20	3.40



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AQUEOUS MATRIX
WATER QUALITY/METALS TESTING

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION		
		EW-7	EW-8	EW-9
Total Cyanide	mg/l	0.032	0.148	0.190
Total Recoverable Phenolics	mg/l	0.135	0.259	0.180
Total Antimony	mg/l	0.011	0.026	0.006
Total Arsenic	mg/l	0.593	0.552	0.712
Total Beryllium	mg/l	0.005	0.005	0.010
Total Cadmium	mg/l	0.054	0.051	0.035
Total Chromium	mg/l	1.61	1.39	1.15
Total Copper	mg/l	1.94	1.33	1.34
Total Lead	mg/l	3.37	3.43	5.10
Total Mercury	mg/l	0.019	0.016	0.020
Total Nickel	mg/l	0.290	0.210	0.480
Total Selenium	mg/l	<0.005	<0.005	<0.005
Total Silver	mg/l	0.006	<0.005	<0.006
Total Thallium	mg/l	<0.005	<0.005	<0.005
Total Zinc	mg/l	8.47	1.02	7.84



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AQUEOUS MATRIX
WATER QUALITY/METALS TESTING

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION
		TRANSFER BLANK
Total Cyanide	mg/l	<0.01
Total Recoverable Phenolics	mg/l	<0.01
Total Antimony	mg/l	<0.005
Total Arsenic	mg/l	<0.005
Total Beryllium	mg/l	<0.005
Total Cadmium	mg/l	<0.01
Total Chromium	mg/l	<0.005
Total Copper	mg/l	<0.005
Total Lead	mg/l	0.012
Total Mercury	mg/l	<0.0003
Total Nickel	mg/l	0.030
Total Selenium	mg/l	<0.005
Total Silver	mg/l	<0.005
Total Thallium	mg/l	<0.005
Total Zinc	mg/l	<0.01



I.D. #86-1210

QUALITY CONTROL INFORMATION - PRECISION
AQUEOUS MATRIX
WATER QUALITY TESTING

PARAMETER	SAMPLE I.D.	UNITS OF MEASURE	VALUE 1	VALUE 2	MEAN	STANDARD DEVIATION
Total Cyanide	POW-1	mg/l	0.602	0.607	0.605	0.0035
	EW-5	mg/l	0.218	0.228	0.223	0.007
Total Recoverable Phenolics	POW-4	mg/l	0.395	0.446	0.420	0.036
	*	mg/l	0.027	0.031	0.029	0.0028

*This sample is not part of this report, but is a sample of similar matrix that was used for quality control at the time of analysis.

QUALITY CONTROL INFORMATION - ACCURACY

PARAMETER	SAMPLE I.D.	µg OF SPIKE	% RECOVERY
Total Cyanide	POW-1	93.4	85
	EW-5	233.5	86.9
Total Recoverable Phenolics	POW-4	40.8	90.6
	Field Blank	40.8	105.8



I.D. #86-1210

QUALITY CONTROL INFORMATION - PRECISION
AQUEOUS MATRIX
METALS TESTING

PARAMETER	SAMPLE I.D.	UNITS OF MEASURE	VALUE 1	VALUE 2	MEAN	STANDARD DEVIATION
Total Antimony	EW-6	mg/l	0.034	0.027	0.0305	0.005
Total Arsenic		mg/l	0.181	0.198	0.1895	0.012
Total Beryllium		mg/l	<0.005	<0.005	<0.005	-
Total Cadmium		mg/l	0.013	0.009	0.011	0.0028
Total Chromium		mg/l	0.320	0.340	0.330	0.014
Total Copper		mg/l	0.442	0.501	0.472	0.042
Total Lead		mg/l	1.51	1.64	1.575	0.091
Total Mercury		mg/l	0.0076	0.0072	0.0074	0.00028
Total Nickel		mg/l	0.070	0.090	0.080	0.014
Total Selenium		mg/l	<0.005	<0.005	<0.005	-
Total Silver		mg/l	<0.006	<0.006	<0.006	-
Total Thallium		mg/l	<0.005	<0.005	<0.005	-
Total Zinc		mg/l	3.00	3.80	3.40	0.56



I.D. #86-1210

QUALITY CONTROL INFORMATION - ACCURACY
AQUEOUS MATRIX
METALS TESTING

PARAMETER	SAMPLE I.D.	µg OF SPIKE	% RECOVERY
Total Antimony	POW-4	500	106
Total Arsenic	POW-4	50	104
Total Beryllium	POW-4	500	95
Total Cadmium	POW-4	500	104
Total Chromium	POW-4	500	99
Total Copper	POW-4	500	97
Total Lead	EW-6	500	88
Total Mercury	POW-4	0.4	84
Total Nickel	POW-4	500	100
Total Selenium	POW-4	50	88
Total Silver	POW-4	500	103
Total Thallium	POW-4	50	94
Total Zinc	POW-4	500	92



I.D. #86-1210

QUALITY CONTROL INFORMATION - PRECISION
AQUEOUS MATRIX
METALS TESTING

PARAMETER	SAMPLE I.D.	UNITS OF MEASURE	VALUE 1	VALUE 2	MEAN	STANDARD DEVIATION
Total Antimony	EW-9	mg/l	0.006	0.006	0.006	0
Total Arsenic		mg/l	0.756	0.667	0.712	0.062
Total Beryllium		mg/l	0.011	0.008	0.0095	0.002
Total Cadmium		mg/l	0.030	0.040	0.035	0.007
Total Chromium		mg/l	1.182	1.113	1.148	0.049
Total Copper		mg/l	1.294	1.391	1.343	0.069
Total Lead		mg/l	6.00	4.20	5.10	1.27
Total Mercury		mg/l	0.0165	0.0243	0.0204	0.0055
Total Nickel		mg/l	0.470	0.490	0.480	0.014
Total Selenium		mg/l	<0.005	<0.005	<0.005	-
Total Silver		mg/l	<0.006	<0.006	<0.006	-
Total Thallium		mg/l	<0.005	<0.005	<0.005	-
Total Zinc		mg/l	6.28	8.20	7.24	1.36



I.D. #86-1210

QUALITY CONTROL INFORMATION - ACCURACY
AQUEOUS MATRIX
METALS TESTING

PARAMETER	SAMPLE I.D.	µg OF SPIKE	% RECOVERY
Total Antimony	EW-9	50	94
Total Arsenic	EW-9	50	96
Total Beryllium	EW-9	500	95
Total Cadmium	EW-9	500	104
Total Chromium	EW-9	500	99
Total Copper	EW-9	500	97
Total Lead	EW-9	500	121
Total Mercury	EW-9	0.4	73
Total Nickel	EW-6	500	103
Total Selenium	EW-6	50	93
Total Silver	EW-6	500	88
Total Thallium	EW-6	50	94
Total Zinc	EW-6	500	98



I.D. #86-1210

SOIL MATRIX
WATER QUALITY/METALS TESTING

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION	
		EW-1	EW-2
Total Cyanide	µg/g dry	6.5	66
Total Recoverable Phenolics	µg/g dry	<0.7	4.5
Total Antimony	µg/g dry	<0.7	2.8
Total Arsenic	µg/g dry	38	139
Total Beryllium	µg/g dry	<0.7	<0.7
Total Cadmium	µg/g dry	1.7	14
Total Chromium	µg/g dry	116	511
Total Copper	µg/g dry	133	445
Total Lead	µg/g dry	202	986
Total Mercury	µg/g dry	1.79	7.14
Total Nickel	µg/g dry	41	67
Total Selenium	µg/g dry	<0.7	<0.7
Total Silver	µg/g dry	0.66	2.0
Total Thallium	µg/g dry	<0.7	<0.7
Total Zinc	µg/g dry	452	602



I.D. #86-1210

SOIL MATRIX
WATER QUALITY/METALS TESTING

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION	
		EW-3	EW-4
Total Cyanide	µg/g dry	13	5.6
Total Recoverable Phenolics	µg/g dry	<0.8	<0.8
Total Antimony	µg/g dry	<0.8	<0.7
Total Arsenic	µg/g dry	60	29
Total Beryllium	µg/g dry	<0.7	<0.6
Total Cadmium	µg/g dry	5.4	6.1
Total Chromium	µg/g dry	158	69
Total Copper	µg/g dry	176	111
Total Lead	µg/g dry	309	277
Total Mercury	µg/g dry	2.65	1.16
Total Nickel	µg/g dry	42	31
Total Selenium	µg/g dry	<0.8	<0.8
Total Silver	µg/g dry	1.8	2.5
Total Thallium	µg/g dry	<0.8	<0.7
Total Zinc	µg/g dry	723	477



I.D. #86-1210

SOIL MATRIX
WATER QUALITY/METALS TESTING

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION	
		EW-5	EW-6
Total Cyanide	µg/g dry	12	6.3
Total Recoverable Phenolics	µg/g dry	3.5	2.7
Total Antimony	µg/g dry	2.4	<0.8
Total Arsenic	µg/g dry	7.3	53
Total Beryllium	µg/g dry	1.3	1.4
Total Cadmium	µg/g dry	4.9	3.3
Total Chromium	µg/g dry	280	234
Total Copper	µg/g dry	236	211
Total Lead	µg/g dry	454	431
Total Mercury	µg/g dry	5.38	2.03
Total Nickel	µg/g dry	39	63
Total Selenium	µg/g dry	<0.8	<0.8
Total Silver	µg/g dry	2.4	0.80
Total Thallium	µg/g dry	<0.8	<0.8
Total Zinc	µg/g dry	1,100	893



I.D. #86-1210

SOIL MATRIX
WATER QUALITY/METALS TESTING

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION	
		EW-7	EW-8
Total Cyanide	µg/g dry	24	9.8
Total Recoverable Phenolics	µg/g dry	13	2.1
Total Antimony	µg/g dry	4.7	<1
Total Arsenic	µg/g dry	95	58
Total Beryllium	µg/g dry	1.0	<1
Total Cadmium	µg/g dry	9.1	5.2
Total Chromium	µg/g dry	334	230
Total Copper	µg/g dry	344	214
Total Lead	µg/g dry	591	487
Total Mercury	µg/g dry	5.87	3.90
Total Nickel	µg/g dry	47	40
Total Selenium	µg/g dry	<0.9	<0.8
Total Silver	µg/g dry	2.0	1.0
Total Thallium	µg/g dry	<1	<0.7
Total Zinc	µg/g dry	1,310	1,110



I.D. #86-1210

SOIL MATRIX
WATER QUALITY/METALS TESTING

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION
		EW-9
Total Cyanide	µg/g dry	8.5
Total Recoverable Phenolics	µg/g dry	2.2
Total Antimony	µg/g dry	<0.7
Total Arsenic	µg/g dry	53
Total Beryllium	µg/g dry	0.75
Total Cadmium	µg/g dry	2.7
Total Chromium	µg/g dry	190
Total Copper	µg/g dry	143
Total Lead	µg/g dry	345
Total Mercury	µg/g dry	4.41
Total Nickel	µg/g dry	27
Total Selenium	µg/g dry	<0.7
Total Silver	µg/g dry	<0.7
Total Thallium	µg/g dry	<0.7
Total Zinc	µg/g dry	538



I.D. #86-1210

SOIL MATRIX
WATER QUALITY/METALS TESTING

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION	
		SS-1	SS-2
Total Cyanide	µg/g dry	<0.6	<0.6
Total Recoverable Phenolics	µg/g dry	<0.6	<0.6
Total Antimony	µg/g dry	<1	<1
Total Arsenic	µg/g dry	55	6.6
Total Beryllium	µg/g dry	3.6	3.2
Total Cadmium	µg/g dry	1.8	<0.7
Total Chromium	µg/g dry	66	43
Total Copper	µg/g dry	55	39
Total Lead	µg/g dry	134	87
Total Mercury	µg/g dry	0.198	0.406
Total Nickel	µg/g dry	20	14
Total Selenium	µg/g dry	<0.6	<0.6
Total Silver	µg/g dry	1.5	<0.7
Total Thallium	µg/g dry	<0.7	<0.7
Total Zinc	µg/g dry	337	231



I.D. #86-1210

SOIL MATRIX
WATER QUALITY/METALS TESTING

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION	
		SS-3	SS-4
Total Cyanide	µg/g dry	<0.7	<0.8
Total Recoverable Phenolics	µg/g dry	1.4	<0.8
Total Antimony	µg/g dry	<0.7	<0.7
Total Arsenic	µg/g dry	16	13
Total Beryllium	µg/g dry	2.4	<0.6
Total Cadmium	µg/g dry	1.4	<1
Total Chromium	µg/g dry	75	78
Total Copper	µg/g dry	48	59
Total Lead	µg/g dry	112	129
Total Mercury	µg/g dry	0.554	0.825
Total Nickel	µg/g dry	20	22
Total Selenium	µg/g dry	<0.7	<0.7
Total Silver	µg/g dry	<0.7	<0.7
Total Thallium	µg/g dry	<0.7	<0.7
Total Zinc	µg/g dry	332	246



I.D. #86-1210

SOIL MATRIX
WATER QUALITY/METALS TESTING

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION	
		SS-5	SS-6
Total Cyanide	µg/g dry	1.2	4.1
Total Recoverable Phenolics	µg/g dry	<0.8	<2
Total Antimony	µg/g dry	<0.6	<0.7
Total Arsenic	µg/g dry	16	47
Total Beryllium	µg/g dry	<0.7	0.86
Total Cadmium	µg/g dry	1.3	3.7
Total Chromium	µg/g dry	62	145
Total Copper	µg/g dry	51	139
Total Lead	µg/g dry	111	213
Total Mercury	µg/g dry	0.859	2.74
Total Nickel	µg/g dry	21	35
Total Selenium	µg/g dry	<0.6	<0.7
Total Silver	µg/g dry	<0.6	<0.7
Total Thallium	µg/g dry	<0.6	<0.7
Total Zinc	µg/g dry	255	679



I.D. #86-1210

SOIL MATRIX
WATER QUALITY/METALS TESTING

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION		
		SS-7	SS-8	SS-9
Total Cyanide	µg/g dry	1.4	3.9	1.9
Total Recoverable Phenolics	µg/g dry	<0.7	<0.7	<0.7
Total Antimony	µg/g dry	<0.7	<0.7	<0.7
Total Arsenic	µg/g dry	13	43	11
Total Beryllium	µg/g dry	<0.7	<0.7	<0.7
Total Cadmium	µg/g dry	<1	3.0	<1
Total Chromium	µg/g dry	89	116	50
Total Copper	µg/g dry	74	106	63
Total Lead	µg/g dry	151	223	200
Total Mercury	µg/g dry	0.805	1.21	0.867
Total Nickel	µg/g dry	24	29	19
Total Selenium	µg/g dry	<0.7	<0.7	<0.7
Total Silver	µg/g dry	<0.7	<0.7	<0.7
Total Thallium	µg/g dry	<0.7	<0.7	<0.7
Total Zinc	µg/g dry	371	504	277



I.D. #86-1210

QUALITY CONTROL INFORMATION
SOIL MATRIX
WATER QUALITY TESTING

REPLICATE ANALYSIS

PARAMETER	SAMPLE I.D.	UNITS OF MEASURE	VALUE 1	VALUE 2	MEAN	STANDARD DEVIATION
Total Cyanide	EW-4	µg/g dry	6.07	5.16	5.61	0.64
	SS-8	µg/g dry	4.05	3.89	3.97	0.11
Total Recoverable Phenolics	SS-9	µg/g dry	<0.7	<0.7	<0.7	-
	*	µg/g dry	1.74	1.76	1.75	0.014

*This sample is not part of this report, but is a sample of similar matrix that was used for quality control at the time of analysis.

RECOVERY ANALYSIS

PARAMETER	SAMPLE I.D.	µg OF SPIKE	% RECOVERY
Total Cyanide	EW-8	233.5	86.9
	EW-4	116.75	97.4
	SS-9	46.7	100
Total Recoverable Phenolics	EW-2	40.8	100.9
	SS-6	40.8	103.4
	SS-9	40.8	100.9



I.D. #86-1210

QUALITY CONTROL INFORMATION
SOIL MATRIX
METALS TESTING

REPLICATE ANALYSIS

PARAMETER	SAMPLE I.D.	UNITS OF MEASURE	VALUE 1	VALUE 2	MEAN	STANDARD DEVIATION
Total Antimony	EW-2	µg/g dry	2.92	2.73	2.83	0.13
Total Arsenic		µg/g dry	152.6	125.8	139	18.9
Total Beryllium		µg/g dry	<0.7	<0.7	<0.7	-
Total Cadmium		µg/g dry	15.7	13.2	14.4	1.75
Total Chromium		µg/g dry	599	423	511	124
Total Copper		µg/g dry	517	374	445	101
Total Lead		µg/g dry	1,116	855	986	185
Total Mercury		µg/g dry	7.73	6.55	7.14	0.84
Total Nickel		µg/g dry	71.5	62.3	66.9	6.5
Total Selenium		µg/g dry	<0.7	<0.7	<0.7	-
Total Silver		µg/g dry	2.43	1.56	1.995	0.61
Total Thallium		µg/g dry	<0.7	<0.7	<0.7	-
Total Zinc		µg/g dry	2,645	1,793	2,219	602



I.D. #86-1210

QUALITY CONTROL INFORMATION
SOIL MATRIX
METALS TESTING

RECOVERY ANALYSIS

PARAMETER	SAMPLE I.D.	µg OF SPIKE	% RECOVERY
Total Antimony	EW-2	50	106
Total Arsenic		50	104
Total Beryllium		500	118
Total Cadmium		500	103
Total Chromium		500	92
Total Copper		500	104
Total Lead		500	99
Total Mercury		0.4	135
Total Nickel		500	102
Total Selenium		50	82
Total Silver		500	97
Total Thallium		50	86
Total Zinc		500	94

I.D. #86-1210



RECRA ENVIRONMENTAL, INC.

QUALITY CONTROL INFORMATION
SOIL MATRIX
METALS TESTING

RECOVERY ANALYSIS

PARAMETER	SAMPLE I.D.	µg OF SPIKE	% RECOVERY
Total Antimony	EW-8	50	112
Total Arsenic		50	112
Total Beryllium		500	96
Total Cadmium		500	101
Total Chromium		500	96
Total Copper		500	103
Total Lead		500	104
Total Mercury		0.4	96
Total Nickel		500	101
Total Selenium		50	94
Total Silver		500	98
Total Thallium		50	82
Total Zinc		500	102



I.D. #86-1210

APPENDIX E.2

VOLATILE ORGANIC PRIORITY POLLUTANTS

ANALYTICAL RESULTS

Prepared For

Empire Soils

Prepared By

Recra Environmental, Inc.
4248 Ridge Lea Road
Amherst, New York 14226

METHODOLOGIES

Specific methodologies employed in obtaining the enclosed analytical results are indicated on the specific data table. The method numbers presented refer to the following U.S. Environmental Protection Agency references.

- o 40 CFR Part 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act" October 26, 1984 (Federal Register) U.S. Environmental Protection Agency.
- o U.S. Environmental Protection Agency "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods". Office of Solid Waste and Emergency Response. July 1982, SW-846, Second Edition.

COMMENTS

Comments pertain to data on one or all pages of this report.

Values reported as "less than" (<) indicate the working detection limit for the particular sample and/or parameter.

The values reported as "less than or equal to" (<=) indicate the compound may be present at trace levels relative to the detection limit but not subject to accurate quantification.

**Chromatographically 1,2-dichlorobenzene and 1,4-dichlorobenzene coelute. The reported value is therefore an "and/or" value.



SOIL MATRIX
METHOD 8240 VOLATILES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	EW-1	EW-2
Acrolein	<400	<400
Acrylonitrile	<400	<400
Benzene	<4.4	<4.4
Bromodichloromethane	<2.2	<2.2
Bromoform	<10	<10
Bromomethane	<10	<10
Carbon tetrachloride	<5.0	<5.0
Chlorobenzene	<6.0	69
Chloroethane	<10	<10
2-Chloroethylvinyl ether	<200	<200
Chloroform	<1.6	<1.6
Chloromethane	<10	<10
Dibromochloromethane	<3.1	<3.1
1,2-Dichlorobenzene	<2.2	320
1,3-Dichlorobenzene	<2.1	3.6
1,4-Dichlorobenzene	<2.5	<2.5
1,1-Dichloroethane	<4.7	<4.7
1,2-Dichloroethane	<2.8	<2.8
1,1-Dichloroethylene	<2.8	<2.8
trans-1,2-Dichloroethylene	<1.6	<1.6
1,2-Dichloropropane	<6.0	<6.0
cis-1,3-Dichloropropene	<20	<20
trans-1,3-Dichloropropene	<5.0	<5.0
Ethylbenzene	<7.2	<7.2
Methylene chloride	<2.8	<2.8
1,1,2,2-Tetrachloroethane	<6.9	<6.9
Tetrachloroethylene	<4.1	<4.1
Toluene	6.5	10
1,1,1-Trichloroethane	<6.5	<6.5
1,1,2-Trichloroethane	<5.0	<5.0
Trichloroethylene	<3.3	<3.3
Trichlorofluoromethane	<2.8	<2.8
Vinyl chloride	<10	<10
Analysis Date	12/16/86	12/16/86
Internal Standards		
Level Added = 0.05 µg/g		
(% Recovery)		
bromochloromethane	66	98
1,4-difluorobenzene	103	104
chlorobenzene D ₅	91	93



I.D. #86-1252

SOIL MATRIX
METHOD 8240 VOLATILES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	EW-3	EW-4
Acrolein	<400	<400
Acrylonitrile	<400	<400
Benzene	<4.4	<4.4
Bromodichloromethane	<2.2	<2.2
Bromoform	<4.7	<4.7
Bromomethane	<10	<10
Carbon tetrachloride	<2.8	<2.8
Chlorobenzene	<6.0	<6.0
Chloroethane	<10	<10
2-Chloroethylvinyl ether	<10	<10
Chloroform	<1.6	<1.6
Chloromethane	<10	<10
Dibromochloromethane	<3.1	<3.1
1,2-Dichlorobenzene	<2.2	<2.2
1,3-Dichlorobenzene	<2.1	<2.1
1,4-Dichlorobenzene	<2.5	<2.5
1,1-Dichloroethane	<4.7	<4.7
1,2-Dichloroethane	<2.8	<2.8
1,1-Dichloroethylene	<2.8	<2.8
trans-1,2-Dichloroethylene	<1.6	<1.6
1,2-Dichloropropane	<6.0	<6.0
cis-1,3-Dichloropropene	<5.0	<5.0
trans-1,3-Dichloropropene	<5.0	<5.0
Ethylbenzene	<7.2	<7.2
Methylene chloride	<2.8	<2.8
1,1,2,2-Tetrachloroethane	<6.9	<6.9
Tetrachloroethylene	<4.1	<4.1
Toluene	<6.0	<6.0
1,1,1-Trichloroethane	<3.8	<3.8
1,1,2-Trichloroethane	<5.0	<5.0
Trichloroethylene	<1.9	<1.9
Trichlorofluoromethane	<2.8	<2.8
Vinyl chloride	<10	<10
Analysis Date	12/10/86	12/10/86
Internal Standards		
Level Added = 0.05 µg/g		
(% Recovery)		
bromochloromethane	77	92
1,4-difluorobenzene	69	85
chlorobenzene D5	45	67



I.D. #86-1253

SOIL MATRIX
METHOD 8240 VOLATILES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	EW-5	EW-6
Acrolein	<400	<400
Acrylonitrile	<400	<400
Benzene	<4.4	<4.4
Bromodichloromethane	<2.2	<2.2
Bromoform	<4.7	<4.7
Bromomethane	<10	<10
Carbon tetrachloride	<2.8	<2.8
Chlorobenzene	<6.0	7.3
Chloroethane	<10	<10
2-Chloroethylvinyl ether	<10	<10
Chloroform	<1.6	<1.6
Chloromethane	<10	<10
Dibromochloromethane	<3.1	<3.1
1,2-Dichlorobenzene	<2.2	4.4
1,3-Dichlorobenzene	<2.1	<2.1
1,4-Dichlorobenzene	<2.5	<2.5
1,1-Dichloroethane	<4.7	<4.7
1,2-Dichloroethane	<2.8	<2.8
1,1-Dichloroethylene	<2.8	<2.8
trans-1,2-Dichloroethylene	<1.6	<1.6
1,2-Dichloropropane	<6.0	<6.0
cis-1,3-Dichloropropene	<5.0	<5.0
trans-1,3-Dichloropropene	<5.0	<5.0
Ethylbenzene	<7.2	<7.2
Methylene chloride	<2.8	<2.8
1,1,2,2-Tetrachloroethane	<6.9	<6.9
Tetrachloroethylene	<4.1	<4.1
Toluene	<6.0	<6.0
1,1,1-Trichloroethane	<3.8	<3.8
1,1,2-Trichloroethane	<5.0	<5.0
Trichloroethylene	<1.9	<1.9
Trichlorofluoromethane	<2.8	<2.8
Vinyl chloride	<10	<10
Analysis Date	12/10/86	12/2/86
Internal Standards		
Level Added = 0.05 µg/g		
(% Recovery)		
bromochloromethane	92	105
1,4-difluorobenzene	97	86
chlorobenzene D ₅	29	81



I.D. #86-1256; 1210A

SOIL MATRIX
METHOD 8240 VOLATILES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	EW-7	
Acrolein	<2,000	
Acrylonitrile	<2,000	
Benzene	<22	
Bromodichloromethane	<11	
Bromoform	<24	
Bromomethane	<50	
Carbon tetrachloride	<14	
Chlorobenzene	<30	
Chloroethane	<50	
2-Chloroethylvinyl ether	<50	
Chloroform	<8.0	
Chloromethane	<50	
Dibromochloromethane	<16	
1,2-Dichlorobenzene	<11	
1,3-Dichlorobenzene	<11	
1,4-Dichlorobenzene	<13	
1,1-Dichloroethane	<24	
1,2-Dichloroethane	<14	
1,1-Dichloroethylene	<14	
trans-1,2-Dichloroethylene	<8.0	
1,2-Dichloropropane	<30	
cis-1,3-Dichloropropene	<25	
trans-1,3-Dichloropropene	<25	
Ethylbenzene	<36	
Methylene chloride	<14	
1,1,2,2-Tetrachloroethane	<35	
Tetrachloroethylene	<21	
Toluene	<30	
1,1,1-Trichloroethane	<19	
1,1,2-Trichloroethane	<25	
Trichloroethylene	<10	
Trichlorofluoromethane	<14	
Vinyl chloride	<50	
Analysis Date	12/11/86	
Internal Standards		
Level Added = 0.05 µg/g		
(% Recovery)		
bromochloromethane	108	
1,4-difluorobenzene	87	
chlorobenzene D ₅	27	



I.D. #86-1256

SOIL MATRIX
METHOD 8240 VOLATILES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION
	EW-8
Acrolein	<800
Acrylonitrile	<800
Benzene	<8.8
Bromodichloromethane	<4.4
Bromoform	<9.4
Bromomethane	<20
Carbon tetrachloride	<5.6
Chlorobenzene	<12
Chloroethane	<20
2-Chloroethylvinyl ether	<20
Chloroform	<3.2
Chloromethane	<20
Dibromochloromethane	<6.2
1,2-Dichlorobenzene	<4.4
1,3-Dichlorobenzene	<4.2
1,4-Dichlorobenzene	<5.0
1,1-Dichloroethane	<9.4
1,2-Dichloroethane	<5.6
1,1-Dichloroethylene	<5.6
trans-1,2-Dichloroethylene	<3.2
1,2-Dichloropropane	<12
cis-1,3-Dichloropropene	<10
trans-1,3-Dichloropropene	<10
Ethylbenzene	<14
Methylene chloride	<5.6
1,1,2,2-Tetrachloroethane	<14
Tetrachloroethylene	<8.2
Toluene	<12
1,1,1-Trichloroethane	<7.6
1,1,2-Trichloroethane	<10
Trichloroethylene	<3.8
Trichlorofluoromethane	<5.6
Vinyl chloride	<20
Analysis Date	12/11/86
Internal Standards	
Level Added = 0.05 µg/g	
(% Recovery)	
bromochloromethane	99
1,4-difluorobenzene	99
chlorobenzene D5	45



I.D. #86-1256

SOIL MATRIX
METHOD 8240 VOLATILES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	EW-9	
Acrolein	<2,000	
Acrylonitrile	<2,000	
Benzene	<22	
Bromodichloromethane	<11	
Bromoform	<24	
Bromomethane	<50	
Carbon tetrachloride	<14	
Chlorobenzene	<30	
Chloroethane	<50	
2-Chloroethylvinyl ether	<50	
Chloroform	<8.0	
Chloromethane	<50	
Dibromochloromethane	<16	
1,2-Dichlorobenzene	<11	
1,3-Dichlorobenzene	<11	
1,4-Dichlorobenzene	<13	
1,1-Dichloroethane	<24	
1,2-Dichloroethane	<14	
1,1-Dichloroethylene	<14	
trans-1,2-Dichloroethylene	<8.0	
1,2-Dichloropropane	<30	
cis-1,3-Dichloropropene	<25	
trans-1,3-Dichloropropene	<25	
Ethylbenzene	<36	
Methylene chloride	<14	
1,1,2,2-Tetrachloroethane	<35	
Tetrachloroethylene	<21	
Toluene	<30	
1,1,1-Trichloroethane	<19	
1,1,2-Trichloroethane	<25	
Trichloroethylene	<10	
Trichlorofluoromethane	<14	
Vinyl chloride	<50	
Analysis Date	12/11/86	
Internal Standards		
Level Added = 0.05 µg/g		
(% Recovery)		
bromochloromethane	96	
1,4-difluorobenzene	87	
chlorobenzene D ₅	53	



I.D. #86-1263A

SOIL MATRIX
METHOD 8240 VOLATILES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	SS-1	SS-2
Acrolein	<400	<400
Acrylonitrile	<400	<400
Benzene	<4.4	<4.4
Bromodichloromethane	<2.2	<2.2
Bromoform	<40	<40
Bromomethane	<10	<10
Carbon tetrachloride	<8.0	<8.0
Chlorobenzene	<6.0	<6.0
Chloroethane	<10	<10
2-Chloroethylvinyl ether	<200	<200
Chloroform	<1.6	<1.6
Chloromethane	<10	<10
Dibromochloromethane	<20	<20
1,2-Dichlorobenzene	<2.2	<2.2
1,3-Dichlorobenzene	<2.1	<2.1
1,4-Dichlorobenzene	<2.5	<2.5
1,1-Dichloroethane	<4.7	<4.7
1,2-Dichloroethane	<2.8	<2.8
1,1-Dichloroethylene	<2.8	<2.8
trans-1,2-Dichloroethylene	<1.6	<1.6
1,2-Dichloropropane	<6.0	<6.0
cis-1,3-Dichloropropene	<40	<40
trans-1,3-Dichloropropene	<10	<10
Ethylbenzene	<7.2	<7.2
Methylene chloride	<2.8	<2.8
1,1,2,2-Tetrachloroethane	<6.9	<6.9
Tetrachloroethylene	<4.1	<4.1
Toluene	<6.0	<6.0
1,1,1-Trichloroethane	<3.8	<3.8
1,1,2-Trichloroethane	<5.0	<5.0
Trichloroethylene	<1.9	<1.9
Trichlorofluoromethane	<2.8	<2.8
Vinyl chloride	<10	<10
Analysis Date	12/1/86	12/2/86
Internal Standards		
Level Added = 0.05 µg/g		
(% Recovery)		
bromochloromethane	61	63
1,4-difluorobenzene	52	78
chlorobenzene D ₅	49	79



I.D. #86-1210

SOIL MATRIX
METHOD 8240 VOLATILES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	SS-3	SS-4
Acrolein	<400	<400
Acrylonitrile	<400	<400
Benzene	<4.4	<4.4
Bromodichloromethane	<2.2	<2.2
Bromoform	<100	<100
Bromomethane	<10	<10
Carbon tetrachloride	<16	<16
Chlorobenzene	<6.0	<6.0
Chloroethane	<10	<10
2-Chloroethylvinyl ether	<200	<200
Chloroform	<1.6	<1.6
Chloromethane	<10	<10
Dibromochloromethane	<40	<40
1,2-Dichlorobenzene	<2.2	<2.2
1,3-Dichlorobenzene	<2.1	<2.1
1,4-Dichlorobenzene	<2.5	<2.5
1,1-Dichloroethane	<4.7	<4.7
1,2-Dichloroethane	<2.8	<2.8
1,1-Dichloroethylene	<2.8	<2.8
trans-1,2-Dichloroethylene	<1.6	<1.6
1,2-Dichloropropane	<6.0	<6.0
cis-1,3-Dichloropropene	<40	<40
trans-1,3-Dichloropropene	<11	<11
Ethylbenzene	<7.2	<7.2
Methylene chloride	<2.8	<2.8
1,1,2,2-Tetrachloroethane	<6.9	<6.9
Tetrachloroethylene	<4.1	<4.1
Toluene	<6.0	<6.0
1,1,1-Trichloroethane	<3.8	<3.8
1,1,2-Trichloroethane	<5.0	<5.0
Trichloroethylene	<1.9	<1.9
Trichlorofluoromethane	<2.8	<2.8
Vinyl chloride	<10	<10
Analysis Date	12/2/86	12/2/86
Internal Standards		
Level Added = 0.05 µg/g		
(% Recovery)		
bromochloromethane	87	77
1,4-difluorobenzene	90	77
chlorobenzene D5	88	76



I.D. #86-1210 A

SOIL MATRIX
METHOD 8240 VOLATILES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	SS-5	SS-6
Acrolein	<400	<400
Acrylonitrile	<400	<400
Benzene	<4.4	<4.4
Bromodichloromethane	<2.2	<2.2
Bromoform	<10	<10
Bromomethane	<10	<10
Carbon tetrachloride	<5.0	<5.0
Chlorobenzene	<6.0	<6.0
Chloroethane	<10	<10
2-Chloroethylvinyl ether	<200	<200
Chloroform	<1.6	<1.6
Chloromethane	<10	<10
Dibromochloromethane	<3.1	<3.1
1,2-Dichlorobenzene	<2.2	<2.2
1,3-Dichlorobenzene	<2.1	<2.1
1,4-Dichlorobenzene	<2.5	<2.5
1,1-Dichloroethane	<4.7	<4.7
1,2-Dichloroethane	<2.8	<2.8
1,1-Dichloroethylene	<2.8	<2.8
trans-1,2-Dichloroethylene	<1.6	<1.6
1,2-Dichloropropane	<6.0	<6.0
cis-1,3-Dichloropropene	<20	<20
trans-1,3-Dichloropropene	<5.0	<5.0
Ethylbenzene	<7.2	<7.2
Methylene chloride	<2.8	<2.8
1,1,2,2-Tetrachloroethane	<6.9	<6.9
Tetrachloroethylene	<4.1	<4.1
Toluene	<6.0	<6.0
1,1,1-Trichloroethane	<6.5	<6.5
1,1,2-Trichloroethane	<5.0	<5.0
Trichloroethylene	<1.9	<1.9
Trichlorofluoromethane	<2.8	<2.8
Vinyl chloride	<10	<10
Analysis Date	12/16/86	12/16/86
Internal Standards		
Level Added = 0.05 µg/g		
(% Recovery)		
bromochloromethane	109	95
1,4-difluorobenzene	113	110
chlorobenzene D ₅	111	104



I.D. #86-1273A

SOIL MATRIX
METHOD 8240 VOLATILES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION		
	SS-7	SS-8	SS-9
Acrolein	<400	<400	<400
Acrylonitrile	<400	<400	<400
Benzene	<4.4	<4.4	<4.4
Bromodichloromethane	<2.2	<2.2	<2.2
Bromoform	<10	<10	<4.7
Bromomethane	<10	<10	<10
Carbon tetrachloride	<5.0	<5.0	<2.8
Chlorobenzene	<6.0	<6.0	<6.0
Chloroethane	<10	<10	<10
2-Chloroethylvinyl ether	<200	<200	<10
Chloroform	<1.6	<1.6	<1.6
Chloromethane	<10	<10	<10
Dibromochloromethane	<3.1	<3.1	<3.1
1,2-Dichlorobenzene	<2.2	<2.2	<2.2
1,3-Dichlorobenzene	<2.1	<2.1	<2.1
1,4-Dichlorobenzene	<2.5	<2.5	<2.5
1,1-Dichloroethane	<4.7	<4.7	<4.7
1,2-Dichloroethane	<2.8	<2.8	<2.8
1,1-Dichloroethylene	<2.8	<2.8	<2.8
trans-1,2-Dichloroethylene	<1.6	<1.6	<1.6
1,2-Dichloropropane	<6.0	<6.0	<6.0
cis-1,3-Dichloropropene	<20	<20	<5.0
trans-1,3-Dichloropropene	<5.0	<5.0	<5.0
Ethylbenzene	<7.2	<7.2	<7.2
Methylene chloride	<2.8	<2.8	<2.8
1,1,2,2-Tetrachloroethane	<6.9	<6.9	<6.9
Tetrachloroethylene	<4.1	<4.1	<4.1
Toluene	<6.0	<6.0	<6.0
1,1,1-Trichloroethane	<6.5	<6.5	<3.8
1,1,2-Trichloroethane	<5.0	<5.0	<5.0
Trichloroethylene	<1.9	<1.9	<1.9
Trichlorofluoromethane	<2.8	<2.8	<2.8
Vinyl chloride	<10	<10	<10
Analysis Date	12/16/86	12/16/86	12/16/86
Internal Standards			
Level Added = 0.05 µg/g			
(% Recovery)			
bromochloromethane	96	99	88
1,4-difluorobenzene	111	106	109
chlorobenzene D ₅	108	105	113



I.D. #86-1267A

AQUEOUS MATRIX
METHOD 624 VOLATILES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION
	POW-1
Acrolein	<400
Acrylonitrile	<400
Benzene	<4.4
Bromodichloromethane	<2.2
Bromoform	<4.7
Bromomethane	<10
Carbon tetrachloride	<2.8
Chlorobenzene	1,100
Chloroethane	<10
2-Chloroethylvinyl ether	<10
Chloroform	<1.6
Chloromethane	<10
Dibromochloromethane	<3.1
1,2-Dichlorobenzene	160
1,3-Dichlorobenzene	23
1,4-Dichlorobenzene	<2.5
1,1-Dichloroethane	<4.7
1,2-Dichloroethane	<2.8
1,1-Dichloroethylene	<2.8
trans-1,2-Dichloroethylene	<1.6
1,2-Dichloropropane	<6.0
cis-1,3-Dichloropropene	<5.0
trans-1,3-Dichloropropene	<5.0
Ethylbenzene	9.2
Methylene chloride	<2.8
1,1,2,2-Tetrachloroethane	<6.9
Tetrachloroethylene	<4.1
Toluene	<6.0
1,1,1-Trichloroethane	<3.8
1,1,2-Trichloroethane	<5.0
Trichloroethylene	<1.9
Trichlorofluoromethane	<2.8
Vinyl chloride	<10
Analysis Date	12/16/86
Internal Standards	
Level Added = 50 µg/l	
(% Recovery)	
bromochloromethane	99
1,4-difluorobenzene	107
chlorobenzene D5	62



I.D. #86-1256A

AQUEOUS MATRIX
METHOD 624 VOLATILES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION		
	POW-2	POW-3	POW-4
Acrolein	<2,000	<2,000	<2,000
Acrylonitrile	<2,000	<2,000	<2,000
Benzene	<22	<22	110
Bromodichloromethane	<11	<11	<11
Bromoform	<24	<24	<24
Bromomethane	<50	<50	<50
Carbon tetrachloride	<14	<14	<14
Chlorobenzene	47	56	1,300
Chloroethane	<50	<50	<50
2-Chloroethylvinyl ether	<50	<50	<50
Chloroform	<8.0	<8.0	<8.0
Chloromethane	<50	<50	<50
Dibromochloromethane	<16	<16	<16
1,2-Dichlorobenzene	<11	<11	510
1,3-Dichlorobenzene	<11	<11	31
1,4-Dichlorobenzene	<13	<13	<13
1,1-Dichloroethane	<24	<24	<24
1,2-Dichloroethane	<14	<14	<14
1,1-Dichloroethylene	<14	<14	<14
trans-1,2-Dichloroethylene	<8.0	<8.0	<8.0
1,2-Dichloropropane	<30	<30	<30
cis-1,3-Dichloropropene	<25	<25	<25
trans-1,3-Dichloropropene	<25	<25	<25
Ethylbenzene	<36	<36	54
Methylene chloride	21	<14	<14
1,1,2,2-Tetrachloroethane	<35	<35	<35
Tetrachloroethylene	<21	<21	<21
Toluene	<30	<30	47
1,1,1-Trichloroethane	<19	<19	<19
1,1,2-Trichloroethane	<25	<25	<25
Trichloroethylene	<10	<10	<10
Trichlorofluoromethane	<14	<14	<14
Vinyl chloride	<50	<50	<50
Analysis Date	12/16/86	12/16/86	12/16/86
Internal Standards			
Level Added = 50 µg/l			
(% Recovery)			
bromochloromethane	109	113	111
1,4-difluorobenzene	102	111	103
chlorobenzene D ₅	89	102	94



I.D. #86-1256A

AQUEOUS MATRIX
METHOD 624 VOLATILES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION	
	PONDED WATER	
Acrolein		<400
Acrylonitrile		<400
Benzene		<4.4
Bromodichloromethane		<2.2
Bromoform		<10
Bromomethane		<10
Carbon tetrachloride		<5.0
Chlorobenzene		<6.0
Chloroethane		<10
2-Chloroethylvinyl ether		<200
Chloroform		<1.6
Chloromethane		<10
Dibromochloromethane		<3.1
1,2-Dichlorobenzene		<2.2
1,3-Dichlorobenzene		<2.1
1,4-Dichlorobenzene		<2.5
1,1-Dichloroethane		<4.7
1,2-Dichloroethane		<2.8
1,1-Dichloroethylene		<2.8
trans-1,2-Dichloroethylene		<1.6
1,2-Dichloropropane		<6.0
cis-1,3-Dichloropropene		<20
trans-1,3-Dichloropropene		<5.0
Ethylbenzene		<7.2
Methylene chloride		<2.8
1,1,2,2-Tetrachloroethane		<6.9
Tetrachloroethylene		<4.1
Toluene		<6.0
1,1,1-Trichloroethane		<6.5
1,1,2-Trichloroethane		<5.0
Trichloroethylene		<1.9
Trichlorofluoromethane		<2.8
Vinyl chloride		<10
Analysis Date	12/16/86	
Internal Standards		
Level Added = 50 µg/l		
(% Recovery)		
bromochloromethane		100
1,4-difluorobenzene		111
chlorobenzene D ₅		93



I.D. #86-1263

AQUEOUS MATRIX
METHOD 624 VOLATILES

COMPOUND (Units of Measure = $\mu\text{g/l}$)	SAMPLE IDENTIFICATION	
	LAKE SAMPLE	FIELD BLANK
Acrolein	<400	<400
Acrylonitrile	<400	<400
Benzene	<4.4	<4.4
Bromodichloromethane	<2.2	<2.2
Bromoform	<10	<10
Bromomethane	<10	<10
Carbon tetrachloride	<5.0	<5.0
Chlorobenzene	<6.0	<6.0
Chloroethane	<10	<10
2-Chloroethylvinyl ether	<200	<200
Chloroform	<1.6	<1.6
Chloromethane	<10	<10
Dibromochloromethane	<3.1	<3.1
1,2-Dichlorobenzene	<2.2	<2.2
1,3-Dichlorobenzene	<2.1	<2.1
1,4-Dichlorobenzene	<2.5	<2.5
1,1-Dichloroethane	<4.7	<4.7
1,2-Dichloroethane	<2.8	<2.8
1,1-Dichloroethylene	<2.8	<2.8
trans-1,2-Dichloroethylene	<1.6	<1.6
1,2-Dichloropropane	<6.0	<6.0
cis-1,3-Dichloropropene	<20	<20
trans-1,3-Dichloropropene	<5.0	<5.0
Ethylbenzene	<7.2	<7.2
Methylene chloride	<2.8	<2.8
1,1,2,2-Tetrachloroethane	<6.9	<6.9
Tetrachloroethylene	<4.1	<4.1
Toluene	<6.0	<6.0
1,1,1-Trichloroethane	<6.5	<6.5
1,1,2-Trichloroethane	<5.0	<5.0
Trichloroethylene	<1.9	<1.9
Trichlorofluoromethane	<2.8	<2.8
Vinyl chloride	<10	<10
Analysis Date	12/16/86	12/16/86
Internal Standards		
Level Added = 50 $\mu\text{g/l}$		
(% Recovery)		
bromochloromethane	86	100
1,4-difluorobenzene	99	98
chlorobenzene D ₅	89	96



I.D. #86-1267

AQUEOUS MATRIX
METHOD 624 VOLATILES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION	
	EW-1 12/4/86	
Acrolein	<400	
Acrylonitrile	<400	
Benzene	34	
Bromodichloromethane	<2.2	
Bromoform	<10	
Bromomethane	<10	
Carbon tetrachloride	<5.0	
Chlorobenzene	150	
Chloroethane	<10	
2-Chloroethylvinyl ether	<200	
Chloroform	<1.6	
Chloromethane	<10	
Dibromochloromethane	<3.1	
1,2-Dichlorobenzene	170	
1,3-Dichlorobenzene	36	
1,4-Dichlorobenzene	<2.5	
1,1-Dichloroethane	<4.7	
1,2-Dichloroethane	<2.8	
1,1-Dichloroethylene	<2.8	
trans-1,2-Dichloroethylene	<1.6	
1,2-Dichloropropane	<6.0	
cis-1,3-Dichloropropene	<20	
trans-1,3-Dichloropropene	<5.0	
Ethylbenzene	<7.2	
Methylene chloride	<2.8	
1,1,2,2-Tetrachloroethane	<6.9	
Tetrachloroethylene	<4.1	
Toluene	<6.0	
1,1,1-Trichloroethane	<6.5	
1,1,2-Trichloroethane	<5.0	
Trichloroethylene	<1.9	
Trichlorofluoromethane	<2.8	
Vinyl chloride	<10	
Analysis Date	12/17/86	
Internal Standards		
Level Added = 50 µg/l		
(% Recovery)		
bromochloromethane	60	
1,4-difluorobenzene	78	
chlorobenzene D ₅	68	



I.D. #86-1267

AQUEOUS MATRIX
METHOD 624 VOLATILES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION	
	EW-2 12/5/86	
Acrolein	<400	
Acrylonitrile	<400	
Benzene	820	
Bromodichloromethane	<2.2	
Bromoform	<4.7	
Bromomethane	<10	
Carbon tetrachloride	<2.8	
Chlorobenzene	3,800	
Chloroethane	<10	
2-Chloroethylvinyl ether	<10	
Chloroform	<1.6	
Chloromethane	<10	
Dibromochloromethane	<3.1	
1,2-Dichlorobenzene	790	
1,3-Dichlorobenzene	25	
1,4-Dichlorobenzene	<2.5	
1,1-Dichloroethane	<4.7	
1,2-Dichloroethane	<2.8	
1,1-Dichloroethylene	<2.8	
trans-1,2-Dichloroethylene	<1.6	
1,2-Dichloropropane	<6.0	
cis-1,3-Dichloropropene	<5.0	
trans-1,3-Dichloropropene	<5.0	
Ethylbenzene	180	
Methylene chloride	<2.8	
1,1,2,2-Tetrachloroethane	<6.9	
Tetrachloroethylene	<4.1	
Toluene	510	
1,1,1-Trichloroethane	<3.8	
1,1,2-Trichloroethane	<5.0	
Trichloroethylene	<1.9	
Trichlorofluoromethane	<2.8	
Vinyl chloride	<10	
Analysis Date	12/12/86	
Internal Standards		
Level Added = 50 µg/l		
(% Recovery)		
bromochloromethane	104	
1,4-difluorobenzene	106	
chlorobenzene D ₅	41	



I.D. #86-1273

AQUEOUS MATRIX
METHOD 624 VOLATILES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION	
	EW-3 12/8/86	EW-4 12/5/86
Acrolein	<2,000	<2,000
Acrylonitrile	<2,000	<2,000
Benzene	400	100
Bromodichloromethane	<11	<11
Bromoform	<48	<48
Bromomethane	<50	<50
Carbon tetrachloride	<14	<14
Chlorobenzene	220	660
Chloroethane	<50	<50
2-Chloroethylvinyl ether	<50	<50
Chloroform	<8.0	<8.0
Chloromethane	<50	<50
Dibromochloromethane	<16	<16
1,2-Dichlorobenzene	1,700	57
1,3-Dichlorobenzene	<11	<11
1,4-Dichlorobenzene	<13	<13
1,1-Dichloroethane	<24	<24
1,2-Dichloroethane	<14	<14
1,1-Dichloroethylene	<14	<14
trans-1,2-Dichloroethylene	<8.0	<8.0
1,2-Dichloropropane	<30	<30
cis-1,3-Dichloropropene	<50	<50
trans-1,3-Dichloropropene	<25	<25
Ethylbenzene	140	<36
Methylene chloride	<14	<14
1,1,2,2-Tetrachloroethane	<35	<35
Tetrachloroethylene	<21	<21
Toluene	44	<30
1,1,1-Trichloroethane	<19	<19
1,1,2-Trichloroethane	<25	<25
Trichloroethylene	<10	<10
Trichlorofluoromethane	<14	<14
Vinyl chloride	<50	<50
Analysis Date	12/18/86	12/12/86
Internal Standards		
Level Added = 50 µg/l		
(% Recovery)		
bromochloromethane	80	92
1,4-difluorobenzene	86	111
chlorobenzene D ₅	85	102



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AQUEOUS MATRIX
METHOD 624 VOLATILES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION	
	EW-5 12/8/86	
Acrolein	<10,000	
Acrylonitrile	<10,000	
Benzene	490	
Bromodichloromethane	<55	
Bromoform	<236	
Bromomethane	<250	
Carbon tetrachloride	<70	
Chlorobenzene	4,700	
Chloroethane	<250	
2-Chloroethylvinyl ether	<250	
Chloroform	<40	
Chloromethane	<250	
Dibromochloromethane	<78	
1,2-Dichlorobenzene	190	
1,3-Dichlorobenzene	<53	
1,4-Dichlorobenzene	<63	
1,1-Dichloroethane	<118	
1,2-Dichloroethane	<70	
1,1-Dichloroethylene	<70	
trans-1,2-Dichloroethylene	<40	
1,2-Dichloropropane	<150	
cis-1,3-Dichloropropene	<260	
trans-1,3-Dichloropropene	<130	
Ethylbenzene	<180	
Methylene chloride	<70	
1,1,2,2-Tetrachloroethane	<170	
Tetrachloroethylene	<100	
Toluene	<150	
1,1,1-Trichloroethane	<95	
1,1,2-Trichloroethane	<130	
Trichloroethylene	<48	
Trichlorofluoromethane	<70	
Vinyl chloride	<250	
Analysis Date	12/18/86	
Internal Standards		
Level Added = 50 µg/l		
(% Recovery)		
bromochloromethane	96	
1,4-difluorobenzene	78	
chlorobenzene D ₅	85	



I.D. #86-1280

AQUEOUS MATRIX
METHOD 624 VOLATILES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION	
	EW-6 12/5/86	
Acrolein	<2,000	
Acrylonitrile	<2,000	
Benzene	790	
Bromodichloromethane	<11	
Bromoform	<24	
Bromomethane	<50	
Carbon tetrachloride	<14	
Chlorobenzene	3,300	
Chloroethane	<50	
2-Chloroethylvinyl ether	<50	
Chloroform	<8.0	
Chloromethane	<50	
Dibromochloromethane	<16	
1,2-Dichlorobenzene	320	
1,3-Dichlorobenzene	30	
1,4-Dichlorobenzene	<13	
1,1-Dichloroethane	<24	
1,2-Dichloroethane	<14	
1,1-Dichloroethylene	<14	
trans-1,2-Dichloroethylene	<8.0	
1,2-Dichloropropane	<30	
cis-1,3-Dichloropropene	<25	
trans-1,3-Dichloropropene	<25	
Ethylbenzene	<36	
Methylene chloride	<14	
1,1,2,2-Tetrachloroethane	<35	
Tetrachloroethylene	<21	
Toluene	<30	
1,1,1-Trichloroethane	<19	
1,1,2-Trichloroethane	<25	
Trichloroethylene	<10	
Trichlorofluoromethane	<14	
Vinyl chloride	<50	
Analysis Date	12/17/86	
Internal Standards		
Level Added = 50 µg/l		
(% Recovery)		
bromochloromethane	98	
1,4-difluorobenzene	114	
chlorobenzene D ₅	69	



I.D. #86-1273

AQUEOUS MATRIX
METHOD 624 VOLATILES

COMPOUND (Units of Measure = $\mu\text{g/l}$)	SAMPLE IDENTIFICATION	
	EW-7 12/8/86	EW-8 12/8/86
Acrolein	<40,000	<40,000
Acrylonitrile	<40,000	<40,000
Benzene	790	1,000
Bromodichloromethane	<220	<220
Bromoform	<940	<940
Bromomethane	<1,000	<1,000
Carbon tetrachloride	<280	<280
Chlorobenzene	9,400	2,600
Chloroethane	<1,000	<1,000
2-Chloroethylvinyl ether	<1,000	<1,000
Chloroform	<160	<160
Chloromethane	<1,000	<1,000
Dibromochloromethane	<310	<310
1,2-Dichlorobenzene	630	<220
1,3-Dichlorobenzene	<210	<210
1,4-Dichlorobenzene	<250	<250
1,1-Dichloroethane	<470	<470
1,2-Dichloroethane	<280	<280
1,1-Dichloroethylene	<280	<280
trans-1,2-Dichloroethylene	<160	<160
1,2-Dichloropropane	<600	<600
cis-1,3-Dichloropropene	<1,000	<1,000
trans-1,3-Dichloropropene	<500	<500
Ethylbenzene	<720	<720
Methylene chloride	<280	<280
1,1,2,2-Tetrachloroethane	<690	<690
Tetrachloroethylene	<410	<410
Toluene	<600	<600
1,1,1-Trichloroethane	<380	<380
1,1,2-Trichloroethane	<500	<500
Trichloroethylene	<190	<190
Trichlorofluoromethane	<280	<280
Vinyl chloride	<1,000	<1,000
Analysis Date	12/18/86	12/18/86
Internal Standards		
Level Added = 50 $\mu\text{g/l}$		
(% Recovery)		
bromochloromethane	135	105
1,4-difluorobenzene	66	104
chlorobenzene D ₅	79	96



I.D. #86-1280

AQUEOUS MATRIX
METHOD 624 VOLATILES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION	
	EW-9 12/8/86	
Acrolein	<2,000	
Acrylonitrile	<2,000	
Benzene	37	
Bromodichloromethane	<11	
Bromoform	<48	
Bromomethane	<50	
Carbon tetrachloride	<14	
Chlorobenzene	220	
Chloroethane	<50	
2-Chloroethylvinyl ether	<50	
Chloroform	<8.0	
Chloromethane	<50	
Dibromochloromethane	<16	
1,2-Dichlorobenzene	<11	
1,3-Dichlorobenzene	<11	
1,4-Dichlorobenzene	<13	
1,1-Dichloroethane	<24	
1,2-Dichloroethane	<14	
1,1-Dichloroethylene	<14	
trans-1,2-Dichloroethylene	<8.0	
1,2-Dichloropropane	<30	
cis-1,3-Dichloropropene	<50	
trans-1,3-Dichloropropene	<25	
Ethylbenzene	<36	
Methylene chloride	<14	
1,1,2,2-Tetrachloroethane	<35	
Tetrachloroethylene	<21	
Toluene	<30	
1,1,1-Trichloroethane	100	
1,1,2-Trichloroethane	<25	
Trichloroethylene	<10	
Trichlorofluoromethane	<14	
Vinyl chloride	<50	
Analysis Date	12/18/86	
Internal Standards		
Level Added = 50 µg/l		
(% Recovery)		
bromochloromethane	92	
1,4-difluorobenzene	96	
chlorobenzene D ₅	91	



I.D. #86-1280

AQUEOUS MATRIX
METHOD 624 VOLATILES

COMPOUND (Units of Measure = $\mu\text{g/l}$)	SAMPLE IDENTIFICATION	
	TRANSFER BLANK	
Acrolein		<400
Acrylonitrile		<400
Benzene		<4.4
Bromodichloromethane		<2.2
Bromoform		<9.4
Bromomethane		<10
Carbon tetrachloride		<2.8
Chlorobenzene		<6.0
Chloroethane		<10
2-Chloroethylvinyl ether		<10
Chloroform		<1.6
Chloromethane		<10
Dibromochloromethane		<3.1
1,2-Dichlorobenzene		<2.2
1,3-Dichlorobenzene		<2.1
1,4-Dichlorobenzene		<2.5
1,1-Dichloroethane		<4.7
1,2-Dichloroethane		<2.8
1,1-Dichloroethylene		<2.8
trans-1,2-Dichloroethylene		<1.6
1,2-Dichloropropane		<6.0
cis-1,3-Dichloropropene		<10
trans-1,3-Dichloropropene		<5.0
Ethylbenzene		<7.2
Methylene chloride		<2.8
1,1,2,2-Tetrachloroethane		<6.9
Tetrachloroethylene		<4.1
Toluene		<6.0
1,1,1-Trichloroethane		<3.8
1,1,2-Trichloroethane		<5.0
Trichloroethylene		18
Trichlorofluoromethane		<2.8
Vinyl chloride		<10
Analysis Date	12/18/86	
Internal Standards		
Level Added = 50 $\mu\text{g/l}$		
(% Recovery)		
bromochloromethane		97
1,4-difluorobenzene		93
chlorobenzene D ₅		88



I.D. #86-1280

QUALITY CONTROL INFORMATION - ACCURACY
SOIL MATRIX
METHOD 8240 VOLATILES

SAMPLE IDENTIFICATION EW-9

COMPOUND (Units of Measure = µg/g Dry)	NANOGRAMS OF SPIKE	PERCENT RECOVERY
Carbon tetrachloride	200	80
Chlorobenzene	200	170
Chloroform	200	75
Dibromochloromethane	200	75
1,1-Dichloroethane	200	80
1,1-Dichloroethylene	200	83
1,2-Dichloropropane	200	77
Methylene chloride	200	63
Tetrachloroethylene	200	120
1,1,2-Trichloroethane	200	89
Trichloroethylene	200	70
Analysis Date	12/11/86	
Internal Standards		
Level Added = 0.05 µg/g		
(% Recovery)		
bromochloromethane	96	
1,4-difluorobenzene	91	
chlorobenzene D ₅	63	



I.D. #86-1263A

QUALITY CONTROL INFORMATION - ACCURACY
SOIL MATRIX
METHOD 8240 VOLATILES

SAMPLE IDENTIFICATION SS-9

COMPOUND (Units of Measure = µg/g Dry)	NANOGRAMS OF SPIKE	PERCENT RECOVERY
Benzene	252	188
Chlorobenzene	228	129
Toluene	231	102
Trichloroethylene	228	126
Analysis Date	12/16/86	
Internal Standards		
Level Added = 0.05 µg/g		
(% Recovery)		
bromochloromethane	67	
1,4-difluorobenzene	94	
chlorobenzene D ₅	95	



I.D. #86-1267A

QUALITY CONTROL INFORMATION - PRECISION
SOIL MATRIX
METHOD 8240 VOLATILES

SAMPLE IDENTIFICATION SS-9

COMPOUND (Units of Measure = µg/g Dry)	VALUE 1	VALUE 2	MEAN	STANDARD DEVIATION
Toluene	<6.0	<6.0	-	-
Analysis Date	12/16/86	12/16/86		
Internal Standards				
Level Added = 0.05 µg/g				
(% Recovery)				
bromochloromethane	88	82		
1,4-difluorobenzene	109	101		
chlorobenzene D ₅	113	100		



I.D. #86-1267A

QUALITY CONTROL INFORMATION - PRECISION
 AQUEOUS MATRIX
 METHOD 624 VOLATILES

SAMPLE IDENTIFICATION POW-4

COMPOUND (Units of Measure = $\mu\text{g/l}$)	VALUE 1	VALUE 2	MEAN	STANDARD DEVIATION
Benzene	110	96	103	9.9
Chlorobenzene	1,300	1,300	1,300	0
1,2-Dichlorobenzene	510	490	500	14
1,3-Dichlorobenzene	31	29	30	1.4
Ethylbenzene	54	56	55	1.4
Toluene	47	46	47	0.71
Analysis Date	12/16/86	12/16/86		
Internal Standards				
Level Added = 50 $\mu\text{g/l}$				
(% Recovery)				
bromochloromethane	111	112		
1,4-difluorobenzene	103	103		
chlorobenzene D ₅	94	94		



I.D. #86-1256A

QUALITY CONTROL INFORMATION - ACCURACY
AQUEOUS MATRIX
METHOD 624 VOLATILES

SAMPLE IDENTIFICATION *

COMPOUND (Units of Measure = $\mu\text{g/l}$)	NANOGRAMS OF SPIKE	PERCENT RECOVERY
Carbon tetrachloride	200	66
Chlorobenzene	200	89
Chloroform	200	68
Dibromochloromethane	200	76
1,1-Dichloroethane	200	75
1,1-Dichloroethylene	200	76
1,2-Dichloropropane	200	79
Methylene chloride	200	53
Tetrachloroethylene	200	86
1,1,2-Trichloroethane	200	85
Trichloroethylene	200	79
Analysis Date	12/16/86	
Internal Standards		
Level Added = 50 $\mu\text{g/l}$		
(% Recovery)		
bromochloromethane	111	
1,4-difluorobenzene	110	
chlorobenzene D ₅	109	

*Quality control results were generated from a sample of similar matrix at the time of sample analysis, and are not results of the actual sample submitted.

QUALITY CONTROL INFORMATION - ACCURACY
 AQUEOUS MATRIX
 METHOD 624 VOLATILES

SAMPLE IDENTIFICATION *

COMPOUND (Units of Measure = $\mu\text{g/l}$)	NANOGRAMS OF SPIKE	PERCENT RECOVERY
Carbon tetrachloride	200	101
Chlorobenzene	200	113
Dibromochloromethane	200	96
1,1-Dichloroethane	200	142
1,1-Dichloroethylene	200	144
1,2-Dichloropropane	200	109
Methylene chloride	200	80
Tetrachloroethylene	200	95
1,1,2-Trichloroethane	200	97
Trichloroethylene	200	110
Analysis Date	12/16/86	
Internal Standards		
Level Added = 50 $\mu\text{g/l}$		
(% Recovery)		
bromochloromethane	82	
1,4-difluorobenzene	102	
chlorobenzene D ₅	111	

*Quality control results were generated from a sample of similar matrix at the time of sample analysis, and are not results of the actual sample submitted.



I.D. #86-1210

RECRA ENVIRONMENTAL, INC.

APPENDIX E.3

EXTRACTABLE ORGANIC PRIORITY POLLUTANTS

ANALYTICAL RESULTS

Prepared For

Empire Soils Investigation
P.O. Box 0913
Hamburg, NY 14075

Prepared By

Recra Environmental, Inc.
4248 Ridge Lea Road
Amherst, New York 14226

METHODOLOGIES

Specific methodologies employed in obtaining the enclosed analytical results are indicated on the specific data table. The method numbers presented refer to the following U.S. Environmental Protection Agency references.

- o 40 CFR Part 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act" October 26, 1984 (Federal Register) U.S. Environmental Protection Agency.
- o U.S. Environmental Protection Agency "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods". Office of Solid Waste and Emergency Response. July 1982, SW-846, Second Edition.

COMMENTS

Comments pertain to data on one or all pages of this report.

Values reported as "less than" (<) indicate the working detection limit for the particular sample and/or parameter.

The values reported as "less than or equal to" (<=) indicate the compound may be present at trace levels relative to the detection limit but not subject to accurate quantification.

*Recovery could not be calculated due to the sample matrix, and dilution factors required.



SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	EW-1	EW-2
Acenaphthene	<3.3	39
Acenaphthylene	<3.3	<3.3
Anthracene	<3.3	25
Benzo(a)anthracene	<3.3	<3.3
Benzo(a)pyrene	<9.9	<9.9
Benzo(b)fluoranthene	<3.3	<3.3
Benzo(g,h,i)perylene	<8.3	<8.3
Benzo(k)fluoranthene	<3.3	<3.3
Bis(2-chloroethoxy)methane	<3.3	<3.3
Bis(2-chloroethyl)ether	<3.3	<3.3
Bis(2-chloroisopropyl)ether	<3.3	<3.3
Bis(2-ethylhexyl)phthalate	<200	<200
4-Bromophenylphenylether	<3.3	<3.3
Butylbenzylphthalate	<3.3	<3.3
2-Chloronaphthalene	<3.3	<3.3
4-Chlorophenylphenylether	<3.3	<3.3
Chrysene	<3.3	<3.3
Dibenzo(a,h)anthracene	<13	<13
1,2-Dichlorobenzene	<3.3	5.7
1,3-Dichlorobenzene	<3.3	5.8
1,4-Dichlorobenzene	<3.3	63
3,3'-Dichlorobenzidine	<200	<200
Diethylphthalate	<3.3	<3.3
Dimethylphthalate	<3.3	<3.3
Di-n-butylphthalate	<3.3	<3.3
2,6-Dinitrotoluene	<3.3	<3.3
2,4-Dinitrotoluene	<3.3	<3.3
Di-n-octylphthalate	<200	<200
Fluoranthene	<3.3	17
Fluorene	<3.3	28
Hexachlorobenzene	<3.3	<3.3
Hexachlorobutadiene	<3.3	<3.3
Hexachlorocyclopentadiene	<3.3	<3.3
Hexachloroethane	<3.3	<3.3
Indeno(1,2,3-cd)pyrene	<6.6	<6.6
Isophorone	<3.3	<3.3
Naphthalene	<3.3	100
Nitrobenzene	<3.3	<3.3
N-nitrosodi-n-propylamine	<3.3	<3.3
N-nitrosodiphenylamine	<3.3	12
Phenanthrene	<3.3	44
Pyrene	<3.3	13
1,2,4-Trichlorobenzene	<3.3	16

(Continued)



I.D. #86-1210

SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	EW-1	EW-2
2-Chlorophenol	<3.3	<3.3
2,4-Dichlorophenol	<3.3	<3.3
2,4-Dimethylphenol	<3.3	<3.3
4,6-Dinitro-o-cresol	<16	<16
2,4-Dinitrophenol	<16	<16
2-Nitrophenol	<3.3	<3.3
4-Nitrophenol	<16	<16
p-Chloro-m-cresol	<3.3	<3.3
Pentachlorophenol	<16	<16
Phenol	<3.3	<3.3
2,4,6-Trichlorophenol	<3.3	<3.3
Extraction Date	12/4/86	12/4/86
Analysis Date	1/6/87	1/6/87
Internal Standards		
Level Added = 1 µg/g		
Phenanthrene-d10		
(% Recovery)	84	102
Surrogates		
Level Added = 5 µg/g		
(% Recovery)		
Decafluorobiphenyl	16	97
2-Fluorobiphenyl	11	92
2-Fluorophenol	62	121
Pentafluorophenol	76	122



I.D. #86-1210

SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	EW-3	EW-4
Acenaphthene	<3.3	<3.3
Acenaphthylene	<3.3	<3.3
Anthracene	<3.3	<3.3
Benzo(a)anthracene	<3.3	<3.3
Benzo(a)pyrene	<9.9	<9.9
Benzo(b)fluoranthene	<3.3	<3.3
Benzo(g,h,i)perylene	<8.3	<8.3
Benzo(k)fluoranthene	<3.3	<3.3
Bis(2-chloroethoxy)methane	<3.3	<3.3
Bis(2-chloroethyl)ether	<3.3	<3.3
Bis(2-chloroisopropyl)ether	<3.3	<3.3
Bis(2-ethylhexyl)phthalate	<200	<200
4-Bromophenylphenylether	<3.3	<3.3
Butylbenzylphthalate	<3.3	<3.3
2-Chloronaphthalene	<3.3	<3.3
4-Chlorophenylphenylether	<3.3	<3.3
Chrysene	<3.3	<3.3
Dibenzo(a,h)anthracene	<13	<13
1,2-Dichlorobenzene	<3.3	<3.3
1,3-Dichlorobenzene	<3.3	<3.3
1,4-Dichlorobenzene	<3.3	<3.3
3,3'-Dichlorobenzidine	<200	<200
Diethylphthalate	<3.3	<3.3
Dimethylphthalate	<3.3	<3.3
Di-n-butylphthalate	<3.3	<3.3
2,6-Dinitrotoluene	<3.3	<3.3
2,4-Dinitrotoluene	<3.3	<3.3
Di-n-octylphthalate	<200	<200
Fluoranthene	<3.3	6.3
Fluorene	<3.3	<3.3
Hexachlorobenzene	<3.3	<3.3
Hexachlorobutadiene	<3.3	<3.3
Hexachlorocyclopentadiene	<3.3	<3.3
Hexachloroethane	<3.3	<3.3
Indeno(1,2,3-cd)pyrene	<6.6	<6.6
Isophorone	<3.3	<3.3
Naphthalene	<3.3	<3.3
Nitrobenzene	<3.3	<3.3
N-nitrosodi-n-propylamine	<3.3	<3.3
N-nitrosodiphenylamine	<3.3	<3.3
Phenanthrene	<3.3	7.8
Pyrene	<3.3	4.4
1,2,4-Trichlorobenzene	<3.3	<3.3

(Continued)



I.D. #86-1210

RECRA ENVIRONMENTAL, INC.

SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	EW-3	EW-4
2-Chlorophenol	<3.3	<3.3
2,4-Dichlorophenol	<3.3	<3.3
2,4-Dimethylphenol	<3.3	<3.3
4,6-Dinitro-o-cresol	<16	<16
2,4-Dinitrophenol	<16	<16
2-Nitrophenol	<3.3	<3.3
4-Nitrophenol	<16	<16
p-Chloro-m-cresol	<3.3	<3.3
Pentachlorophenol	<16	<16
Phenol	<3.3	<3.3
2,4,6-Trichlorophenol	<3.3	<3.3
Extraction Date	12/4/86	12/4/86
Analysis Date	1/6/87	1/6/87
Internal Standards		
Level Added = 1 µg/g		
Phenanthrene-d10		
(% Recovery)	71	90
Surrogates		
Level Added = 5 µg/g		
(% Recovery)		
Decafluorobiphenyl	62	62
2-Fluorobiphenyl	34	40
2-Fluorophenol	92	67
Pentafluorophenol	116	91



I.D. #86-1210

SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	EW-5	EW-6
Acenaphthene	<3.3	<3.3
Acenaphthylene	<3.3	<3.3
Anthracene	<3.3	<3.3
Benzo(a)anthracene	<3.3	<3.3
Benzo(a)pyrene	<9.9	<9.9
Benzo(b)fluoranthene	<3.3	<3.3
Benzo(g,h,i)perylene	<8.3	<8.3
Benzo(k)fluoranthene	<3.3	<3.3
Bis(2-chloroethoxy)methane	<3.3	<3.3
Bis(2-chloroethyl)ether	<3.3	<3.3
Bis(2-chloroisopropyl)ether	<3.3	<3.3
Bis(2-ethylhexyl)phthalate	<200	<200
4-Bromophenylphenylether	<3.3	<3.3
Butylbenzylphthalate	<3.3	<3.3
2-Chloronaphthalene	<3.3	<3.3
4-Chlorophenylphenylether	<3.3	<3.3
Chrysene	<3.3	<3.3
Dibenzo(a,h)anthracene	<13	<13
1,2-Dichlorobenzene	<3.3	<3.3
1,3-Dichlorobenzene	<3.3	<3.3
1,4-Dichlorobenzene	<3.3	5.9
3,3'-Dichlorobenzidine	<200	<200
Diethylphthalate	<3.3	<3.3
Dimethylphthalate	<3.3	<3.3
Di-n-butylphthalate	<3.3	<3.3
2,6-Dinitrotoluene	<3.3	<3.3
2,4-Dinitrotoluene	<3.3	<3.3
Di-n-octylphthalate	<200	<200
Fluoranthene	<3.3	<3.3
Fluorene	<3.3	<3.3
Hexachlorobenzene	<3.3	<3.3
Hexachlorobutadiene	<3.3	<3.3
Hexachlorocyclopentadiene	<3.3	<3.3
Hexachloroethane	<3.3	<3.3
Indeno(1,2,3-cd)pyrene	<6.6	<6.6
Isophorone	<3.3	<3.3
Naphthalene	<3.3	8.1
Nitrobenzene	<3.3	<3.3
N-nitrosodi-n-propylamine	<3.3	<3.3
N-nitrosodiphenylamine	<3.3	<3.3
Phenanthrene	<3.3	<3.3
Pyrene	<3.3	<3.3
1,2,4-Trichlorobenzene	<3.3	26

(Continued)



I.D. #86-1210

SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	EW-5	EW-6
2-Chlorophenol	<3.3	<3.3
2,4-Dichlorophenol	<3.3	<3.3
2,4-Dimethylphenol	<3.3	<3.3
4,6-Dinitro-o-cresol	<16	<16
2,4-Dinitrophenol	<16	<16
2-Nitrophenol	<3.3	<3.3
4-Nitrophenol	<16	<16
p-Chloro-m-cresol	<3.3	<3.3
Pentachlorophenol	<16	<16
Phenol	<3.3	<3.3
2,4,6-Trichlorophenol	<3.3	<3.3
Extraction Date	12/5/86	12/2/86
Analysis Date	1/7/87	1/5/87
Internal Standards		
Level Added = 1 µg/g		
Phenanthrene-d10		
(% Recovery)	112	82
Surrogates		
Level Added = 5 µg/g		
(% Recovery)		
Decafluorobiphenyl	32	101
2-Fluorobiphenyl	24	31
2-Fluorophenol	44	114
Pentafluorophenol	65	135



I.D. #86-1210

SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	EW-7	EW-8
Acenaphthene	<3.3	<3.3
Acenaphthylene	<3.3	<3.3
Anthracene	4.1	<3.3
Benzo(a)anthracene	<3.3	<3.3
Benzo(a)pyrene	<9.9	<9.9
Benzo(b)fluoranthene	<3.3	<3.3
Benzo(g,h,i)perylene	<8.3	<8.3
Benzo(k)fluoranthene	<3.3	<3.3
Bis(2-chloroethoxy)methane	<3.3	<3.3
Bis(2-chloroethyl)ether	<3.3	<3.3
Bis(2-chloroisopropyl)ether	<3.3	<3.3
Bis(2-ethylhexyl)phthalate	<200	<200
4-Bromophenylphenylether	<3.3	<3.3
Butylbenzylphthalate	<3.3	<3.3
2-Chloronaphthalene	<3.3	<3.3
4-Chlorophenylphenylether	<3.3	<3.3
Chrysene	<3.3	<3.3
Dibenzo(a,h)anthracene	<13	<13
1,2-Dichlorobenzene	<3.3	<3.3
1,3-Dichlorobenzene	<3.3	<3.3
1,4-Dichlorobenzene	8.1	<3.3
3,3'-Dichlorobenzidine	<200	<200
Diethylphthalate	<3.3	<3.3
Dimethylphthalate	<3.3	<3.3
Di-n-butylphthalate	<3.3	<3.3
2,6-Dinitrotoluene	<3.3	<3.3
2,4-Dinitrotoluene	<3.3	<3.3
Di-n-octylphthalate	<200	<200
Fluoranthene	<3.3	<3.3
Fluorene	<3.3	<3.3
Hexachlorobenzene	<3.3	<3.3
Hexachlorobutadiene	<3.3	<3.3
Hexachlorocyclopentadiene	<3.3	<3.3
Hexachloroethane	<3.3	<3.3
Indeno(1,2,3-cd)pyrene	<6.6	<6.6
Isophorone	<3.3	<3.3
Naphthalene	4.2	<3.3
Nitrobenzene	<3.3	<3.3
N-nitrosodi-n-propylamine	<3.3	<3.3
N-nitrosodiphenylamine	<3.3	<3.3
Phenanthrene	<3.3	<3.3
Pyrene	<3.3	<3.3
1,2,4-Trichlorobenzene	<3.3	<3.3

(Continued)



I.D. #86-1210

SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	EW-7	EW-8
2-Chlorophenol	<3.3	<3.3
2,4-Dichlorophenol	<3.3	<3.3
2,4-Dimethylphenol	<3.3	<3.3
4,6-Dinitro-o-cresol	<16	<16
2,4-Dinitrophenol	<16	<16
2-Nitrophenol	<3.3	<3.3
4-Nitrophenol	<16	<16
p-Chloro-m-cresol	<3.3	<3.3
Pentachlorophenol	<16	<16
Phenol	<3.3	<3.3
2,4,6-Trichlorophenol	<3.3	<3.3
Extraction Date	12/5/86	12/5/86
Analysis Date	1/7/87	1/7/87
Internal Standards		
Level Added = 1 µg/g		
Phenanthrene-d10		
(% Recovery)	116	76
Surrogates		
Level Added = 5 µg/g		
(% Recovery)		
Decafluorobiphenyl	36	36
2-Fluorobiphenyl	23	3
2-Fluorophenol	47	42
Pentafluorophenol	61	50



I.D. #86-1210

SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION
	EW-9
Acenaphthene	<3.3
Acenaphthylene	<3.3
Anthracene	<3.3
Benzo(a)anthracene	<3.3
Benzo(a)pyrene	<9.9
Benzo(b)fluoranthene	<3.3
Benzo(g,h,i)perylene	<8.3
Benzo(k)fluoranthene	<3.3
Bis(2-chloroethoxy)methane	<3.3
Bis(2-chloroethyl)ether	<3.3
Bis(2-chloroisopropyl)ether	<3.3
Bis(2-ethylhexyl)phthalate	<200
4-Bromophenylphenylether	<3.3
Butylbenzylphthalate	<3.3
2-Chloronaphthalene	<3.3
4-Chlorophenylphenylether	<3.3
Chrysene	<3.3
Dibenzo(a,h)anthracene	<13
1,2-Dichlorobenzene	<3.3
1,3-Dichlorobenzene	<3.3
1,4-Dichlorobenzene	<3.3
3,3'-Dichlorobenzidine	<200
Diethylphthalate	<3.3
Dimethylphthalate	<3.3
Di-n-butylphthalate	<3.3
2,6-Dinitrotoluene	<3.3
2,4-Dinitrotoluene	<3.3
Di-n-octylphthalate	<200
Fluoranthene	<3.3
Fluorene	<3.3
Hexachlorobenzene	<3.3
Hexachlorobutadiene	<3.3
Hexachlorocyclopentadiene	<3.3
Hexachloroethane	<3.3
Indeno(1,2,3-cd)pyrene	<6.6
Isophorone	<3.3
Naphthalene	<3.3
Nitrobenzene	<3.3
N-nitrosodi-n-propylamine	<3.3
N-nitrosodiphenylamine	<3.3
Phenanthrene	<3.3
Pyrene	<3.3
1,2,4-Trichlorobenzene	<5.4

(Continued)



I.D. #86-1210

SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION
	EW-9
2-Chlorophenol	<3.3
2,4-Dichlorophenol	<3.3
2,4-Dimethylphenol	<3.3
4,6-Dinitro-o-cresol	<16
2,4-Dinitrophenol	<16
2-Nitrophenol	<3.3
4-Nitrophenol	<16
p-Chloro-m-cresol	<3.3
Pentachlorophenol	<16
Phenol	<3.3
2,4,6-Trichlorophenol	<3.3
Extraction Date	12/8/86
Analysis Date	1/8/87
Internal Standards	
Level Added = 1 µg/g	
Phenanthrene-d10	
(% Recovery)	127
Surrogates	
Level Added = 5 µg/g	
(% Recovery)	
Decafluorobiphenyl	42
2-Fluorobiphenyl	*
2-Fluorophenol	35
Pentafluorophenol	52



I.D. #86-1210

SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	SS-1	SS-2
Acenaphthene	<3.3	<3.3
Acenaphthylene	3.3	<3.3
Anthracene	<3.3	<3.3
Benzo(a)anthracene	3.3	3.3
Benzo(a)pyrene	<9.9	<9.9
Benzo(b)fluoranthene	<3.3	<3.3
Benzo(g,h,i)perylene	<8.3	<8.3
Benzo(k)fluoranthene	<3.3	<3.3
Bis(2-chloroethoxy)methane	<3.3	<3.3
Bis(2-chloroethyl)ether	<3.3	<3.3
Bis(2-chloroisopropyl)ether	<3.3	<3.3
Bis(2-ethylhexyl)phthalate	<200	<200
4-Bromophenylphenylether	<3.3	<3.3
Butylbenzylphthalate	<3.3	<3.3
2-Chloronaphthalene	<3.3	<3.3
4-Chlorophenylphenylether	<3.3	<3.3
Chrysene	<3.3	<3.3
Dibenzo(a,h)anthracene	<13	<13
1,2-Dichlorobenzene	<3.3	<3.3
1,3-Dichlorobenzene	<3.3	<3.3
1,4-Dichlorobenzene	<3.3	<3.3
3,3'-Dichlorobenzidine	<200	<200
Diethylphthalate	<3.3	<3.3
Dimethylphthalate	<3.3	<3.3
Di-n-butylphthalate	<3.3	<3.3
2,6-Dinitrotoluene	<3.3	<3.3
2,4-Dinitrotoluene	<3.3	<3.3
Di-n-octylphthalate	<200	<200
Fluoranthene	4.3	<3.3
Fluorene	<3.3	3.3
Hexachlorobenzene	<3.3	<3.3
Hexachlorobutadiene	<3.3	<3.3
Hexachlorocyclopentadiene	<3.3	<3.3
Hexachloroethane	<3.3	<3.3
Indeno(1,2,3-cd)pyrene	<6.6	<6.6
Isophorone	<3.3	<3.3
Naphthalene	<3.3	<3.3
Nitrobenzene	<3.3	<3.3
N-nitrosodi-n-propylamine	<3.3	<3.3
N-nitrosodiphenylamine	<3.3	<3.3
Phenanthrene	3.7	<3.3
Pyrene	<3.3	3.3
1,2,4-Trichlorobenzene	3.3	3.3

(Continued)



I.D. #86-1210

SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	SS-1	SS-2
2-Chlorophenol	<3.3	<3.3
2,4-Dichlorophenol	<3.3	<3.3
2,4-Dimethylphenol	<3.3	<3.3
4,6-Dinitro-o-cresol	<16	<16
2,4-Dinitrophenol	<16	<16
2-Nitrophenol	<3.3	<3.3
4-Nitrophenol	<16	<16
p-Chloro-m-cresol	<3.3	<3.3
Pentachlorophenol	<16	<16
Phenol	<3.3	<3.3
2,4,6-Trichlorophenol	<3.3	<3.3
Extraction Date	12/2/86	12/2/86
Analysis Date	12/23/86	12/23/86
Internal Standards		
Level Added = 1 µg/g		
Phenanthrene-d10		
(% Recovery)	154	131
Surrogates		
Level Added = 5 µg/g		
(% Recovery)		
Decafluorobiphenyl	*	*
2-Fluorobiphenyl	*	*
2-Fluorophenol	36	18
Pentafluorophenol	65	34



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SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	SS-3	SS-4
Acenaphthene	<3.3	<3.3
Acenaphthylene	<3.3	<3.3
Anthracene	<3.3	<3.3
Benzo(a)anthracene	<3.3	<3.3
Benzo(a)pyrene	<9.9	<9.9
Benzo(b)fluoranthene	<3.3	<3.3
Benzo(g,h,i)perylene	<8.3	<8.3
Benzo(k)fluoranthene	<3.3	<3.3
Bis(2-chloroethoxy)methane	<3.3	<3.3
Bis(2-chloroethyl)ether	<3.3	<3.3
Bis(2-chloroisopropyl)ether	<3.3	<3.3
Bis(2-ethylhexyl)phthalate	<200	<200
4-Bromophenylphenylether	<3.3	<3.3
Butylbenzylphthalate	<3.3	<3.3
2-Chloronaphthalene	<3.3	<3.3
4-Chlorophenylphenylether	<3.3	<3.3
Chrysene	<3.3	<3.3
Dibenzo(a,h)anthracene	<13	<13
1,2-Dichlorobenzene	<3.3	<3.3
1,3-Dichlorobenzene	<3.3	<3.3
1,4-Dichlorobenzene	<3.3	<3.3
3,3'-Dichlorobenzidine	<200	<200
Diethylphthalate	<3.3	<3.3
Dimethylphthalate	<3.3	<3.3
Di-n-butylphthalate	<3.3	<3.3
2,6-Dinitrotoluene	<3.3	<3.3
2,4-Dinitrotoluene	<3.3	<3.3
Di-n-octylphthalate	<200	<200
Fluoranthene	<3.3	<3.3
Fluorene	<3.3	<3.3
Hexachlorobenzene	<3.3	<3.3
Hexachlorobutadiene	<3.3	<3.3
Hexachlorocyclopentadiene	<3.3	<3.3
Hexachloroethane	<3.3	<3.3
Indeno(1,2,3-cd)pyrene	<6.6	<6.6
Isophorone	<3.3	<3.3
Naphthalene	<3.3	<3.3
Nitrobenzene	<3.3	<3.3
N-nitrosodi-n-propylamine	<3.3	<3.3
N-nitrosodiphenylamine	<3.3	<3.3
Phenanthrene	<3.3	<3.3
Pyrene	<3.3	<3.3
1,2,4-Trichlorobenzene	<3.3	<3.3

(Continued)



I.D. #86-1210

SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	SS-3	SS-4
2-Chlorophenol	<3.3	<3.3
2,4-Dichlorophenol	<3.3	<3.3
2,4-Dimethylphenol	<3.3	<3.3
4,6-Dinitro-o-cresol	<16	<16
2,4-Dinitrophenol	<16	<16
2-Nitrophenol	<3.3	<3.3
4-Nitrophenol	<16	<16
p-Chloro-m-cresol	<3.3	<3.3
Pentachlorophenol	<16	<16
Phenol	<3.3	<3.3
2,4,6-Trichlorophenol	<3.3	<3.3
Extraction Date	12/2/86	12/2/86
Analysis Date	1/5/87	1/6/87
Internal Standards		
Level Added = 1 µg/g		
Phenanthrene-d10		
(% Recovery)	122	89
Surrogates		
Level Added = 5 µg/g		
(% Recovery)		
Decafluorobiphenyl	56	72
2-Fluorobiphenyl	33	28
2-Fluorophenol	66	72
Pentafluorophenol	80	93



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SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	SS-5	SS-6
Acenaphthene	<3.3	<3.3
Acenaphthylene	<3.3	<3.3
Anthracene	<3.3	<3.3
Benzo(a)anthracene	<3.3	<3.3
Benzo(a)pyrene	<9.9	<9.9
Benzo(b)fluoranthene	<3.3	<3.3
Benzo(g,h,i)perylene	<8.3	<8.3
Benzo(k)fluoranthene	<3.3	<3.3
Bis(2-chloroethoxy)methane	<3.3	<3.3
Bis(2-chloroethyl)ether	<3.3	<3.3
Bis(2-chloroisopropyl)ether	<3.3	<3.3
Bis(2-ethylhexyl)phthalate	<200	<200
4-Bromophenylphenylether	<3.3	<3.3
Butylbenzylphthalate	<3.3	<3.3
2-Chloronaphthalene	<3.3	<3.3
4-Chlorophenylphenylether	<3.3	<3.3
Chrysene	<3.3	<3.3
Dibenzo(a,h)anthracene	<13	<13
1,2-Dichlorobenzene	<3.3	<3.3
1,3-Dichlorobenzene	<3.3	<3.3
1,4-Dichlorobenzene	<3.3	<3.3
3,3'-Dichlorobenzidine	<200	<200
Diethylphthalate	<3.3	<3.3
Dimethylphthalate	<3.3	<3.3
Di-n-butylphthalate	<3.3	<3.3
2,6-Dinitrotoluene	<3.3	<3.3
2,4-Dinitrotoluene	<3.3	<3.3
Di-n-octylphthalate	<200	<200
Fluoranthene	<3.3	<3.3
Fluorene	<3.3	<3.3
Hexachlorobenzene	<3.3	<3.3
Hexachlorobutadiene	<3.3	<3.3
Hexachlorocyclopentadiene	<3.3	<3.3
Hexachloroethane	<3.3	<3.3
Indeno(1,2,3-cd)pyrene	<6.6	<6.6
Isophorone	<3.3	<3.3
Naphthalene	<3.3	<3.3
Nitrobenzene	<3.3	<3.3
N-nitrosodi-n-propylamine	<3.3	<3.3
N-nitrosodiphenylamine	<3.3	19
Phenanthrene	<3.3	<3.3
Pyrene	<3.3	<3.3
1,2,4-Trichlorobenzene	<3.3	<3.3

(Continued)



I.D. #86-1210

SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	SS-5	SS-6
2-Chlorophenol	<3.3	<3.3
2,4-Dichlorophenol	<3.3	<3.3
2,4-Dimethylphenol	<3.3	<3.3
4,6-Dinitro-o-cresol	<16	<16
2,4-Dinitrophenol	<16	<16
2-Nitrophenol	<3.3	<3.3
4-Nitrophenol	<16	<16
p-Chloro-m-cresol	<3.3	<3.3
Pentachlorophenol	<16	<16
Phenol	<3.3	<3.3
2,4,6-Trichlorophenol	<3.3	<3.3
Extraction Date	12/8/86	12/8/86
Analysis Date	1/15/87	1/15/87
Internal Standards		
Level Added = 1 µg/g		
Phenanthrene-d10		
(% Recovery)	81	84
Surrogates		
Level Added = 5 µg/g		
(% Recovery)		
Decafluorobiphenyl	74	73
2-Fluorobiphenyl	*	*
2-Fluorophenol	103	100
Pentafluorophenol	160	146



I.D. #86-1210

SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION		
	SS-7	SS-8	SS-9
Acenaphthene	<3.3	<3.3	<3.3
Acenaphthylene	<3.3	<3.3	<3.3
Anthracene	<3.3	<3.3	<3.3
Benzo(a)anthracene	<3.3	<3.3	<3.3
Benzo(a)pyrene	<9.9	<9.9	<9.9
Benzo(b)fluoranthene	<3.3	<3.3	<3.3
Benzo(g,h,i)perylene	<8.3	<8.3	<8.3
Benzo(k)fluoranthene	<3.3	<3.3	<3.3
Bis(2-chloroethoxy)methane	<3.3	<3.3	<3.3
Bis(2-chloroethyl)ether	<3.3	<3.3	<3.3
Bis(2-chloroisopropyl)ether	<3.3	<3.3	<3.3
Bis(2-ethylhexyl)phthalate	<200	<200	<200
4-Bromophenylphenylether	<3.3	<3.3	<3.3
Butylbenzylphthalate	<3.3	<3.3	<3.3
2-Chloronaphthalene	<3.3	<3.3	<3.3
4-Chlorophenylphenylether	<3.3	<3.3	<3.3
Chrysene	<3.3	<3.3	<3.3
Dibenzo(a,h)anthracene	<13	<13	<13
1,2-Dichlorobenzene	4.3	<3.3	<3.3
1,3-Dichlorobenzene	<3.3	<3.3	<3.3
1,4-Dichlorobenzene	<3.3	<3.3	<3.3
3,3'-Dichlorobenzidine	<200	<200	<200
Diethylphthalate	<3.3	<3.3	<3.3
Dimethylphthalate	<3.3	<3.3	<3.3
Di-n-butylphthalate	<3.3	<3.3	<3.3
2,6-Dinitrotoluene	<3.3	<3.3	<3.3
2,4-Dinitrotoluene	<3.3	<3.3	<3.3
Di-n-octylphthalate	<200	<200	<200
Fluoranthene	3.4	3.5	11
Fluorene	<3.3	<3.3	<3.3
Hexachlorobenzene	<3.3	<3.3	<3.3
Hexachlorobutadiene	<3.3	<3.3	<3.3
Hexachlorocyclopentadiene	<3.3	<3.3	<3.3
Hexachloroethane	<3.3	<3.3	<3.3
Indeno(1,2,3-cd)pyrene	<6.6	<6.6	<6.6
Isophorone	<3.3	<3.3	<3.3
Naphthalene	3.8	3.4	<3.3
Nitrobenzene	<3.3	<3.3	<3.3
N-nitrosodi-n-propylamine	<3.3	<3.3	<3.3
N-nitrosodiphenylamine	<3.3	<3.3	<3.3
Phenanthrene	<3.3	<3.3	7.8
Pyrene	5.9	5.0	<3.3
1,2,4-Trichlorobenzene	<3.3	<3.3	<3.3

(Continued)



I.D. #86-1210

SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION		
	SS-7	SS-8	SS-9
2-Chlorophenol	<3.3	<3.3	<3.3
2,4-Dichlorophenol	<3.3	<3.3	<3.3
2,4-Dimethylphenol	<3.3	<3.3	<3.3
4,6-Dinitro-o-cresol	<16	<16	<16
2,4-Dinitrophenol	<16	<16	<16
2-Nitrophenol	<3.3	<3.3	<3.3
4-Nitrophenol	<16	<16	<16
p-Chloro-m-cresol	<3.3	<3.3	<3.3
Pentachlorophenol	<16	<16	<16
Phenol	<3.3	<3.3	<3.3
2,4,6-Trichlorophenol	<3.3	<3.3	<3.3
Extraction Date	12/8/86	12/8/86	12/8/86
Analysis Date	1/16/87	1/16/87	1/16/87
Internal Standards			
Level Added = 1 µg/g			
Phenanthrene-d10			
(% Recovery)	95	99	120
Surrogates			
Level Added = 5 µg/g			
(% Recovery)			
Decafluorobiphenyl	90	44	70
2-Fluorobiphenyl	*	*	*
2-Fluorophenol	152	59	98
Pentafluorophenol	194	91	141



I.D. #86-1210

AQUEOUS MATRIX
METHOD 625 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION	
	POW-1	POW-2
Acenaphthene	<1.9	<1.9
Acenaphthylene	<3.5	<3.5
Anthracene	4.0	<1.9
Benzo(a)anthracene	<7.8	<7.8
Benzo(a)pyrene	<6.0	<6.0
Benzo(b)fluoranthene	<4.8	<4.8
Benzo(g,h,i)perylene	<10	<10
Benzo(k)fluoranthene	<2.5	<2.5
Bis(2-chloroethoxy)methane	<5.3	<5.3
Bis(2-chloroethyl)ether	<5.7	<5.7
Bis(2-chloroisopropyl)ether	<5.7	<5.7
Bis(2-ethylhexyl)phthalate	<150	<150
4-Bromophenylphenylether	<1.9	<1.9
Butylbenzylphthalate	<2.5	<2.5
2-Chloronaphthalene	<1.9	6.8
4-Chlorophenylphenylether	<4.2	<4.2
Chrysene	<2.5	<2.5
Dibenzo(a,h)anthracene	<10	<10
1,2-Dichlorobenzene	<1.9	7.2
1,3-Dichlorobenzene	32	<1.9
1,4-Dichlorobenzene	160	35
3,3'-Dichlorobenzidine	<300	<300
Diethylphthalate	<22	<22
Dimethylphthalate	<1.6	<1.6
Di-n-butylphthalate	<2.5	<2.5
2,6-Dinitrotoluene	<1.9	<1.9
2,4-Dinitrotoluene	<5.7	<5.7
Di-n-octylphthalate	<150	<150
Fluoranthene	<2.2	<2.2
Fluorene	22	<1.9
Hexachlorobenzene	<1.9	<1.9
Hexachlorobutadiene	<0.9	<0.9
Hexachlorocyclopentadiene	<25	<25
Hexachloroethane	<1.6	<1.6
Indeno(1,2,3-cd)pyrene	<6.0	<6.0
Isophorone	<2.2	<2.2
Naphthalene	360	13
Nitrobenzene	<1.9	9.7
N-nitrosodi-n-propylamine	<25	<25
N-nitrosodiphenylamine	1,900	<1.9
Phenanthrene	28	<5.4
Pyrene	<1.9	<1.9
1,2,4-Trichlorobenzene	8.6	4.5

(Continued)



I.D. #86-1210

AQUEOUS MATRIX
METHOD 625 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION	
	POW-1	POW-2
2-Chlorophenol	<3.3	<3.3
2,4-Dichlorophenol	<2.7	<2.7
2,4-Dimethylphenol	<2.7	<2.7
4,6-Dinitro-o-cresol	<24	<24
2,4-Dinitrophenol	<42	<42
2-Nitrophenol	<3.6	20
4-Nitrophenol	<2.4	<2.4
p-Chloro-m-cresol	<3.0	<3.0
Pentachlorophenol	<3.6	<3.6
Phenol	42	<1.5
2,4,6-Trichlorophenol	<2.7	<2.7
Extraction Date	12/9/86	12/9/86
Analysis Date	1/16/87	1/16/87
Internal Standards		
Level Added = 20 µg/l		
Phenanthrene-d10		
(% Recovery)	60	57
Surrogates		
Level Added = 100 µg/l		
(% Recovery)		
Decafluorobiphenyl	59	6
2-Fluorobiphenyl	89	60
2-Fluorophenol	59	130
Pentafluorophenol	91	178



I.D. #86-1210

AQUEOUS MATRIX
METHOD 625 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION	
	POW-3	POW-4
Acenaphthene	<1.9	<1.9
Acenaphthylene	<3.5	<3.5
Anthracene	<1.9	4.6
Benzo(a)anthracene	<7.8	<7.8
Benzo(a)pyrene	<6.0	<6.0
Benzo(b)fluoranthene	<4.8	<4.8
Benzo(g,h,i)perylene	<10	<10
Benzo(k)fluoranthene	<2.5	<2.5
Bis(2-chloroethoxy)methane	<5.3	<5.3
Bis(2-chloroethyl)ether	<5.7	<5.7
Bis(2-chloroisopropyl)ether	<5.7	<5.7
Bis(2-ethylhexyl)phthalate	<150	<150
4-Bromophenylphenylether	<1.9	<1.9
Butylbenzylphthalate	<2.5	<2.5
2-Chloronaphthalene	<1.9	<1.9
4-Chlorophenylphenylether	<4.2	<4.2
Chrysene	<2.5	<2.5
Dibenzo(a,h)anthracene	<10	<10
1,2-Dichlorobenzene	4.3	76
1,3-Dichlorobenzene	<1.9	15
1,4-Dichlorobenzene	18	140
3,3'-Dichlorobenzidine	<300	<300
Diethylphthalate	<22	<22
Dimethylphthalate	<1.6	<1.6
Di-n-butylphthalate	<2.5	<2.5
2,6-Dinitrotoluene	<1.9	<1.9
2,4-Dinitrotoluene	<5.7	6.5
Di-n-octylphthalate	<150	<150
Fluoranthene	<2.2	5.4
Fluorene	<1.9	<1.9
Hexachlorobenzene	<1.9	<1.9
Hexachlorobutadiene	<0.9	<0.9
Hexachlorocyclopentadiene	<25	<25
Hexachloroethane	<1.6	<1.6
Indeno(1,2,3-cd)pyrene	<6.0	<6.0
Isophorone	<2.2	<2.2
Naphthalene	5.3	150
Nitrobenzene	<1.9	<1.9
N-nitrosodi-n-propylamine	<25	<25
N-nitrosodiphenylamine	<1.9	<1.9
Phenanthrene	<5.4	15
Pyrene	<1.9	3.6
1,2,4-Trichlorobenzene	<1.9	8.6

(Continued)



I.D. #86-1210

AQUEOUS MATRIX
METHOD 625 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = $\mu\text{g/l}$)	SAMPLE IDENTIFICATION	
	POW-3	POW-4
2-Chlorophenol	<3.3	<3.3
2,4-Dichlorophenol	<2.7	<2.7
2,4-Dimethylphenol	<2.7	<2.7
4,6-Dinitro-o-cresol	<24	<24
2,4-Dinitrophenol	<42	560
2-Nitrophenol	<3.6	<3.6
4-Nitrophenol	<2.4	<2.4
p-Chloro-m-cresol	<3.0	<3.0
Pentachlorophenol	<3.6	<3.6
Phenol	<1.5	<1.5
2,4,6-Trichlorophenol	<2.7	<2.7
Extraction Date	12/9/86	12/9/86
Analysis Date	1/16/87	1/16/87
Internal Standards		
Level Added = 20 $\mu\text{g/l}$		
Phenanthrene-d10		
(% Recovery)	133	118
Surrogates		
Level Added = 100 $\mu\text{g/l}$		
(% Recovery)		
Decafluorobiphenyl	49	49
2-Fluorobiphenyl	86	51
2-Fluorophenol	59	48
Pentafluorophenol	92	66



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AQUEOUS MATRIX
METHOD 625 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION
	PONDED H ₂ O
Acenaphthene	<1.9
Acenaphthylene	<3.5
Anthracene	<1.9
Benzo(a)anthracene	<7.8
Benzo(a)pyrene	<6.0
Benzo(b)fluoranthene	<4.8
Benzo(g,h,i)perylene	<10
Benzo(k)fluoranthene	<2.5
Bis(2-chloroethoxy)methane	<5.3
Bis(2-chloroethyl)ether	<5.7
Bis(2-chloroisopropyl)ether	<5.7
Bis(2-ethylhexyl)phthalate	<150
4-Bromophenylphenylether	<1.9
Butylbenzylphthalate	<2.5
2-Chloronaphthalene	<1.9
4-Chlorophenylphenylether	<4.2
Chrysene	<2.5
Dibenzo(a,h)anthracene	<10
1,2-Dichlorobenzene	<1.9
1,3-Dichlorobenzene	<1.9
1,4-Dichlorobenzene	<4.4
3,3'-Dichlorobenzidine	<300
Diethylphthalate	<22
Dimethylphthalate	<1.6
Di-n-butylphthalate	<2.5
2,6-Dinitrotoluene	<1.9
2,4-Dinitrotoluene	<5.7
Di-n-octylphthalate	<150
Fluoranthene	<2.2
Fluorene	<1.9
Hexachlorobenzene	<1.9
Hexachlorobutadiene	<0.9
Hexachlorocyclopentadiene	<25
Hexachloroethane	<1.6
Indeno(1,2,3-cd)pyrene	<6.0
Isophorone	<2.2
Naphthalene	2.0
Nitrobenzene	<1.9
N-nitrosodi-n-propylamine	<25
N-nitrosodiphenylamine	<1.9
Phenanthrene	<5.4
Pyrene	<1.9
1,2,4-Trichlorobenzene	<1.9

(Continued)



I.D. #86-1210

AQUEOUS MATRIX
METHOD 625 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = $\mu\text{g/l}$)	SAMPLE IDENTIFICATION
	PONDED H ₂ O
2-Chlorophenol	<3.3
2,4-Dichlorophenol	<2.7
2,4-Dimethylphenol	<2.7
4,6-Dinitro-o-cresol	<24
2,4-Dinitrophenol	<42
2-Nitrophenol	<3.6
4-Nitrophenol	<2.4
p-Chloro-m-cresol	<3.0
Pentachlorophenol	<3.6
Phenol	<1.5
2,4,6-Trichlorophenol	<2.7
Extraction Date	12/5/86
Analysis Date	1/6/87
Internal Standards	
Level Added = 20 $\mu\text{g/l}$	
Phenanthrene-d10	
(% Recovery)	96
Surrogates	
Level Added = 100 $\mu\text{g/l}$	
(% Recovery)	
Decafluorobiphenyl	29
2-Fluorobiphenyl	31
2-Fluorophenol	44
Pentafluorophenol	61



I.D. #86-1210

AQUEOUS MATRIX
METHOD 625 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION	
	LAKE SAMPLE	FIELD BLANK
Acenaphthene	<1.9	<1.9
Acenaphthylene	<3.5	<3.5
Anthracene	<1.9	<1.9
Benzo(a)anthracene	<7.8	<7.8
Benzo(a)pyrene	<6.0	<6.0
Benzo(b)fluoranthene	<4.8	<4.8
Benzo(g,h,i)perylene	<10	<10
Benzo(k)fluoranthene	<2.5	<2.5
Bis(2-chloroethoxy)methane	<5.3	<5.3
Bis(2-chloroethyl)ether	<5.7	<5.7
Bis(2-chloroisopropyl)ether	<5.7	<5.7
Bis(2-ethylhexyl)phthalate	<150	<150
4-Bromophenylphenylether	<1.9	<1.9
Butylbenzylphthalate	<2.5	<2.5
2-Chloronaphthalene	<1.9	<1.9
4-Chlorophenylphenylether	<4.2	<4.2
Chrysene	<2.5	<2.5
Dibenzo(a,h)anthracene	<10	<10
1,2-Dichlorobenzene	<1.9	<1.9
1,3-Dichlorobenzene	<1.9	<1.9
1,4-Dichlorobenzene	<4.4	<4.4
3,3'-Dichlorobenzidine	<300	<300
Diethylphthalate	<22	<22
Dimethylphthalate	<1.6	<1.6
Di-n-butylphthalate	<2.5	<2.5
2,6-Dinitrotoluene	<1.9	<1.9
2,4-Dinitrotoluene	<5.7	<5.7
Di-n-octylphthalate	<150	<150
Fluoranthene	<2.2	<2.2
Fluorene	<1.9	<1.9
Hexachlorobenzene	<1.9	<1.9
Hexachlorobutadiene	<0.9	<0.9
Hexachlorocyclopentadiene	<25	<25
Hexachloroethane	<1.6	<1.6
Indeno(1,2,3-cd)pyrene	<6.0	<6.0
Isophorone	<2.2	<2.2
Naphthalene	<1.6	<1.6
Nitrobenzene	<1.9	<1.9
N-nitrosodi-n-propylamine	<25	<25
N-nitrosodiphenylamine	<1.9	<1.9
Phenanthrene	<5.4	<5.4
Pyrene	<1.9	<1.9
1,2,4-Trichlorobenzene	<1.9	<1.9

(Continued)



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AQUEOUS MATRIX
METHOD 625 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = $\mu\text{g/l}$)	SAMPLE IDENTIFICATION	
	LAKE SAMPLE	FIELD BLANK
2-Chlorophenol	<3.3	<3.3
2,4-Dichlorophenol	<2.7	<2.7
2,4-Dimethylphenol	<2.7	<2.7
4,6-Dinitro-o-cresol	<24	<24
2,4-Dinitrophenol	<42	<42
2-Nitrophenol	<3.6	<3.6
4-Nitrophenol	<2.4	<2.4
p-Chloro-m-cresol	<3.0	<3.0
Pentachlorophenol	<3.6	<3.6
Phenol	<1.5	<1.5
2,4,6-Trichlorophenol	<2.7	<2.7
Extraction Date	12/5/86	12/5/86
Analysis Date	1/8/87	1/8/87
Internal Standards		
Level Added = 20 $\mu\text{g/l}$		
Phenanthrene-d10		
(% Recovery)	131	68
Surrogates		
Level Added = 100 $\mu\text{g/l}$		
(% Recovery)		
Decafluorobiphenyl	14	31
2-Fluorobiphenyl	15	15
2-Fluorophenol	14	19
Pentafluorophenol	33	34



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AQUEOUS MATRIX
METHOD 625 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION		
	EW-1	EW-2	EW-3
Acenaphthene	<1.9	19	<9.0
Acenaphthylene	<3.5	<3.5	<3.5
Anthracene	<1.9	45	<1.9
Benzo(a)anthracene	<7.8	7.9	<7.8
Benzo(a)pyrene	<6.0	<6.0	<6.0
Benzo(b)fluoranthene	<4.8	<4.8	<4.8
Benzo(g,h,i)perylene	<10	<10	<10
Benzo(k)fluoranthene	<2.5	<2.5	<2.5
Bis(2-chloroethoxy)methane	<5.3	<5.3	<5.3
Bis(2-chloroethyl)ether	<5.7	<5.7	<5.7
Bis(2-chloroisopropyl)ether	<5.7	<5.7	<5.7
Bis(2-ethylhexyl)phthalate	<150	<150	<150
4-Bromophenylphenylether	<1.9	<1.9	<1.9
Butylbenzylphthalate	<2.5	<2.5	<2.5
2-Chloronaphthalene	<1.9	<1.9	<1.9
4-Chlorophenylphenylether	<4.2	<4.2	<4.2
Chrysene	<2.5	13	<2.5
Dibenzo(a,h)anthracene	<10	<10	<10
1,2-Dichlorobenzene	<1.9	160	<1.9
1,3-Dichlorobenzene	<4.0	46	<1.9
1,4-Dichlorobenzene	14	620	130
3,3'-Dichlorobenzidine	<300	<300	<300
Diethylphthalate	<22	<22	<22
Dimethylphthalate	<1.6	<1.6	<1.6
Di-n-butylphthalate	<2.5	<2.5	<2.5
2,6-Dinitrotoluene	<1.9	<1.9	<1.9
2,4-Dinitrotoluene	<5.7	<5.7	<5.7
Di-n-octylphthalate	<150	<150	<150
Fluoranthene	<2.2	44	<2.2
Fluorene	<1.9	<1.9	<1.9
Hexachlorobenzene	<1.9	<1.9	<1.9
Hexachlorobutadiene	<0.9	<0.9	<0.9
Hexachlorocyclopentadiene	<25	<25	<25
Hexachloroethane	<1.6	<1.6	<1.6
Indeno(1,2,3-cd)pyrene	<6.0	<6.0	<6.0
Isophorone	<2.2	<2.2	<2.2
Naphthalene	<1.6	2,600	28
Nitrobenzene	<1.9	<1.9	<1.9
N-nitrosodi-n-propylamine	<25	<25	<25
N-nitrosodiphenylamine	13	<1.9	23
Phenanthrene	<5.4	88	<5.4
Pyrene	<1.9	33	<1.9
1,2,4-Trichlorobenzene	<1.9	2.0	<1.9

(Continued)



I.D. #86-1210

AQUEOUS MATRIX
METHOD 625 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION		
	EW-1	EW-2	EW-3
2-Chlorophenol	<3.3	95	<3.3
2,4-Dichlorophenol	<2.7	<2.7	<2.7
2,4-Dimethylphenol	<2.7	<2.7	<2.7
4,6-Dinitro-o-cresol	<24	<24	<24
2,4-Dinitrophenol	<42	<42	<42
2-Nitrophenol	<3.6	<3.6	<3.6
4-Nitrophenol	<2.4	<2.4	<2.4
p-Chloro-m-cresol	<3.0	<3.0	<3.0
Pentachlorophenol	<3.6	<3.6	<3.6
Phenol	<1.5	<1.5	<1.5
2,4,6-Trichlorophenol	<2.7	<2.7	<2.7
Extraction Date	12/5/86	12/11/86	12/12/86
Analysis Date	1/8/87	1/20/87	1/21/87
Internal Standards			
Level Added = 20 µg/l			
Phenanthrene-d10			
(% Recovery)	125	96	70
Surrogates			
Level Added = 100 µg/l			
(% Recovery)			
Decafluorobiphenyl	38	111	133
2-Fluorobiphenyl	44	60	77
2-Fluorophenol	37	109	80
Pentafluorophenol	58	185	146



I.D. #86-1210

AQUEOUS MATRIX
METHOD 625 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION		
	EW-4	EW-5	EW-6
Acenaphthene	6.7	<1.9	40
Acenaphthylene	<3.5	<3.5	<3.5
Anthracene	<1.9	7.0	10
Benzo(a)anthracene	<7.8	<7.8	<7.8
Benzo(a)pyrene	<6.0	<6.0	<6.0
Benzo(b)fluoranthene	<4.8	<4.8	<4.8
Benzo(g,h,i)perylene	<10	<10	<10
Benzo(k)fluoranthene	<2.5	<2.5	<2.5
Bis(2-chloroethoxy)methane	<5.3	<5.3	<5.3
Bis(2-chloroethyl)ether	<5.7	<5.7	14
Bis(2-chloroisopropyl)ether	<5.7	<5.7	<5.7
Bis(2-ethylhexyl)phthalate	<150	<150	<150
4-Bromophenylphenylether	<1.9	<1.9	<1.9
Butylbenzylphthalate	<2.5	<2.5	<2.5
2-Chloronaphthalene	<1.9	<1.9	<1.9
4-Chlorophenylphenylether	<4.2	<4.2	<4.2
Chrysene	<2.5	<2.5	<2.5
Dibenzo(a,h)anthracene	<10	<10	<10
1,2-Dichlorobenzene	6.0	<1.9	50
1,3-Dichlorobenzene	8.1	<1.9	44
1,4-Dichlorobenzene	50	190	430
3,3'-Dichlorobenzidine	<300	<300	<300
Diethylphthalate	<22	<22	<22
Dimethylphthalate	<1.6	<1.6	<1.6
Di-n-butylphthalate	<2.5	<2.5	<2.5
2,6-Dinitrotoluene	<1.9	<1.9	<1.9
2,4-Dinitrotoluene	<5.7	<5.7	<5.7
Di-n-octylphthalate	<150	<150	<150
Fluoranthene	<2.2	<2.2	<2.2
Fluorene	3.9	<1.9	27
Hexachlorobenzene	<1.9	<1.9	<1.9
Hexachlorobutadiene	<0.9	<0.9	<0.9
Hexachlorocyclopentadiene	<25	<25	<25
Hexachloroethane	<1.6	<1.6	<1.6
Indeno(1,2,3-cd)pyrene	<6.0	<6.0	<6.0
Isophorone	<2.2	<2.2	<2.2
Naphthalene	3.3	9.1	450
Nitrobenzene	<1.9	<1.9	<1.9
N-nitrosodi-n-propylamine	<25	<25	<25
N-nitrosodiphenylamine	10	160	<1.9
Phenanthrene	<5.4	<5.4	22
Pyrene	<1.9	<1.9	<1.9
1,2,4-Trichlorobenzene	<1.9	<1.9	160

(Continued)



I.D. #86-1210

AQUEOUS MATRIX
METHOD 625 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION		
	EW-4	EW-5	EW-6
2-Chlorophenol	12	<3.3	26
2,4-Dichlorophenol	<2.7	<2.7	9.3
2,4-Dimethylphenol	<2.7	<2.7	<2.7
4,6-Dinitro-o-cresol	<24	<24	<24
2,4-Dinitrophenol	<42	<42	<42
2-Nitrophenol	<3.6	<3.6	<3.6
4-Nitrophenol	<2.4	<2.4	<2.4
p-Chloro-m-cresol	<3.0	<3.0	<3.0
Pentachlorophenol	<3.6	<3.6	<3.6
Phenol	<1.5	<1.5	<1.5
2,4,6-Trichlorophenol	<2.7	<2.7	<2.7
Extraction Date	12/11/86	12/12/86	12/11/86
Analysis Date	1/20/87	1/21/87	1/20/87
Internal Standards			
Level Added = 20 µg/l			
Phenanthrene-d10			
(% Recovery)	75	128	60
Surrogates			
Level Added = 100 µg/l			
(% Recovery)			
Decafluorobiphenyl	115	70	124
2-Fluorobiphenyl	79	0	57
2-Fluorophenol	112	61	140
Pentafluorophenol	146	119	171



I.D. #86-1210

AQUEOUS MATRIX
METHOD 625 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION		
	EW-7	EW-8	EW-9
Acenaphthene	6.2	20	28
Acenaphthylene	<3.5	<3.5	<3.5
Anthracene	13	7.9	9.5
Benzo(a)anthracene	<7.8	<7.8	<7.8
Benzo(a)pyrene	<6.0	<6.0	<6.0
Benzo(b)fluoranthene	<4.8	<4.8	<4.8
Benzo(g,h,i)perylene	<10	<10	<10
Benzo(k)fluoranthene	<2.5	<2.5	<2.5
Bis(2-chloroethoxy)methane	<5.3	<5.3	<5.3
Bis(2-chloroethyl)ether	<5.7	<5.7	<5.7
Bis(2-chloroisopropyl)ether	<5.7	<5.7	<5.7
Bis(2-ethylhexyl)phthalate	<150	<150	<150
4-Bromophenylphenylether	<1.9	<1.9	<1.9
Butylbenzylphthalate	<2.5	<2.5	<2.5
2-Chloronaphthalene	<1.9	<1.9	<1.9
4-Chlorophenylphenylether	<4.2	<4.2	<4.2
Chrysene	<2.5	<2.5	<2.5
Dibenzo(a,h)anthracene	<10	<10	<10
1,2-Dichlorobenzene	330	<1.9	190
1,3-Dichlorobenzene	<1.9	<1.9	<1.9
1,4-Dichlorobenzene	770	330	150
3,3'-Dichlorobenzidine	<300	<300	<300
Diethylphthalate	<22	<22	<22
Dimethylphthalate	<1.6	<1.6	<1.6
Di-n-butylphthalate	<2.5	<2.5	<2.5
2,6-Dinitrotoluene	<1.9	<1.9	<1.9
2,4-Dinitrotoluene	<5.7	<5.7	<5.7
Di-n-octylphthalate	<150	<150	<150
Fluoranthene	<2.2	<2.2	<2.2
Fluorene	<1.9	<1.9	<1.9
Hexachlorobenzene	<1.9	<1.9	<1.9
Hexachlorobutadiene	<0.9	<0.9	<0.9
Hexachlorocyclopentadiene	<25	<25	<25
Hexachloroethane	<1.6	<1.6	<1.6
Indeno(1,2,3-cd)pyrene	<6.0	<6.0	<6.0
Isophorone	<2.2	<2.2	<2.2
Naphthalene	120	240	500
Nitrobenzene	<1.9	<1.9	<1.9
N-nitrosodi-n-propylamine	<25	<25	<25
N-nitrosodiphenylamine	130	130	130
Phenanthrene	10	13	18
Pyrene	<1.9	<1.9	<1.9
1,2,4-Trichlorobenzene	15	<1.9	60

(Continued)



I.D. #86-1210

AQUEOUS MATRIX
METHOD 625 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION		
	EW-7	EW-8	EW-9
2-Chlorophenol	<3.3	<3.3	<3.3
2,4-Dichlorophenol	<2.7	<2.7	<2.7
2,4-Dimethylphenol	<2.7	<2.7	<2.7
4,6-Dinitro-o-cresol	<24	<24	<24
2,4-Dinitrophenol	<42	<42	<42
2-Nitrophenol	<3.6	<3.6	<3.6
4-Nitrophenol	<2.4	<2.4	<2.4
p-Chloro-m-cresol	<3.0	<3.0	<3.0
Pentachlorophenol	<3.6	<3.6	<3.6
Phenol	<1.5	<1.5	<1.5
2,4,6-Trichlorophenol	<2.7	<2.7	<2.7
Extraction Date	12/12/86	12/12/86	12/12/86
Analysis Date	1/21/87	1/21/87	1/21/87
Internal Standards			
Level Added = 20 µg/l			
Phenanthrene-d10			
(% Recovery)	119	124	129
Surrogates			
Level Added = 100 µg/l			
(% Recovery)			
Decafluorobiphenyl	0	81	0
2-Fluorobiphenyl	0	0	0
2-Fluorophenol	66	72	71
Pentafluorophenol	126	121	130



I.D. #86-1210

AQUEOUS MATRIX
METHOD 625 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION	
	TRANSFER BLANK	
Acenaphthene	<1.9	
Acenaphthylene	<3.5	
Anthracene	<1.9	
Benzo(a)anthracene	<7.8	
Benzo(a)pyrene	<6.0	
Benzo(b)fluoranthene	<4.8	
Benzo(g,h,i)perylene	<10	
Benzo(k)fluoranthene	<2.5	
Bis(2-chloroethoxy)methane	<5.3	
Bis(2-chloroethyl)ether	<5.7	
Bis(2-chloroisopropyl)ether	<5.7	
Bis(2-ethylhexyl)phthalate	<150	
4-Bromophenylphenylether	<1.9	
Butylbenzylphthalate	<2.5	
2-Chloronaphthalene	<1.9	
4-Chlorophenylphenylether	<4.2	
Chrysene	<2.5	
Dibenzo(a,h)anthracene	<10	
1,2-Dichlorobenzene	<1.9	
1,3-Dichlorobenzene	<1.9	
1,4-Dichlorobenzene	<4.4	
3,3'-Dichlorobenzidine	<300	
Diethylphthalate	<22	
Dimethylphthalate	<1.6	
Di-n-butylphthalate	<2.5	
2,6-Dinitrotoluene	<1.9	
2,4-Dinitrotoluene	<5.7	
Di-n-octylphthalate	<150	
Fluoranthene	<2.2	
Fluorene	<1.9	
Hexachlorobenzene	<1.9	
Hexachlorobutadiene	<0.9	
Hexachlorocyclopentadiene	<25	
Hexachloroethane	<1.6	
Indeno(1,2,3-cd)pyrene	<6.0	
Isophorone	<2.2	
Naphthalene	<1.6	
Nitrobenzene	<1.9	
N-nitrosodi-n-propylamine	<25	
N-nitrosodiphenylamine	<1.9	
Phenanthrene	<5.4	
Pyrene	<1.9	
1,2,4-Trichlorobenzene	<1.9	

(Continued)



I.D. #86-1210

AQUEOUS MATRIX
METHOD 625 PRIORITY POLLUTANT EXTRACTABLES

COMPOUND (Units of Measure = $\mu\text{g/l}$)	SAMPLE IDENTIFICATION
	TRANSFER BLANK
2-Chlorophenol	<3.3
2,4-Dichlorophenol	<2.7
2,4-Dimethylphenol	<2.7
4,6-Dinitro-o-cresol	<24
2,4-Dinitrophenol	<42
2-Nitrophenol	<3.6
4-Nitrophenol	<2.4
p-Chloro-m-cresol	<3.0
Pentachlorophenol	<3.6
Phenol	<1.5
2,4,6-Trichlorophenol	<2.7
Extraction Date	12/12/86
Analysis Date	1/21/87
Internal Standards	
Level Added = 20 $\mu\text{g/l}$	
Phenanthrene-d10	
(% Recovery)	127
Surrogates	
Level Added = 100 $\mu\text{g/l}$	
(% Recovery)	
Decafluorobiphenyl	42
2-Fluorobiphenyl	9
2-Fluorophenol	40
Pentafluorophenol	81



I.D. #86-1210

QUALITY CONTROL INFORMATION - PRECISION
SOIL MATRIX
METHOD 8270 EXTRACTABLES

SAMPLE IDENTIFICATION SS-9

COMPOUND (Units of Measure = µg/g Dry)	VALUE 1	VALUE 2	MEAN	STANDARD DEVIATION
Fluoranthene	18	2.2	10	11
Phenanthrene	13	2.0	7.5	7.8



I.D. #86-1210

QUALITY CONTROL INFORMATION - ACCURACY
SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

SAMPLE IDENTIFICATION EW-8

COMPOUND	NANOGRAMS OF SPIKE	PERCENT* RECOVERY
2-Chlorophenol	25	80
1,3-Dichlorobenzene	25	264
2,4-Dichlorophenol	25	128
Di-n-octylphthalate	25	88
Fluoranthene	25	208
Fluorene	25	144
Naphthalene	25	320
Nitrobenzene	25	104
2,4,6-Trichlorophenol	25	144
Extraction Date	12/5/86	
Analysis Date	1/16/87	
Internal Standards		
Level Added = 1 µg/g		
Phenanthrene-d10		
(% Recovery)	127	
Surrogates		
Level Added = 5 µg/g		
(% Recovery)		
Decafluorobiphenyl	72	
2-Fluorobiphenyl	103	
2-Fluorophenol	102	
Pentafluorophenol	69	

*Elevated recovery values are attributed to the presence of an interferent in the sample which could not be resolved from the compound of interest.



I.D. #86-1210

QUALITY CONTROL INFORMATION - ACCURACY
SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

SAMPLE IDENTIFICATION Method Blank Spike

COMPOUND	NANOGRAMS OF SPIKE	PERCENT RECOVERY
2-Chlorophenol	25	96
1,3-Dichlorobenzene	25	116
2,4-Dichlorophenol	25	136
Di-n-octylphthalate	25	36
Fluoranthene	25	108
Fluorene	25	124
Naphthalene	25	128
Nitrobenzene	25	108
2,4,6-Trichlorophenol	25	120
Extraction Date	12/2/86	
Analysis Date	1/16/87	
Internal Standards		
Level Added = 1 µg/g		
Phenanthrene-d10		
(% Recovery)	87	
Surrogates		
Level Added = 5 µg/g		
(% Recovery)		
Decafluorobiphenyl	91	
2-Fluorobiphenyl	103	
2-Fluorophenol	115	
Pentafluorophenol	98	



I.D. #86-1210

QUALITY CONTROL INFORMATION - ACCURACY
SOIL MATRIX
METHOD 8270 PRIORITY POLLUTANT EXTRACTABLES

SAMPLE IDENTIFICATION Method Blank Spike

COMPOUND	NANOGRAMS OF SPIKE	PERCENT RECOVERY
2-Chlorophenol	25	84
1,3-Dichlorobenzene	25	104
2,4-Dichlorophenol	25	124
Di-n-octylphthalate	25	88
Fluoranthene	25	108
Fluorene	25	120
Naphthalene	25	84
Nitrobenzene	25	112
2,4,6-Trichlorophenol	25	128
Extraction Date	12/4/86	
Analysis Date	1/16/87	
Internal Standards		
Level Added = 1 µg/g		
Phenanthrene-d10		
(% Recovery)	116	
Surrogates		
Level Added = 5 µg/g		
(% Recovery)		
Decafluorobiphenyl	56	
2-Fluorobiphenyl	64	
2-Fluorophenol	73	
Pentafluorophenol	71	



I.D. #86-1210

QUALITY CONTROL INFORMATION - PRECISION
AQUEOUS MATRIX
METHOD 625 EXTRACTABLES

SAMPLE IDENTIFICATION EW-3

COMPOUND (Units of Measure = $\mu\text{g/l}$)	VALUE 1	VALUE 2	MEAN	STANDARD DEVIATION
1,4-Dichlorobenzene	670	480	580	130
Naphthalene	160	120	140	28
N-nitrosodiphenylamine	110	77	94	23

SAMPLE IDENTIFICATION EW-4

COMPOUND (Units of Measure = $\mu\text{g/l}$)	VALUE 1	VALUE 2	MEAN	STANDARD DEVIATION
Acenaphthene	6.4	6.9	6.7	0.35
1,2-Dichlorobenzene	5.1	6.9	6.0	1.3
1,3-Dichlorobenzene	8.2	7.9	8.1	0.21
1,4-Dichlorobenzene	49	50	50	0.71
Fluorene	4.0	3.7	3.9	0.21
Naphthalene	2.8	3.7	3.3	0.64
N-nitrosodiphenylamine	9.0	11	10	1.4
2-Chlorophenol	10	13	12	2.1



I.D. #86-1210

QUALITY CONTROL INFORMATION - PRECISION
AQUEOUS MATRIX
METHOD 625 EXTRACTABLES

SAMPLE IDENTIFICATION POW-4

COMPOUND (Units of Measure = $\mu\text{g/l}$)	VALUE 1	VALUE 2	MEAN	STANDARD DEVIATION
Anthracene	4.2	4.9	4.6	0.49
1,2-Dichlorobenzene	82	70	76	8.5
1,3-Dichlorobenzene	16	14	15	1.4
1,4-Dichlorobenzene	150	130	140	14
2,4-Dinitrotoluene	6.4	6.5	6.5	0.071
Fluoranthene	5.3	5.4	5.4	0.071
Naphthalene	140	150	150	7.1
Phenanthrene	13	16	15	2.1
Pyrene	3.6	3.5	3.6	0.071
1,2,4-Trichlorobenzene	8.8	8.4	8.6	0.28
2,4-Dinitrophenol	*	560	560	*

*Could not be quantified due to sample matrix interference.



I.D. #86-1210

QUALITY CONTROL INFORMATION - ACCURACY
 AQUEOUS MATRIX
 METHOD 625 PRIORITY POLLUTANT EXTRACTABLES

SAMPLE IDENTIFICATION Method Blank Spike

COMPOUND	NANOGRAMS OF SPIKE	PERCENT RECOVERY
2-Chlorophenol	50	72
1,3-Dichlorobenzene	50	41
2,4-Dichlorophenol	50	74
Di-n-octylphthalate	50	72
Fluoranthene	50	100
Fluorene	50	98
Naphthalene	50	60
Nitrobenzene	50	63
2,4,6-Trichlorophenol	50	84
Extraction Date	12/12/86	
Analysis Date	1/22/87	
Internal Standards		
Level Added = 20 µg/l		
Phenanthrene-d10		
(% Recovery)	96	
Surrogates		
Level Added = 100 µg/l		
(% Recovery)		
Decafluorobiphenyl	26	
2-Fluorobiphenyl	64	
2-Fluorophenol	30	
Pentafluorophenol	0	



I.D. #86-1210

APPENDIX E.4

PESTICIDES AND PCB'S

ANALYTICAL RESULTS

Prepared For

Empire Soils Investigation
P.O. Box 0913
Hamburg, NY 14075

Prepared By

Recra Environmental, Inc.
4248 Ridge Lea Road
Amherst, New York 14226

METHODOLOGIES

Specific methodologies employed in obtaining the enclosed analytical results are indicated on the specific data table. The method numbers presented refer to one of the following U.S. Environmental Protection Agency references unless noted otherwise in this report.

- o 40 CFR Part 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act" October 26, 1984 (Federal Register) U.S. Environmental Protection Agency.
- o U.S. Environmental Protection Agency "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods". Office of Solid Waste and Emergency Response. July 1982, SW-846, Second Edition.

COMMENTS

Comments pertain to data on one or all pages of this report.

Values reported as "less than" (<) indicate the working detection limit for the particular sample and/or parameter.

The values reported as "less than or equal to" (<=) indicate the compound may be present at trace levels relative to the detection limit but not subject to accurate quantification.

*Chromatographically 4,4'-DDD and Endosulfan II coelute. The reported value is therefore an "and/or" value.

Results of the analysis of soils are corrected for moisture content and reported on a dry weight basis.

Results of the analysis of Pesticide/PCB's are based on the matching of retention times between samples and standards on a single gas chromatographic column.



SOIL MATRIX
METHOD 8080 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCB'S

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	EW-1	EW-2
Aldrin	<0.05	<0.4
Alpha-BHC	<0.05	<0.1
Beta-BHC	<0.05	0.14
Delta-BHC	<0.05	<0.1
Gamma-BHC	<0.05	<0.06
Chlordane	<1	<4
4,4'-DDD	<0.1	<0.2
4,4'-DDE	<0.1	<0.2
4,4'-DDT	<0.2	<0.2
Dieldrin	<0.1	<0.2
Endosulfan I	<0.1	<0.4
Endosulfan II	<0.1	<0.2
Endosulfan sulfate	<0.2	<0.2
Endrin	<0.1	<0.2
Endrin aldehyde	<0.2	<0.2
Heptachlor	<0.05	<0.4
Heptachlor epoxide	<0.05	<0.5
Toxaphene	<5	<6
PCB-1016	<1	<1
PCB-1221	<2	<2
PCB-1232	<2	<2
PCB-1242	<1	<1
PCB-1248	<1	9.4
PCB-1254	<1	<1
PCB-1260	<1	<1
Extraction Date	12/4/86	12/4/86
Analysis Date	12/22/86	12/22/86



I.D. #86-1252

SOIL MATRIX
METHOD 8080 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCB'S

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	EW-3	EW-4
Aldrin	<0.2	<0.02
Alpha-BHC	<0.03	<0.02
Beta-BHC	0.034	<0.03
Delta-BHC	<0.06	<0.02
Gamma-BHC	<0.03	<0.01
Chlordane	<1	<0.5
4,4'-DDD	0.16*	0.055*
4,4'-DDE	<0.2	<0.02
4,4'-DDT	0.43	<0.05
Dieldrin	<0.06	<0.03
Endosulfan I	<0.2	<0.03
Endosulfan II	<0.06*	<0.04*
Endosulfan sulfate	<0.06	<0.04
Endrin	<0.06	<0.02
Endrin aldehyde	<0.06	<0.02
Heptachlor	<0.2	<0.03
Heptachlor epoxide	<0.4	<0.03
Toxaphene	<3	<0.5
PCB-1016	<1	<0.1
PCB-1221	<2	<0.2
PCB-1232	<2	<0.2
PCB-1242	<1	<0.1
PCB-1248	5.4	0.97
PCB-1254	<1	<0.1
PCB-1260	<1	<0.1
Extraction Date	12/17/86	12/17/86
Analysis Date	12/22/86	12/20/86



I.D. #86-1253

SOIL MATRIX
METHOD 8080 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCB'S

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	EW-5	EW-6
Aldrin	0.36	<0.2
Alpha-BHC	<0.03	<0.3
Beta-BHC	<0.03	<0.2
Delta-BHC	<0.07	<0.06
Gamma-BHC	<0.03	<0.03
Chlordane	<0.6	<2
4,4'-DDD	<0.3	0.39*
4,4'-DDE	0.27	<0.06
4,4'-DDT	<0.06	<0.3
Dieldrin	<0.6	<0.06
Endosulfan I	<0.06	<0.09
Endosulfan II	<0.3	0.39*
Endosulfan sulfate	<0.06	<0.2
Endrin	<0.06	<0.2
Endrin aldehyde	<0.06	<0.2
Heptachlor	<0.03	<0.09
Heptachlor epoxide	<0.5	<0.09
Toxaphene	<3	<3
PCB-1016	<0.6	<2
PCB-1221	<2	<4
PCB-1232	<2	<4
PCB-1242	<0.6	<2
PCB-1248	<0.6	<2
PCB-1254	<0.6	<1
PCB-1260	2.0	<1
Extraction Date	12/5/86	11/26/86
Analysis Date	12/22/86	12/9/86



I.D. #86-1256

SOIL MATRIX
METHOD 8080 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCB'S

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	EW-7	EW-8
Aldrin	<0.2	<0.03
Alpha-BHC	<0.7	<0.03
Beta-BHC	<0.7	<0.03
Delta-BHC	0.21	0.067
Gamma-BHC	<0.7	<0.03
Chlordane	<2	<0.6
4,4'-DDD	<3	<0.2
4,4'-DDE	<0.2	<0.2
4,4'-DDT	<0.2	<0.06
Dieldrin	<0.2	<0.06
Endosulfan I	<3	<0.06
Endosulfan II	<3	<0.2
Endosulfan sulfate	<0.2	<0.06
Endrin	3.5	<0.06
Endrin aldehyde	<6	<0.06
Heptachlor	0.31	0.17
Heptachlor epoxide	<0.2	<0.3
Toxaphene	<6	<3
PCB-1016	<2	0.6
PCB-1221	<3	<2
PCB-1232	<3	<2
PCB-1242	<2	<0.6
PCB-1248	<2	<0.6
PCB-1254	<2	<0.6
PCB-1260	<2	<0.6
Extraction Date	12/5/86	12/5/86
Analysis Date	12/22/86	12/22/86



I.D. #86-1256

SOIL MATRIX
METHOD 8080 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCB'S

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	EW-9	
Aldrin	<0.05	
Alpha-BHC	<0.05	
Beta-BHC	<0.05	
Delta-BHC	0.099	
Gamma-BHC	<0.05	
Chlordane	<1	
4,4'-DDD	<0.3	
4,4'-DDE	<0.1	
4,4'-DDT	<0.7	
Dieldrin	<0.1	
Endosulfan I	<0.1	
Endosulfan II	<0.3	
Endosulfan sulfate	<0.1	
Endrin	<0.1	
Endrin aldehyde	<0.1	
Heptachlor	0.12	
Heptachlor epoxide	<0.1	
Toxaphene	<4	
PCB-1016	<1	
PCB-1221	<2	
PCB-1232	<2	
PCB-1242	<1	
PCB-1248	<1	
PCB-1254	<1	
PCB-1260	<1	
Extraction Date	12/8/86	
Analysis Date	12/19/86	



I.D. #86-1263

RECRA ENVIRONMENTAL, INC.

SOIL MATRIX
METHOD 8080 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCB'S

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	SS-1	SS-2
Aldrin	<0.005	0.031
Alpha-BHC	<0.005	<0.03
Beta-BHC	<0.005	<0.01
Delta-BHC	<0.005	<0.01
Gamma-BHC	<0.005	<0.005
Chlordane	<0.3	<0.5
4,4'-DDD	<0.05	<0.1
4,4'-DDE	<0.01	<0.05
4,4'-DDT	<0.04	<0.1
Dieldrin	<0.01	<0.03
Endosulfan I	<0.01	<0.03
Endosulfan II	<0.05	<0.1
Endosulfan sulfate	0.20	0.11
Endrin	<0.04	<0.03
Endrin aldehyde	<0.04	<0.05
Heptachlor	<0.005	0.049
Heptachlor epoxide	<0.005	<0.03
Toxaphene	<0.4	<1
PCB-1016	<0.3	<0.5
PCB-1221	<0.5	<1
PCB-1232	<0.5	<1
PCB-1242	<0.3	<0.5
PCB-1248	<0.3	<0.5
PCB-1254	<0.1	0.38
PCB-1260	<0.1	<0.3
Extraction Date	11/26/86	12/26/86
Analysis Date	12/4/86	12/3/86



I.D. #86-1210

RECRA ENVIRONMENTAL, INC.

SOIL MATRIX
METHOD 8080 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCB'S

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	SS-3	SS-4
Aldrin	<0.05	<0.03
Alpha-BHC	<0.3	<2
Beta-BHC	<0.2	<0.03
Delta-BHC	<0.05	<0.03
Gamma-BHC	<0.2	<0.03
Chlordane	<0.5	<0.7
4,4'-DDD	<0.1	<0.2
4,4'-DDE	<0.03	<0.05
4,4'-DDT	<0.2	<0.2
Dieldrin	<0.03	<0.05
Endosulfan I	<0.1	<0.05
Endosulfan II	<0.1	<0.2
Endosulfan sulfate	<0.21	<0.2
Endrin	<0.03	<2
Endrin aldehyde	<0.05	<0.2
Heptachlor	<0.1	0.14
Heptachlor epoxide	<0.03	<0.03
Toxaphene	<0.8	<2
PCB-1016	<0.5	<2
PCB-1221	<1	<3
PCB-1232	<1	<3
PCB-1242	<0.5	<2
PCB-1248	<0.5	<2
PCB-1254	<0.3	<0.5
PCB-1260	<0.3	<0.5
Extraction Date	11/26/86	12/26/86
Analysis Date	12/4/86	12/9/86



I.D. #86-1210

SOIL MATRIX
METHOD 8080 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCB'S

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION	
	SS-5	SS-6
Aldrin	<0.005	<0.03
Alpha-BHC	<0.01	<0.08
Beta-BHC	<0.01	<0.05
Delta-BHC	<0.005	<0.03
Gamma-BHC	<0.005	<0.03
Chlordane	<0.09	<3
4,4'-DDD	0.028*	<0.03
4,4'-DDE	<0.01	<0.03
4,4'-DDT	0.054	<0.03
Dieldrin	<0.01	<0.05
Endosulfan I	<0.01	0.41
Endosulfan II	<0.01*	<0.03
Endosulfan sulfate	0.091	<0.03
Endrin	0.034	0.39
Endrin aldehyde	<0.005	<0.03
Heptachlor	<0.01	<0.03
Heptachlor epoxide	<0.005	<0.03
Toxaphene	<0.2	<3
PCB-1016	<0.09	<0.5
PCB-1221	<0.2	<1
PCB-1232	<0.2	<1
PCB-1242	<0.09	<0.5
PCB-1248	<0.09	<0.5
PCB-1254	<0.09	<0.5
PCB-1260	<0.09	<0.5
Extraction Date	12/8/86	12/8/86
Analysis Date	12/19/86	12/19/86



I.D. #86-1273

SOIL MATRIX
METHOD 8080 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCB'S

COMPOUND (Units of Measure = µg/g Dry)	SAMPLE IDENTIFICATION		
	SS-7	SS-8	SS-9
Aldrin	<0.02	<0.03	<0.02
Alpha-BHC	<0.02	<0.03	<0.02
Beta-BHC	<0.02	<0.03	<0.02
Delta-BHC	<0.02	<0.03	<0.02
Gamma-BHC	<0.02	<0.03	<0.02
Chlordane	<0.04	<0.05	<0.05
4,4'-DDD	<0.05	<0.03	<0.05
4,4'-DDE	<0.02	<0.03	<0.02
4,4'-DDT	<0.05	<0.03	<0.05
Dieldrin	<0.02	<0.03	<0.02
Endosulfan I	<0.02	<0.03	<0.02
Endosulfan II	<0.05	<0.03	<0.05
Endosulfan sulfate	<0.1	<0.1	<0.09
Endrin	<0.02	<0.03	<0.02
Endrin aldehyde	<0.05	<0.03	<0.05
Heptachlor	<0.02	<0.03	<0.02
Heptachlor epoxide	<0.02	<0.03	<0.02
Toxaphene	<0.2	<0.3	<0.2
PCB-1016	<0.1	<0.1	<0.1
PCB-1221	<0.2	<0.2	<0.2
PCB-1232	<0.2	<0.2	<0.2
PCB-1242	<0.1	<0.1	<0.1
PCB-1248	<0.1	<0.1	<0.1
PCB-1254	<0.1	<0.1	<0.1
PCB-1260	0.38	0.37	0.41
Extraction Date	12/8/86	12/8/86	12/8/86
Analysis Date	12/22/86	12/20/86	12/20/86



I.D. #86-1267A

RECRA ENVIRONMENTAL, INC.

SAMPLE IDENTIFICATION	PARAMETER (UNITS OF MEASURE)
	DRY WEIGHT - 103°C (%)
EW-1	78.8
EW-2	64.2
EW-3	63.4
EW-4	70.4
EW-5	64.5
EW-6	68.2
EW-7	54.7
EW-8	70.3
EW-9	77.3
SS-1	82.6
SS-2	83.8
SS-3	77.1
SS-4	83.2
SS-5	77.6
SS-6	69.5
SS-7	80.9
SS-8	70.9
SS-9	80.8



I.D. #86-1210

RECRA ENVIRONMENTAL, INC.

QUALITY CONTROL INFORMATION - PRECISION
SOIL MATRIX
METHOD 8080 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

SAMPLE IDENTIFICATION EW-4

COMPOUND (Units of Measure = µg/g Dry)	VALUE 1	VALUE 2	MEAN	STANDARD DEVIATION
Aldrin	<0.02	<0.02	<0.02	-
Alpha-BHC	<0.02	<0.02	<0.02	-
Beta-BHC	<0.03	<0.03	<0.03	-
Delta-BHC	<0.02	<0.02	<0.02	-
Gamma-BHC	<0.01	<0.01	<0.01	-
Chlordane	<0.5	<0.5	<0.5	-
4,4'-DDD	0.064	0.046	0.055*	0.013
4,4'-DDE	<0.02	<0.02	<0.02	-
4,4'-DDT	0.24	<0.05	<0.05	-
Dieldrin	<0.03	<0.03	<0.03	-
Endosulfan I	<0.03	<0.03	<0.03	-
Endosulfan II	<0.04	<0.04	<0.04*	-
Endosulfan sulfate	<0.04	<0.04	<0.04	-
Endrin	<0.02	<0.02	<0.02	-
Endrin aldehyde	<0.02	<0.02	<0.02	-
Heptachlor	<0.03	<0.03	<0.03	-
Heptachlor epoxide	<0.03	<0.03	<0.03	-
Toxaphene	<0.5	<0.5	<0.5	-
PCB-1016	<0.1	<0.1	<0.1	-
PCB-1221	<0.2	<0.2	<0.2	-
PCB-1232	<0.2	<0.2	<0.2	-
PCB-1242	<0.1	<0.1	<0.1	-
PCB-1248	1.1	0.84	0.97	0.18
PCB-1254	<0.1	<0.1	<0.1	-
PCB-1260	<0.1	<0.1	<0.1	-
Extraction Date	12/17/86	12/17/86		
Analysis Date	12/20/86	12/20/86		



I.D. #36-1253

QUALITY CONTROL INFORMATION - PRECISION
SOIL MATRIX
METHOD 8080 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

SAMPLE IDENTIFICATION EW-5

COMPOUND (Units of Measure = µg/g Dry)	VALUE 1	VALUE 2	MEAN	STANDARD DEVIATION
Aldrin	0.34	0.37	0.36	0.071
Alpha-BHC	<0.03	<0.03	<0.03	-
Beta-BHC	<0.03	<0.03	<0.03	-
Delta-BHC	<0.06	<0.07	<0.07	-
Gamma-BHC	<0.03	<0.03	<0.03	-
Chlordane	<0.6	<0.6	<0.6	-
4,4'-DDD	<0.3	<0.3	<0.3	-
4,4'-DDE	0.31	0.23	0.27	0.057
4,4'-DDT	<0.06	<0.06	<0.06	-
Dieldrin	<0.6	<0.6	<0.6	-
Endosulfan I	<0.06	<0.06	<0.06	-
Endosulfan II	<0.3	<0.3	<0.3	-
Endosulfan sulfate	<0.06	<0.06	<0.06	-
Endrin	<0.06	<0.06	<0.06	-
Endrin aldehyde	<0.06	<0.06	<0.06	-
Heptachlor	<0.03	<0.03	<0.03	-
Heptachlor epoxide	<0.5	<0.5	<0.5	-
Toxaphene	<3	<3	<3	-
PCB-1016	<0.6	<0.6	<0.6	-
PCB-1221	<2	<2	<2	-
PCB-1232	<2	<2	<2	-
PCB-1242	<0.6	<0.6	<0.6	-
PCB-1248	<0.6	<0.6	<0.6	-
PCB-1254	<0.6	<0.6	<0.6	-
PCB-1260	1.9	2.1	2.0	0.14
Extraction Date	12/5/86	12/5/86		
Analysis Date	12/22/86	12/22/86		



I.D. #86-1256

QUALITY CONTROL INFORMATION - PRECISION
SOIL MATRIX
METHOD 8080 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

SAMPLE IDENTIFICATION SS-4

COMPOUND (Units of Measure = µg/g Dry)	VALUE 1	VALUE 2	MEAN	STANDARD DEVIATION
Aldrin	<0.03	<0.03	<0.03	-
Alpha-BHC	<0.5	<2	<2	-
Beta-BHC	<0.03	<0.03	<0.03	-
Delta-BHC	<0.03	<0.03	<0.03	-
Gamma-BHC	<0.03	<0.03	<0.03	-
Chlordane	<0.7	<0.7	<0.7	-
4,4'-DDD	<0.2	<0.2	<0.2	-
4,4'-DDE	<0.05	<0.05	<0.05	-
4,4'-DDT	<0.2	<0.2	<0.2	-
Dieldrin	<0.05	<0.05	<0.05	-
Endosulfan I	<0.05	<0.05	<0.05	-
Endosulfan II	<0.2	<0.2	<0.2	-
Endosulfan sulfate	<0.2	<0.2	<0.2	-
Endrin	<0.05	<2	<2	-
Endrin aldehyde	<0.2	<0.2	<0.2	-
Heptachlor	0.10	0.18	0.14	0.057
Heptachlor epoxide	<0.03	<0.03	<0.03	-
Toxaphene	<2	<2	<2	-
PCB-1016	<2	<2	<2	-
PCB-1221	<3	<3	<3	-
PCB-1232	<3	<3	<3	-
PCB-1242	<2	<2	<2	-
PCB-1248	<2	<2	<2	-
PCB-1254	<0.5	<0.5	<0.5	-
PCB-1260	<0.5	<0.5	<0.5	-
Extraction Date	11/26/86	11/26/86		
Analysis Date	12/9/86	12/9/86		



I.D. #86-1210

RECRA ENVIRONMENTAL, INC.

QUALITY CONTROL INFORMATION - PRECISION
SOIL MATRIX
METHOD 8080 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

SAMPLE IDENTIFICATION SS-9

COMPOUND (Units of Measure = µg/g Dry)	VALUE 1	VALUE 2	MEAN	STANDARD DEVIATION
Aldrin	<0.02	<0.02	<0.02	-
Alpha-BHC	<0.02	<0.02	<0.02	-
Beta-BHC	<0.02	<0.02	<0.02	-
Delta-BHC	<0.02	<0.02	<0.02	-
Gamma-BHC	<0.02	<0.02	<0.02	-
Chlordane	<0.05	<0.05	<0.05	-
4,4'-DDD	<0.05	<0.05	<0.05	-
4,4'-DDE	<0.02	<0.02	<0.02	-
4,4'-DDT	<0.05	<0.05	<0.05	-
Dieldrin	<0.02	<0.02	<0.02	-
Endosulfan I	<0.02	<0.02	<0.02	-
Endosulfan II	<0.05	<0.05	<0.05	-
Endosulfan sulfate	<0.09	<0.09	<0.09	-
Endrin	<0.02	<0.02	<0.02	-
Endrin aldehyde	<0.05	<0.05	<0.05	-
Heptachlor	<0.02	<0.02	<0.02	-
Heptachlor epoxide	<0.02	<0.02	<0.02	-
Toxaphene	<0.2	<0.2	<0.2	-
PCB-1016	<0.1	<0.1	<0.1	-
PCB-1221	<0.2	<0.2	<0.2	-
PCB-1232	<0.2	<0.2	<0.2	-
PCB-1242	<0.1	<0.1	<0.1	-
PCB-1248	<0.1	<0.1	<0.1	-
PCB-1254	<0.1	<0.1	<0.1	-
PCB-1260	0.37	0.44	0.41	0.049
Extraction Date	12/8/86	12/8/86		
Analysis Date	12/20/86	12/20/86		



I.D. #86-1267

RECRA ENVIRONMENTAL, INC.

QUALITY CONTROL INFORMATION - ACCURACY
SOIL MATRIX
METHOD 8080 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

SAMPLE IDENTIFICATION Method Blank Spike

COMPOUND	NANOGRAMS OF SPIKE	PERCENT RECOVERY
Aldrin	0.20	67
Gamma-BHC	0.20	85
4,4'-DDE	0.20	99
Endosulfan II	0.20	82
Endrin	0.20	94
Heptachlor	0.20	107
Extraction Date	11/26/86	
Analysis Date	12/9/86	



I.D. #86-1210

RECRA ENVIRONMENTAL, INC.

QUALITY CONTROL INFORMATION - ACCURACY
SOIL MATRIX
METHOD 8080 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

SAMPLE IDENTIFICATION Method Blank Spike

COMPOUND	NANOGRAMS OF SPIKE	PERCENT RECOVERY
Aldrin	0.20	64
Gamma-BHC	0.20	142
4,4'-DDE	0.20	97
Endosulfan II	0.20	150
Endrin	0.20	100
Heptachlor	0.20	88
Extraction Date	12/17/86	
Analysis Date	12/20/86	



I.D. #86-1253

RECRA ENVIRONMENTAL, INC.

AQUEOUS MATRIX
METHOD 608 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCB'S

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION	
	POW-1	POW-2
Aldrin	<0.2	<0.01
Alpha-BHC	<0.2	<0.01
Beta-BHC	3.2	0.32
Delta-BHC	<0.2	<0.01
Gamma-BHC	<0.2	<0.01
Chlordane	<3	<0.2
4,4'-DDD	<2	<0.02
4,4'-DDE	<0.3	<0.02
4,4'-DDT	<0.3	<0.02
Dieldrin	<0.3	<0.05
Endosulfan I	<0.3	<0.02
Endosulfan II	<2	<0.02
Endosulfan sulfate	<0.3	<0.02
Endrin	<0.3	<0.02
Endrin aldehyde	<0.3	<0.04
Heptachlor	<0.2	<0.01
Heptachlor epoxide	<0.2	<0.01
Toxaphene	<10	<0.7
PCB-1016	<3	<0.2
PCB-1221	<5	<0.4
PCB-1232	<5	<0.4
PCB-1242	<3	<0.2
PCB-1248	<3	<0.2
PCB-1254	<3	<0.2
PCB-1260	<3	<0.2
Extraction Date	12/8/86	12/8/86
Analysis Date	12/16/86	12/16/86



I.D. #86-1256

AQUEOUS MATRIX
METHOD 608 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCB'S

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION	
	POW-3	POW-4
Aldrin	0.010	<0.05
Alpha-BHC	<0.01	<0.05
Beta-BHC	0.23	0.72
Delta-BHC	<0.01	<0.05
Gamma-BHC	<0.01	<0.05
Chlordane	<0.1	<1
4,4'-DDD	<0.04	<0.3
4,4'-DDE	<0.03	<0.1
4,4'-DDT	<0.01	<0.1
Dieldrin	<0.01	0.24
Endosulfan I	0.032	0.25
Endosulfan II	<0.04	<0.3
Endosulfan sulfate	<0.01	<0.1
Endrin	<0.01	<0.1
Endrin aldehyde	<0.01	<0.6
Heptachlor	<0.01	<0.05
Heptachlor epoxide	<0.01	<0.05
Toxaphene	<0.4	<4
PCB-1016	<0.1	<1
PCB-1221	<0.2	<2
PCB-1232	<0.2	<2
PCB-1242	<0.1	<1
PCB-1248	<0.1	<1
PCB-1254	<0.1	<1
PCB-1260	<0.1	<1
Extraction Date	12/8/86	12/8/86
Analysis Date	12/16/86	12/16/86



I.D. #86-1256

RECRA ENVIRONMENTAL, INC.

AQUEOUS MATRIX
METHOD 608 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCB'S

COMPOUND (Units of Measure = $\mu\text{g/l}$)	SAMPLE IDENTIFICATION	
	PONDED WATER	
Aldrin		<0.02
Alpha-BHC		<0.02
Beta-BHC		<2
Delta-BHC		<0.05
Gamma-BHC		<0.02
Chlordane		<0.7
4,4'-DDD		<0.1
4,4'-DDE		<0.05
4,4'-DDT		<0.1
Dieldrin		<0.05
Endosulfan I		<0.05
Endosulfan II		<0.1
Endosulfan sulfate		<0.5
Endrin		<0.05
Endrin aldehyde		<0.1
Heptachlor		<0.02
Heptachlor epoxide		<0.02
Toxaphene		<1
PCB-1016		<1
PCB-1221		<2
PCB-1232		<2
PCB-1242		<1
PCB-1248		<1
PCB-1254		<0.5
PCB-1260		<0.5
Extraction Date	12/8/86	
Analysis Date	12/16/86	



I.D. #86-1263

RECRA ENVIRONMENTAL, INC.

AQUEOUS MATRIX
METHOD 608 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCB'S

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION	
	LAKE SAMPLE	FIELD BLANK
Aldrin	<0.01	<0.01
Alpha-BHC	<0.02	<0.01
Beta-BHC	<0.3	<0.01
Delta-BHC	<0.03	<0.03
Gamma-BHC	<0.01	<0.01
Chlordane	<0.3	<0.3
4,4'-DDD	<0.05	<0.05
4,4'-DDE	<0.02	<0.02
4,4'-DDT	<0.05	<0.05
Dieldrin	<0.02	<0.02
Endosulfan I	<0.02	<0.02
Endosulfan II	<0.05	<0.05
Endosulfan sulfate	<0.07	<0.08
Endrin	<0.02	<0.02
Endrin aldehyde	<0.05	<0.05
Heptachlor	<0.01	<0.01
Heptachlor epoxide	<0.01	<0.01
Toxaphene	<0.5	<0.5
PCB-1016	<0.5	<0.5
PCB-1221	<1	<1
PCB-1232	<1	<1
PCB-1242	<0.5	<0.5
PCB-1248	<0.5	<0.5
PCB-1254	<0.2	<0.2
PCB-1260	<0.2	<0.2
Extraction Date	12/8/86	12/8/86
Analysis Date	12/16/86	12/16/86



I.D. #86-1267

AQUEOUS MATRIX
METHOD 608 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCB'S

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION		
	EW-1 (12/4/86)	EW-2 (12/5/86)	EW-3 (12/8/86)
Aldrin	<0.04	<0.08	<0.03
Alpha-BHC	<0.04	<0.08	<0.03
Beta-BHC	<4	<0.08	<0.03
Delta-BHC	<0.07	<0.08	<0.03
Gamma-BHC	<0.04	0.10	<0.03
Chlordane	<1	<2	<0.5
4,4'-DDD	0.28*	0.85*	<0.2
4,4'-DDE	<0.07	<0.08	<0.05
4,4'-DDT	<0.2	<0.2	<0.05
Dieldrin	<0.07	<0.08	<0.05
Endosulfan I	<0.07	<1	0.27
Endosulfan II	<0.2*	<0.1*	<0.2
Endosulfan sulfate	<0.2	<0.2	<0.05
Endrin	<0.07	<0.08	<0.05
Endrin aldehyde	<0.2	2.1	1.1
Heptachlor	<0.04	<0.08	<0.03
Heptachlor epoxide	<0.04	<0.08	<0.03
Toxaphene	<2	<8	<2
PCB-1016	<2	<3	<0.5
PCB-1221	<4	<6	<1
PCB-1232	<4	<6	<1
PCB-1242	<2	<3	<0.5
PCB-1248	<2	<3	<0.5
PCB-1254	<1	<3	<0.5
PCB-1260	<1	<3	<0.5
Extraction Date	12/8/86	12/10/86	12/10/86
Analysis Date	12/16/86	12/18/86	12/19/86



I.D. #86-1267

AQUEOUS MATRIX
METHOD 608 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCB'S

COMPOUND (Units of Measure = µg/l)	SAMPLE IDENTIFICATION		
	EW-4 (12/5/86)	EW-5 (12/8/86)	EW-6 (12/5/86)
Aldrin	<0.005	<0.05	<0.09
Alpha-BHC	0.24	<0.05	<0.09
Beta-BHC	0.16	<0.05	<0.09
Delta-BHC	0.044	<0.05	<0.09
Gamma-BHC	0.012	<0.05	<0.09
Chlordane	<0.1	<1	<0.9
4,4'-DDD	0.038*	<0.3	0.12*
4,4'-DDE	<0.005	<0.1	<0.09
4,4'-DDT	<0.01	<0.1	<0.09
Dieldrin	0.0081	<0.1	<0.09
Endosulfan I	<0.005	<0.2	<0.09
Endosulfan II	<0.01*	<0.3	<0.09*
Endosulfan sulfate	<0.1	<0.1	<0.09
Endrin	<0.01	<0.1	<0.09
Endrin aldehyde	0.072	0.83	0.67
Heptachlor	<0.01	<0.05	<0.09
Heptachlor epoxide	<0.005	<0.05	<0.09
Toxaphene	<0.4	<4	<5
PCB-1016	<0.4	<1	<0.9
PCB-1221	<1	<2	<2
PCB-1232	<1	<2	<2
PCB-1242	<0.4	<1	<0.9
PCB-1248	<0.4	<1	<0.9
PCB-1254	<0.3	<1	<0.9
PCB-1260	<0.3	<1	<0.9
Extraction Date	12/10/86	12/10/86	12/10/86
Analysis Date	12/19/86	12/18/86	12/19/86



I.D. #86-1273

AQUEOUS MATRIX
METHOD 608 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCB'S

COMPOUND (Units of Measure = $\mu\text{g/l}$)	SAMPLE IDENTIFICATION		
	EW-7 (12/8/86)	EW-8 (12/8/86)	EW-9 (12/8/86)
Aldrin	<0.03	<0.03	<0.006
Alpha-BHC	<0.03	<0.03	<0.006
Beta-BHC	<0.03	<0.03	<0.006
Delta-BHC	<0.03	<0.03	<0.006
Gamma-BHC	<0.03	<0.03	<0.006
Chlordane	<0.5	<0.6	<0.2
4,4'-DDD	0.27*	0.46*	<0.3
4,4'-DDE	<0.05	<0.06	<0.02
4,4'-DDT	<0.05	<0.06	<0.02
Dieldrin	<0.05	<0.06	<0.02
Endosulfan I	<0.3	<0.3	0.12
Endosulfan II	<0.05*	<0.06*	<0.3
Endosulfan sulfate	<0.05	<0.06	<0.02
Endrin	0.13	<0.06	<0.02
Endrin aldehyde	0.86	0.64	0.19
Heptachlor	<0.03	<0.03	<0.006
Heptachlor epoxide	<0.03	<0.06	<0.02
Toxaphene	<2	<3	<0.5
PCB-1016	<0.5	<0.6	<0.2
PCB-1221	<1	<2	<0.3
PCB-1232	<1	<2	<0.3
PCB-1242	<0.5	<0.6	<0.2
PCB-1248	<0.5	<0.6	<0.2
PCB-1254	<0.5	<0.6	<0.2
PCB-1260	<0.5	<0.6	<0.2
Extraction Date	12/10/86	12/10/86	12/10/86
Analysis Date	12/19/86	12/19/86	12/18/86



I.D. #86-1280

AQUEOUS MATRIX
METHOD 608 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCB'S

COMPOUND (Units of Measure = $\mu\text{g/l}$)	SAMPLE IDENTIFICATION
	TRANSFER BLANK (12/8/86)
Aldrin	<0.005
Alpha-BHC	0.046
Beta-BHC	0.10
Delta-BHC	0.03
Gamma-BHC	<0.005
Chlordane	<0.1
4,4'-DDD	<0.02
4,4'-DDE	<0.01
4,4'-DDT	<0.01
Dieldrin	<0.01
Endosulfan I	<0.01
Endosulfan II	<0.02
Endosulfan sulfate	<0.01
Endrin	<0.01
Endrin aldehyde	<0.01
Heptachlor	<0.005
Heptachlor epoxide	<0.005
Toxaphene	<0.4
PCB-1016	<0.1
PCB-1221	<0.2
PCB-1232	<0.2
PCB-1242	<0.1
PCB-1248	<0.1
PCB-1254	<0.1
PCB-1260	<0.1
Extraction Date	12/10/86
Analysis Date	12/18/86



I.D. #36-1230

ECRA ENVIRONMENTAL, INC.

QUALITY CONTROL INFORMATION - PRECISION
 AQUEOUS MATRIX
 METHOD 608 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

SAMPLE IDENTIFICATION POW-2

COMPOUND (Units of Measure = µg/l)	VALUE 1	VALUE 2	MEAN	STANDARD DEVIATION
Aldrin	<0.01	<0.01	<0.01	-
Alpha-BHC	<0.01	<0.01	<0.01	-
Beta-BHC	0.20	0.43	0.32	0.16
Delta-BHC	<0.01	<0.01	<0.01	-
Gamma-BHC	<0.01	<0.01	<0.01	-
Chlordane	<0.2	<0.2	<0.2	-
4,4'-DDD	<0.02	<0.02	<0.02	-
4,4'-DDE	<0.02	<0.02	<0.02	-
4,4'-DDT	<0.02	<0.02	<0.02	-
Dieldrin	<0.05	<0.05	<0.05	-
Endosulfan I	<0.02	<0.02	<0.02	-
Endosulfan II	<0.02	<0.02	<0.02	-
Endosulfan sulfate	<0.02	<0.02	<0.02	-
Endrin	<0.02	<0.02	<0.02	-
Endrin aldehyde	<0.04	<0.04	<0.04	-
Heptachlor	<0.01	<0.01	<0.01	-
Heptachlor epoxide	<0.01	<0.01	<0.01	-
Toxaphene	<0.7	<0.7	<0.7	-
PCB-1016	<0.2	<0.2	<0.2	-
PCB-1221	<0.4	<0.4	<0.4	-
PCB-1232	<0.4	<0.4	<0.4	-
PCB-1242	<0.2	<0.2	<0.2	-
PCB-1248	<0.2	<0.2	<0.2	-
PCB-1254	<0.2	<0.2	<0.2	-
PCB-1260	<0.2	<0.2	<0.2	-
Extraction Date	12/8/86	12/8/86		
Analysis Date	12/16/86	12/16/86		



I.D. #86-1256

QUALITY CONTROL INFORMATION - ACCURACY
AQUEOUS MATRIX
METHOD 608 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

SAMPLE IDENTIFICATION Method Blank Spike

COMPOUND	NANOGRAMS OF SPIKE	PERCENT RECOVERY
Aldrin	0.20	66
Gamma-BHC	0.20	84
4,4'-DDE	0.20	88
Endosulfan II	0.20	97
Endrin	0.20	106
Heptachlor	0.20	106
Extraction Date	12/8/86	
Analysis Date	12/16/86	



I.D. #86-1256

RECREA ENVIRONMENTAL, INC.

QUALITY CONTROL INFORMATION - ACCURACY
AQUEOUS MATRIX
METHOD 608 - PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

SAMPLE IDENTIFICATION Method Blank Spike

COMPOUND	NANOGRAMS OF SPIKE	PERCENT RECOVERY
Aldrin	0.20	43
Gamma-BHC	0.20	120
4,4'-DDE	0.20	89
Endosulfan II	0.20	170
Endrin	0.20	125
Extraction Date	12/8/86	
Analysis Date	12/16/86	



I.D. #86-1263

APPENDIX E.5

CHAIN OF CUSTODY RECORDS

CHAIN OF CUSTODY RECORD

Distribution	Original accompanies shipment. Copy to coordinator field files
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CHAIN OF CUSTODY RECORD

Distribution		Original accompanies shipment, copy to coordinator field files
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100	100	

CHAIN OF CUSTODY RECORD

Distribution	Original accompanies shipment	copy to coordinator field files

RECRA ENVIRONMENTAL, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.: BTA-86-04		SITE NAME: NFTA DINED DISTING AREA		NO. OF CON- TAINERS		REMARKS	
SAMPLERS (SIGNATURE): <i>Frank Q. Mpmolw</i>		STATION LOCATION					
STATION NO.	DATE	TIME	COMP.	GRAB			
S.S-5	12/5		✓				URGENT SAMPLE OF S.S-5, I-13, I-13 - RETENTION AREA OF ENVIRONMENTAL WELL
S.S-6	12/5		✓				URGENT SAMPLE OF S.S-6, I-13, I-13 - RETENTION AREA OF ENVIRONMENTAL WELL
EW-2	12/5		✓				URGENT SAMPLE OF EW-2, I-13, I-13 - RETENTION AREA OF ENVIRONMENTAL WELL
EW-3	12/5		✓				URGENT SAMPLE OF EW-3, I-13, I-13 - RETENTION AREA OF ENVIRONMENTAL WELL
EW-4	12/5		✓				URGENT SAMPLE OF EW-4, I-13, I-13 - RETENTION AREA OF ENVIRONMENTAL WELL
EW-6	12/5		✓				URGENT SAMPLE OF EW-6, I-13, I-13 - RETENTION AREA OF ENVIRONMENTAL WELL
* Returned EW-3 to ARBER ON 12/8/86 Due to insufficient Volume (Will be Resampled) K. Kasper							
RELINQUISHED BY (SIGNATURE): <i>Frank Q. Mpmolw</i>		DATE/TIME: 12/5/86		RECEIVED BY (SIGNATURE): K. Kasper		DATE/TIME:	
RELINQUISHED BY (SIGNATURE):		DATE/TIME:		RECEIVED BY (SIGNATURE):		DATE/TIME:	
RELINQUISHED BY (SIGNATURE):		DATE/TIME:		RECEIVED BY (SIGNATURE):		DATE/TIME:	

CHAIN OF CUSTODY RECORD

	Distribution	Original accompanies shipment. copy to coordinator field files
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