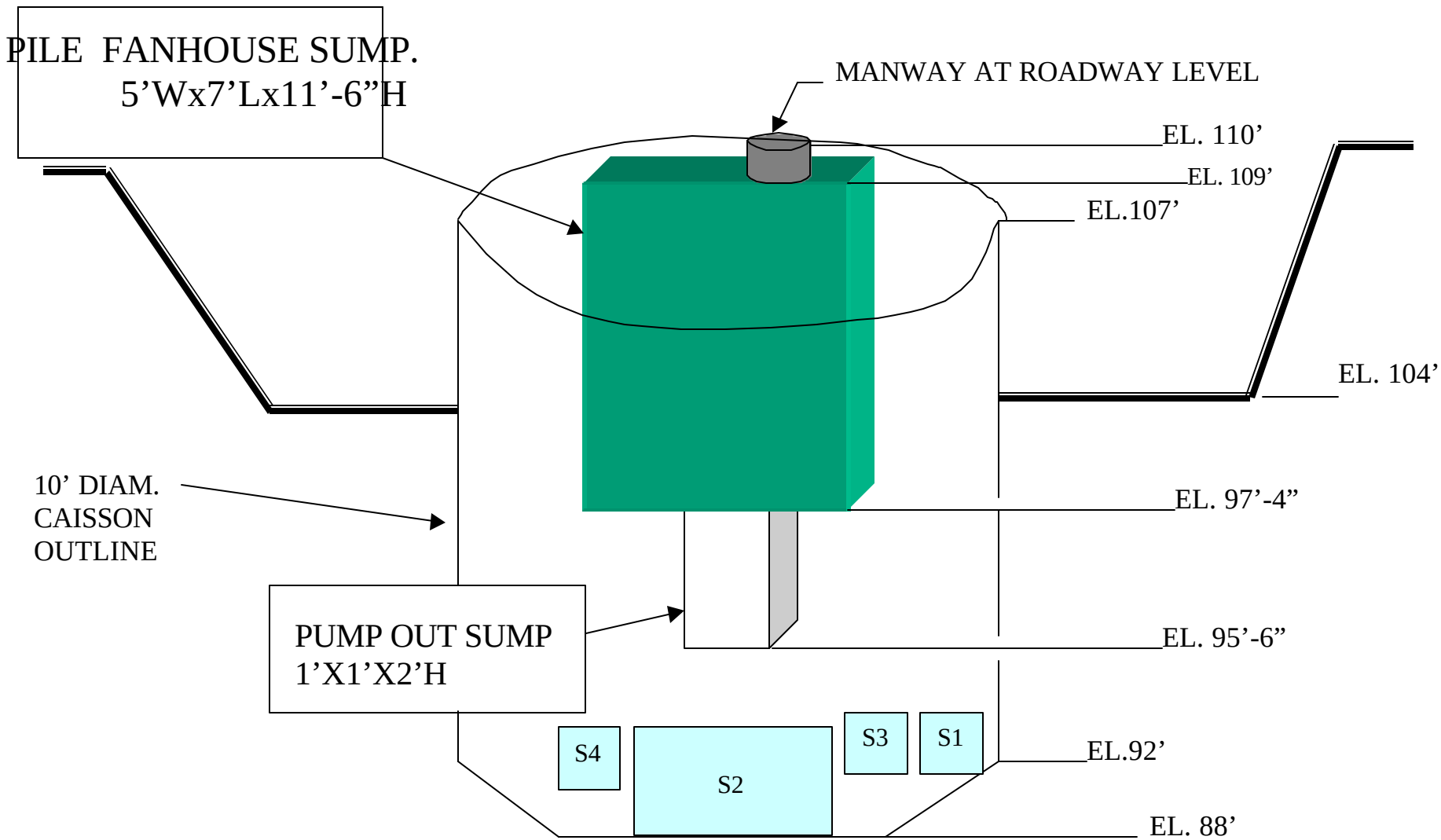
PFS Remediation -Final Verification Sampling

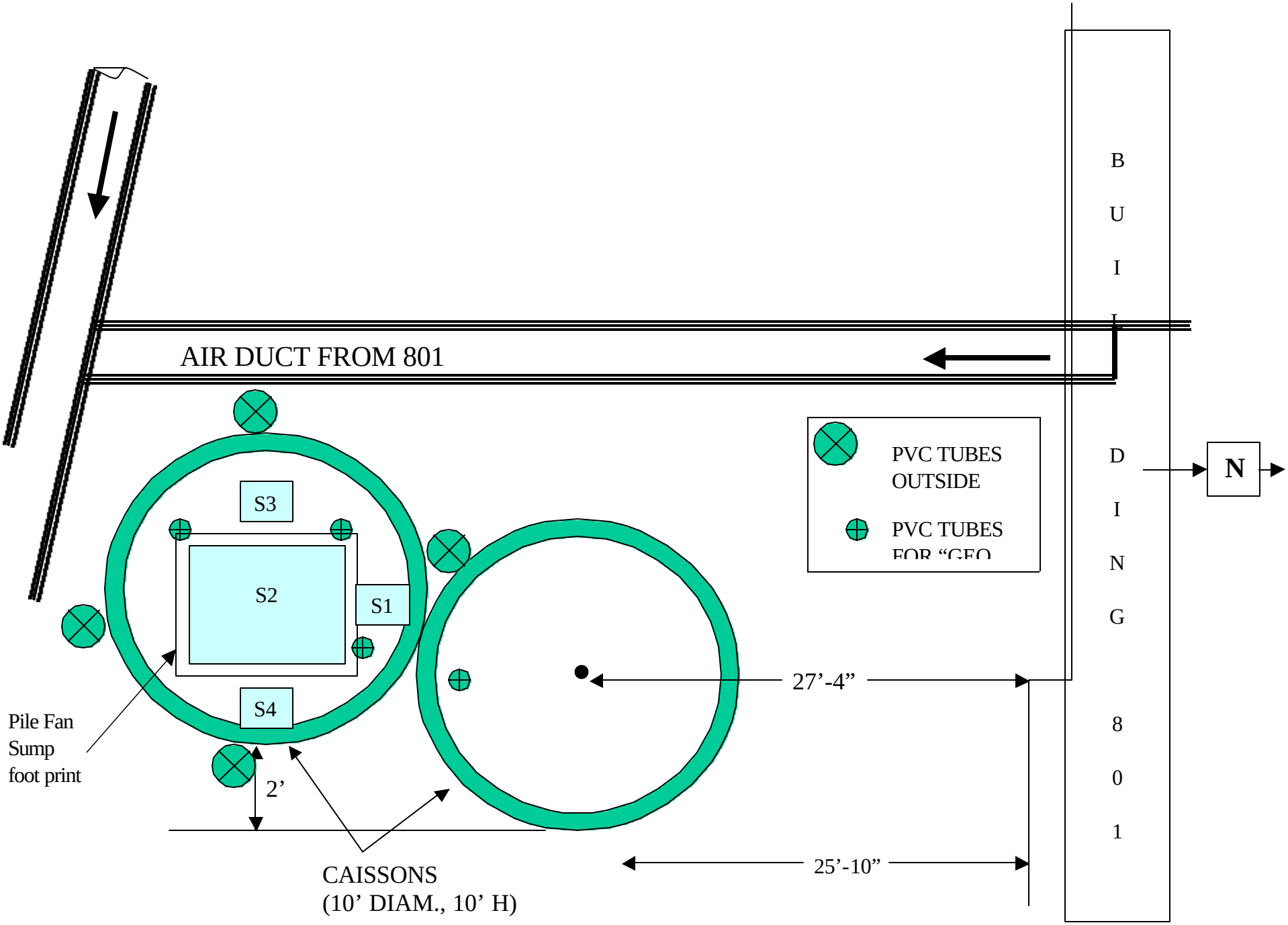
Data Package 5

COC #	SDG#	Sample Description	Sample Number	Location #
6514	23262/23260	N of PFS in Caisson #1, 0-6"	065-002000314-30	S1
6514	23262/23260	Clamshell of PFS in Caisson #1, composite	065-003000314-30	S2
6514	23262/23260	W of PFS in Caisson #1, 0-6"	065-004000314-30	S3
6514	23262/23260	E of PFS in Caisson #1, 0-6"	065-005000314-30	S4
6514	23262/23260	Trip Blank	076-400000314-12	
6514	23262/23260	QA duplicates	065-005000314-31	
6514	23262/23260	Equip Blank	076-401000314-18	



EXCAVATION OUTLINE
LOOKING WEST

Data Package 5 South Caisson Relative Soil Sample Locations S1 - S4



Data Package 5 Relative Soil Sample Locations S1 - S4

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 23260

Matrix: (soil/water) SOIL Lab Sample ID: 1000037900

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1B323

Level: (low/med) LOW Date Received: 03/22/00

% Moisture: not dec. _____ Date Analyzed: 03/22/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethylene	1.0	U
67-64-1	Acetone	4.0	J
75-15-0	Carbon disulfide	5.0	U
75-09-2	Methylene chloride	3.8	J
75-34-3	1,1-Dichloroethane	1.0	U
108-05-4	Vinyl acetate	5.0	U
78-93-3	2-Butanone	5.0	U
540-59-0	1,2-Dichloroethylene(total)	2.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethylene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropylene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropylene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
591-78-6	2-Hexanone	5.0	U
127-18-4	Tetrachloroethylene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 23260

Matrix: (soil/water) SOIL Lab Sample ID: 1000037900

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1B323

Level: (low/med) LOW Date Received: 03/22/00

% Moisture: not dec. _____ Date Analyzed: 03/22/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

065-002000314

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 23260

Matrix: (soil/water) SOIL Lab Sample ID: 23260006

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1B324

Level: (low/med) LOW Date Received: 03/16/00

% Moisture: not dec. 6 Date Analyzed: 03/22/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	1.1	U
75-01-4	Vinyl chloride	1.1	U
74-83-9	Bromomethane	1.1	U
75-00-3	Chloroethane	1.1	U
75-35-4	1,1-Dichloroethylene	1.1	U
67-64-1	Acetone	3.9	JB
75-15-0	Carbon disulfide	5.3	U
75-09-2	Methylene chloride	1.1	JB
75-34-3	1,1-Dichloroethane	1.1	U
108-05-4	Vinyl acetate	5.3	U
78-93-3	2-Butanone	5.3	U
540-59-0	1,2-Dichloroethylene(total)	2.1	U
67-66-3	Chloroform	1.1	U
71-55-6	1,1,1-Trichloroethane	1.1	U
56-23-5	Carbon tetrachloride	1.1	U
107-06-2	1,2-Dichloroethane	1.1	U
71-43-2	Benzene	1.1	U
79-01-6	Trichloroethylene	1.1	U
78-87-5	1,2-Dichloropropane	1.1	U
75-27-4	Bromodichloromethane	1.1	U
10061-01-5	cis-1,3-Dichloropropylene	1.1	U
108-10-1	4-Methyl-2-pentanone	5.3	U
108-88-3	Toluene	1.1	U
10061-02-6	trans-1,3-Dichloropropylene	1.1	U
79-00-5	1,1,2-Trichloroethane	1.1	U
591-78-6	2-Hexanone	5.3	U
127-18-4	Tetrachloroethylene	1.1	U
124-48-1	Dibromochloromethane	1.1	U
108-90-7	Chlorobenzene	1.1	U
100-41-4	Ethylbenzene	1.1	U
1330-20-7	Xylenes (total)	3.2	U
100-42-5	Styrene	1.1	U
75-25-2	Bromoform	1.1	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

065-002000314

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 23260

Matrix: (soil/water) SOIL Lab Sample ID: 23260006

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1B324

Level: (low/med) LOW Date Received: 03/16/00

% Moisture: not dec. 6 Date Analyzed: 03/22/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-34-5	1,1,2,2-Tetrachloroethane	1.1	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

065-003000314

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 23260

Matrix: (soil/water) SOIL Lab Sample ID: 23260007

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1B325

Level: (low/med) LOW Date Received: 03/16/00

% Moisture: not dec. 5 Date Analyzed: 03/22/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethylene	1.0	U
67-64-1	Acetone	4.1	JB
75-15-0	Carbon disulfide	5.2	U
75-09-2	Methylene chloride	1.3	JB
75-34-3	1,1-Dichloroethane	1.0	U
108-05-4	Vinyl acetate	5.2	U
78-93-3	2-Butanone	5.2	U
540-59-0	1,2-Dichloroethylene(total)	2.1	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethylene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropylene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.2	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropylene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
591-78-6	2-Hexanone	5.2	U
127-18-4	Tetrachloroethylene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.1	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

065-003000314

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 23260

Matrix: (soil/water) SOIL Lab Sample ID: 23260007

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1B325

Level: (low/med) LOW Date Received: 03/16/00

% Moisture: not dec. 5 Date Analyzed: 03/22/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

065-004000314

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 23260

Matrix: (soil/water) SOIL Lab Sample ID: 23260008

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1B326

Level: (low/med) LOW Date Received: 03/16/00

% Moisture: not dec. 3 Date Analyzed: 03/22/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethylene	1.0	U
67-64-1	Acetone	3.6	JB
75-15-0	Carbon disulfide	5.2	U
75-09-2	Methylene chloride	5.2	U
75-34-3	1,1-Dichloroethane	1.0	U
108-05-4	Vinyl acetate	5.2	U
78-93-3	2-Butanone	5.2	U
540-59-0	1,2-Dichloroethylene(total)	2.1	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethylene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropylene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.2	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropylene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
591-78-6	2-Hexanone	5.2	U
127-18-4	Tetrachloroethylene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.1	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

065-004000314

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 23260

Matrix: (soil/water) SOIL Lab Sample ID: 23260008

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1B326

Level: (low/med) LOW Date Received: 03/16/00

% Moisture: not dec. 3 Date Analyzed: 03/22/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

065-005000314

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 23260

Matrix: (soil/water) SOIL Lab Sample ID: 23260009

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1B327

Level: (low/med) LOW Date Received: 03/16/00

% Moisture: not dec. 5 Date Analyzed: 03/22/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethylene	1.0	U
67-64-1	Acetone	4.1	JB
75-15-0	Carbon disulfide	5.3	U
75-09-2	Methylene chloride	1.9	JB
75-34-3	1,1-Dichloroethane	1.0	U
108-05-4	Vinyl acetate	5.3	U
78-93-3	2-Butanone	5.3	U
540-59-0	1,2-Dichloroethylene(total)	2.1	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethylene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropylene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.3	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropylene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
591-78-6	2-Hexanone	5.3	U
127-18-4	Tetrachloroethylene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.2	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

065-005000314

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 23260

Matrix: (soil/water) SOIL Lab Sample ID: 23260009

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1B327

Level: (low/med) LOW Date Received: 03/16/00

% Moisture: not dec. 5 Date Analyzed: 03/22/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

065-005000314

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 23260

Matrix: (soil/water) SOIL Lab Sample ID: 23260010

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1B328

Level: (low/med) LOW Date Received: 03/16/00

% Moisture: not dec. 6 Date Analyzed: 03/23/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethylene	1.0	U
67-64-1	Acetone	3.7	JB
75-15-0	Carbon disulfide	5.3	U
75-09-2	Methylene chloride	5.3	U
75-34-3	1,1-Dichloroethane	1.0	U
108-05-4	Vinyl acetate	5.3	U
78-93-3	2-Butanone	5.3	U
540-59-0	1,2-Dichloroethylene(total)	2.1	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethylene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropylene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.3	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropylene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
591-78-6	2-Hexanone	5.3	U
127-18-4	Tetrachloroethylene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.2	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

065-005000314

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 23260

Matrix: (soil/water) SOIL Lab Sample ID: 23260010

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1B328

Level: (low/med) LOW Date Received: 03/16/00

% Moisture: not dec. 6 Date Analyzed: 03/23/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U

General Engineering Laboratories, Inc.

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1000042060
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info: |VOAQC_LF| VBLK

Client SDG: 23262
Client Smp ID: VBLK01
Sample Point:
Date Received: 04-APR-2000
Quant Type: ISTD
Level: LOW
Operator: RMB

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/l	Q
1330-20-7	Xylenes (total)	3.0	U
540-59-0	1,2-Dichloroethylene(total)	2.0	U
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-64-1	Acetone	3.4	J
75-35-4	1,1-Dichloroethylene	1.0	U
75-15-0	Carbon disulfide	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethylene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
108-05-4	Vinyl acetate	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.0	U
156-59-2	cis-1,2-Dichloroethylene	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethylene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropylene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropylene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
591-78-6	2-Hexanone	5.0	U
127-18-4	Tetrachloroethylene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
108-90-7	Chlorobenzene	1.0	U
	m,p-Xylenes	2.0	U
95-47-6	o-Xylene	1.0	U

General Engineering Laboratories, Inc.

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1000042060
Sample Location:
Sample Date:
Sample Matrix: WATER
Analysis Type: VOA
Data Type: MS DATA
Misc Info: |VOAQC_LF| VBLK

Client SDG: 23262
Client Smp ID: VBLK01
Sample Point:
Date Received: 04-APR-2000
Quant Type: ISTD
Level: LOW
Operator: RMB

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/l	Q
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
1868-53-7	Dibromofluoromethane	49.7	
2037-26-5	Toluene-d8	52.6	
460-00-4	Bromofluorobenzene	50.0	

General Engineering Laboratories, Inc.

TARGET COMPOUNDS

Client Name: Brookhaven National 16-MAR-2000 00:00 Client SDG: 23262
Lab Smp Id: 23262002 Client Smp ID: 076-401000314-18
Sample Location: Sample Point:
Sample Date: 14-MAR-2000 Date Received: 16-MAR-2000
Sample Matrix: WATER Quant Type: ISTD
Analysis Type: VOA Level: LOW
Data Type: MS DATA Operator: RMB
Misc Info: |VOA8260ALF| BRKL neat ph=2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/l	Q
1330-20-7	Xylenes (total)	3.0	U
540-59-0	1,2-Dichloroethylene(total)	2.0	U
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-64-1	Acetone	4.0	J
75-35-4	1,1-Dichloroethylene	1.0	U
75-15-0	Carbon disulfide	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethylene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
108-05-4	Vinyl acetate	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.0	U
156-59-2	cis-1,2-Dichloroethylene	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethylene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropylene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropylene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
591-78-6	2-Hexanone	5.0	U
127-18-4	Tetrachloroethylene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
108-90-7	Chlorobenzene	1.0	U
----------	m,p-Xylenes	2.0	U
95-47-6	o-Xylene	1.0	U

General Engineering Laboratories, Inc.

TARGET COMPOUNDS

Client Name: Brookhaven National 16-MAR-2000 00:00 Client SDG: 23262
Lab Smp Id: 23262002 Client Smp ID: 076-401000314-18
Sample Location: Sample Point:
Sample Date: 14-MAR-2000 Date Received: 16-MAR-2000
Sample Matrix: WATER Quant Type: ISTD
Analysis Type: VOA Level: LOW
Data Type: MS DATA Operator: RMB
Misc Info: |VOA8260ALF| BRKL neat ph=2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/l	Q
100-42-5	Styrene	0.13	J
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
1868-53-7	Dibromofluoromethane	49.0	
2037-26-5	Toluene-d8	52.3	
460-00-4	Bromofluorobenzene	49.0	

General Engineering Laboratories, Inc.

TARGET COMPOUNDS

Client Name: Brookhaven National 16-MAR-2000 00:00 Client SDG: 23262
Lab Smp Id: 23262003 Client Smp ID: 076-401000314-12
Sample Location: Sample Point:
Sample Date: 14-MAR-2000 Date Received: 16-MAR-2000
Sample Matrix: WATER Quant Type: ISTD
Analysis Type: VOA Level: LOW
Data Type: MS DATA Operator: RMB
Misc Info: |VOA8260ALF| BRKL neat ph=2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/l	Q
1330-20-7	Xylenes (total)	3.0	U
540-59-0	1,2-Dichloroethylene(total)	2.0	U
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-64-1	Acetone	28.2	
75-35-4	1,1-Dichloroethylene	1.0	U
75-15-0	Carbon disulfide	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethylene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
108-05-4	Vinyl acetate	5.0	U
78-93-3	2-Butanone	13.6	
67-66-3	Chloroform	1.0	U
156-59-2	cis-1,2-Dichloroethylene	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethylene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropylene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropylene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
591-78-6	2-Hexanone	5.0	U
127-18-4	Tetrachloroethylene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
108-90-7	Chlorobenzene	1.0	U
	m,p-Xylenes	2.0	U
95-47-6	o-Xylene	1.0	U

General Engineering Laboratories, Inc.

TARGET COMPOUNDS

Client Name: Brookhaven National 16-MAR-2000 00:00 Client SDG: 23262
Lab Smp Id: 23262003 Client Smp ID: 076-401000314-12
Sample Location: Sample Point:
Sample Date: 14-MAR-2000 Date Received: 16-MAR-2000
Sample Matrix: WATER Quant Type: ISTD
Analysis Type: VOA Level: LOW
Data Type: MS DATA Operator: RMB
Misc Info: |VOA8260ALF| BRKL neat ph=2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug/l	Q
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
1868-53-7	Dibromofluoromethane	49.9	
2037-26-5	Toluene-d8	53.2	
460-00-4	Bromofluorobenzene	50.0	

Certificate of Analysis

Company : Brookhaven National Laboratory
Address : OER
Building 51M
Upton, NY 11973-5000
Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 5, 2000

Client Sample ID:	065-004000314-30	Project:	BRKL00297
Sample ID:	23260008	Client ID:	BRKL001
Matrix:	Soil	COC:	6514
Collect Date:	14-MAR-00 12:14		
Receive Date:	16-MAR-00 11:00		
Collector:	Client		
Moisture:	2.96%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis Federal											
7471 Cold Vapor Hg in Solid											
Mercury		28.8	14.9	32.8	ug/kg	1	RMJ	03/22/00	1735	17479	1
Metals Analysis-ICP Federal											
6010 TAL Metals Soil Federal											
Antimony		-34.8	157	963	ug/kg	2	KAR	03/22/00	0026	17350	2
Arsenic		420	251	482	ug/kg	2					
Barium		2720	89.5	482	ug/kg	2					
Beryllium		54.8	59.9	482	ug/kg	2					
Cadmium		-53.1	73.5	482	ug/kg	2					
Calcium		140000	3320	9630	ug/kg	2					
Chromium		2130	124	482	ug/kg	2					
Cobalt		685	107	482	ug/kg	2					
Copper		2490	193	482	ug/kg	2					
Iron		1930000	2200	4820	ug/kg	2					
Lead		1660	191	482	ug/kg	2					
Magnesium		306000	354	1930	ug/kg	2					
Manganese		37900	170	963	ug/kg	2					
Nickel		1320	139	482	ug/kg	2					
Potassium		87800	4420	9630	ug/kg	2					
Selenium		-68.5	280	482	ug/kg	2					
Silver		29.7	194	482	ug/kg	2					
Thallium		-500	395	963	ug/kg	2					
Vanadium		5670	143	482	ug/kg	2					
Zinc		5340	265	482	ug/kg	2					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	846 3050BS PREP	AJM	04/03/00	2101	19148
SW846 3050B	846 3050BS PREP	FDG	03/21/00	1433	17195
SW846 3050B	846 3050BS PREP	FDG	03/28/00	1418	18293
SW846 5035	5030/8260A and 5035/8260B Prep	SM	03/22/00	1726	17546
SW846 7471A	EPA 7471 Mercury Prep Soil	ARD	03/21/00	2010	17182

The following Analytical Methods were performed

Method	Description
1	SW846 7471A

Certificate of Analysis

Company : Brookhaven National Laboratory
Address : OER
Building 51M
Upton, NY 11973-5000
Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 5, 2000

Client Sample ID: 065-005000314-30
Sample ID: 23260009
Matrix: Soil
Collect Date: 14-MAR-00 12:23
Receive Date: 16-MAR-00 11:00
Collector: Client
Moisture: 5.02%

Project: ..0297
Client ID: BRKL001
COC: 6514

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis Federal											
7471 Cold Vapor Hg in Solid											
Mercury		28.7	14.7	32.2	ug/kg	1	RMJ	03/22/00	1737	17479	1
Metals Analysis-ICP Federal											
6010 TAL Metals Soil Federal											
Antimony		5.88	165	1010	ug/kg	2	KAR	03/22/00	0032	17350	2
Arsenic		469	264	506	ug/kg	2					
Barium		4300	94.0	506	ug/kg	2					
Beryllium		67.8	63.0	506	ug/kg	2					
Cadmium		-63.9	77.2	506	ug/kg	2					
Calcium		190000	3490	10100	ug/kg	2					
Chromium		2310	131	506	ug/kg	2					
Cobalt		906	112	506	ug/kg	2					
Copper		2680	202	506	ug/kg	2					
Iron		2210000	2310	5060	ug/kg	2					
Lead		2460	200	506	ug/kg	2					
Magnesium		390000	373	2020	ug/kg	2					
Manganese		38600	179	1010	ug/kg	2					
Nickel		1570	146	506	ug/kg	2					
Potassium		127000	4650	10100	ug/kg	2					
Selenium		165	295	506	ug/kg	2					
Silver		34.4	203	506	ug/kg	2					
Thallium		-492	415	1010	ug/kg	2					
Vanadium		3800	150	506	ug/kg	2					
Zinc		7500	278	506	ug/kg	2					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	846 3050BS PREP	AJM	04/03/00	2101	19148
SW846 3050B	846 3050BS PREP	FDG	03/21/00	1433	17195
SW846 3050B	846 3050BS PREP	FDG	03/28/00	1418	18293
SW846 5035	5030/8260A and 5035/8260B Prep	SM	03/22/00	1726	17546
SW846 7471A	EPA 7471 Mercury Prep Soil	ARD	03/21/00	2010	17182

The following Analytical Methods were performed

Method	Description
1	SW846 7471A

TOTAL METALS

INORGANIC ANALYSIS DATA PACKAGE

SDG No.: 23262 Method Type: SW 846

Sample ID: 23262002 Client ID: 076-401000314-18

Contract: BRKL00297 Lab Code: Case No.: SAS No.:

Matrix: WATER Date Received: 3/16/2000 Level: LOW % Solids: 0.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7429-90-5	Aluminum	6.5	µg/L	U		P	6.5	TJA61 Trace ICP2	32100
7440-36-0	Antimony	3.9	µg/L	B		P	2.0	TJA61 Trace ICP2	32100
7440-38-2	Arsenic	2.1	µg/L	U		P	2.1	TJA61 Trace ICP2	32100
7440-39-3	Barium	0.48	µg/L	B		P	0.24	TJA61 Trace ICP2	32100
7440-41-7	Beryllium	0.17	µg/L	U		P	0.17	TJA61 Trace ICP2	32100
7440-43-9	Cadmium	0.23	µg/L	U		P	0.23	TJA61 Trace ICP2	32100
7440-70-2	Calcium	84.5	µg/L	B		P	5.6	TJA61 Trace ICP2	32100
7440-47-3	Chromium	1.0	µg/L	B		P	0.61	TJA61 Trace ICP2	32100
7440-48-4	Cobalt	0.67	µg/L	U		P	0.67	TJA61 Trace ICP2	32100
7440-50-8	Copper	2.7	µg/L	B		P	1.0	TJA61 Trace ICP2	32100
7439-89-6	Iron	25.1	µg/L	B		P	2.0	TJA61 Trace ICP2	32100
7439-92-1	Lead	2.2	µg/L	B		P	1.1	TJA61 Trace ICP2	32100
7439-95-4	Magnesium	15.5	µg/L	B		P	7.5	TJA61 Trace ICP2	32100
7439-96-5	Manganese	1.2	µg/L	B		P	0.34	TJA61 Trace ICP2	32100
7440-02-0	Nickel	2.6	µg/L	B		P	1.1	TJA61 Trace ICP2	32100
7440-09-7	Potassium	41.5	µg/L	U		P	41.5	TJA61 Trace ICP2	32100
7782-49-2	Selenium	2.1	µg/L	U		P	2.1	TJA61 Trace ICP2	32100
7440-22-4	Silver	1.1	µg/L	U		P	1.1	TJA61 Trace ICP2	32100
7440-23-5	Sodium	64.1	µg/L	B		P	7.0	TJA61 Trace ICP2	32100
7440-28-0	Thallium	3.6	µg/L	U		P	3.6	TJA61 Trace ICP2	32100
7440-62-2	Vanadium	0.63	µg/L	U		P	0.63	TJA61 Trace ICP2	32100
7440-66-6	Zinc	6.3	µg/L	B		P	0.47	TJA61 Trace ICP2	32100

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Certificate of Analysis

Company : Brookhaven National Laboratory
Address : OER
Building 51M
Upton, NY 11973-5000
Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 5, 2000

Client Sample ID:	065-002000314-30	Project:	BRKL00297
Sample ID:	23260006	Client ID:	BRKL001
Matrix:	Soil	COC:	6514
Collect Date:	14-MAR-00 11:43		
Receive Date:	16-MAR-00 11:00		
Collector:	Client		
Moisture:	5.69%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis Federal											
7471 Cold Vapor Hg in Solid											
Mercury		22.5	14.2	31.2	ug/kg	1	RMJ	03/22/00	1728	17479	1
Metals Analysis-ICP Federal											
6010 TAL Metals Soil Federal											
Antimony		114	165	1010	ug/kg	2	KAR	03/21/00	2350	17350	2
Arsenic		736	264	505	ug/kg	2					
Barium		8000	93.8	505	ug/kg	2					
Beryllium		119	62.8	505	ug/kg	2					
Cadmium		0.199	77.0	505	ug/kg	2					
Calcium		550000	3480	10100	ug/kg	2					
Chromium		3810	130	505	ug/kg	2					
Cobalt		1090	112	505	ug/kg	2					
Copper		3070	202	505	ug/kg	2					
Iron		3080000	2300	5050	ug/kg	2					
Lead		6900	200	505	ug/kg	2					
Magnesium		515000	372	2020	ug/kg	2					
Manganese		43400	179	1010	ug/kg	2					
Nickel		2280	145	505	ug/kg	2					
Potassium		161000	4630	10100	ug/kg	2					
Selenium		150	294	505	ug/kg	2					
Silver		38.3	203	505	ug/kg	2					
Thallium		-547	414	1010	ug/kg	2					
Vanadium		5710	149	505	ug/kg	2					
Zinc		21200	278	505	ug/kg	2					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	846 3050BS PREP	AJM	04/03/00	2101	19148
SW846 3050B	846 3050BS PREP	FDG	03/21/00	1433	17195
SW846 3050B	846 3050BS PREP	FDG	03/28/00	1418	18293
SW846 5035	5030/8260A and 5035/8260B Prep	SM	03/22/00	1726	17546
SW846 7471A	EPA 7471 Mercury Prep Soil	ARD	03/21/00	2010	17182

The following Analytical Methods were performed

Method	Description
1	SW846 7471A

Certificate of Analysis

Company : Brookhaven National Laboratory
Address : OER
Building 51M
Upton, NY 11973-5000
Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 5, 2000

Client Sample ID:	065-003000314-30	Project:	BRKL00297
Sample ID:	23260007	Client ID:	BRKL001
Matrix:	Soil	COC:	6514
Collect Date:	14-MAR-00 12:08		
Receive Date:	16-MAR-00 11:00		
Collector:	Client		
Moisture:	4.52%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis Federal											
7471 Cold Vapor Hg in Solid											
Mercury		33.0	13.9	30.4	ug/kg	1	RMJ	03/22/00	1733	17479	1
Metals Analysis-ICP Federal											
6010 TAL Metals Soil Federal											
Antimony		-29.7	160	979	ug/kg	2	KAR	03/22/00	0020	17350	2
Arsenic		602	255	489	ug/kg	2					
Barium		4180	90.9	489	ug/kg	2					
Beryllium		60.2	60.9	489	ug/kg	2					
Cadmium		-38.8	74.7	489	ug/kg	2					
Calcium		301000	3380	9790	ug/kg	2					
Chromium		2390	126	489	ug/kg	2					
Cobalt		795	109	489	ug/kg	2					
Copper		1890	196	489	ug/kg	2					
Iron		1730000	2230	4890	ug/kg	2					
Lead		2500	194	489	ug/kg	2					
Magnesium		286000	360	1960	ug/kg	2					
Manganese		30800	173	979	ug/kg	2					
Nickel		1200	141	489	ug/kg	2					
Potassium		117000	4490	9790	ug/kg	2					
Selenium		-72.5	285	489	ug/kg	2					
Silver		9.79	197	489	ug/kg	2					
Thallium		-598	401	979	ug/kg	2					
Vanadium		3050	145	489	ug/kg	2					
Zinc		6380	269	489	ug/kg	2					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	846 3050BS PREP	AJM	04/03/00	2101	19148
SW846 3050B	846 3050BS PREP	FDG	03/21/00	1433	17195
SW846 3050B	846 3050BS PREP	FDG	03/28/00	1418	18293
SW846 5035	5030/8260A and 5035/8260B Prep	SM	03/22/00	1726	17546
SW846 7471A	EPA 7471 Mercury Prep Soil	ARD	03/21/00	2010	17182

The following Analytical Methods were performed

Method	Description
1	SW846 7471A

Certificate of Analysis

Company : Brookhaven National Laboratory
Address : OER
Building 51M
Upton, NY 11973-5000
Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 5, 2000

Client Sample ID:	065-004000314-30	Project:	BRKL00297
Sample ID:	23260008	Client ID:	BRKL001
Matrix:	Soil	COC:	6514
Collect Date:	14-MAR-00 12:14		
Receive Date:	16-MAR-00 11:00		
Collector:	Client		
Moisture:	2.96%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis Federal											
7471 Cold Vapor Hg in Solid											
Mercury		28.8	14.9	32.8	ug/kg	1	RMJ	03/22/00	1735	17479	1
Metals Analysis-ICP Federal											
6010 TAL Metals Soil Federal											
Antimony		-34.8	157	963	ug/kg	2	KAR	03/22/00	0026	17350	2
Arsenic		420	251	482	ug/kg	2					
Barium		2720	89.5	482	ug/kg	2					
Beryllium		54.8	59.9	482	ug/kg	2					
Cadmium		-53.1	73.5	482	ug/kg	2					
Calcium		140000	3320	9630	ug/kg	2					
Chromium		2130	124	482	ug/kg	2					
Cobalt		685	107	482	ug/kg	2					
Copper		2490	193	482	ug/kg	2					
Iron		1930000	2200	4820	ug/kg	2					
Lead		1660	191	482	ug/kg	2					
Magnesium		306000	354	1930	ug/kg	2					
Manganese		37900	170	963	ug/kg	2					
Nickel		1320	139	482	ug/kg	2					
Potassium		87800	4420	9630	ug/kg	2					
Selenium		-68.5	280	482	ug/kg	2					
Silver		29.7	194	482	ug/kg	2					
Thallium		-500	395	963	ug/kg	2					
Vanadium		5670	143	482	ug/kg	2					
Zinc		5340	265	482	ug/kg	2					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	846 3050BS PREP	AJM	04/03/00	2101	19148
SW846 3050B	846 3050BS PREP	FDG	03/21/00	1433	17195
SW846 3050B	846 3050BS PREP	FDG	03/28/00	1418	18293
SW846 5035	5030/8260A and 5035/8260B Prep	SM	03/22/00	1726	17546
SW846 7471A	EPA 7471 Mercury Prep Soil	ARD	03/21/00	2010	17182

The following Analytical Methods were performed

Method	Description
1	SW846 7471A

Certificate of Analysis

Company : Brookhaven National Laboratory
Address : OER
Building 51M
Upton, NY 11973-5000
Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 5, 2000

Client Sample ID:	065-005000314-30	Project:	..0297
Sample ID:	23260009	Client ID:	BRKL001
Matrix:	Soil	COC:	6514
Collect Date:	14-MAR-00 12:23		
Receive Date:	16-MAR-00 11:00		
Collector:	Client		
Moisture:	5.02%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis Federal											
7471 Cold Vapor Hg in Solid											
Mercury		28.7	14.7	32.2	ug/kg	1	RMJ	03/22/00	1737	17479	1
Metals Analysis-ICP Federal											
6010 TAL Metals Soil Federal											
Antimony		5.88	165	1010	ug/kg	2	KAR	03/22/00	0032	17350	2
Arsenic		469	264	506	ug/kg	2					
Barium		4300	94.0	506	ug/kg	2					
Beryllium		67.8	63.0	506	ug/kg	2					
Cadmium		-63.9	77.2	506	ug/kg	2					
Calcium		190000	3490	10100	ug/kg	2					
Chromium		2310	131	506	ug/kg	2					
Cobalt		906	112	506	ug/kg	2					
Copper		2680	202	506	ug/kg	2					
Iron		2210000	2310	5060	ug/kg	2					
Lead		2460	200	506	ug/kg	2					
Magnesium		390000	373	2020	ug/kg	2					
Manganese		38600	179	1010	ug/kg	2					
Nickel		1570	146	506	ug/kg	2					
Potassium		127000	4650	10100	ug/kg	2					
Selenium		165	295	506	ug/kg	2					
Silver		34.4	203	506	ug/kg	2					
Thallium		-492	415	1010	ug/kg	2					
Vanadium		3800	150	506	ug/kg	2					
Zinc		7500	278	506	ug/kg	2					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	846 3050BS PREP	AJM	04/03/00	2101	19148
SW846 3050B	846 3050BS PREP	FDG	03/21/00	1433	17195
SW846 3050B	846 3050BS PREP	FDG	03/28/00	1418	18293
SW846 5035	5030/8260A and 5035/8260B Prep	SM	03/22/00	1726	17546
SW846 7471A	EPA 7471 Mercury Prep Soil	ARD	03/21/00	2010	17182

The following Analytical Methods were performed

Method	Description
1	SW846 7471A

TOTAL METALS

INORGANIC ANALYSIS DATA PACKAGE

SDG No.: 23262 Method Type: SW 846

Sample ID: 23262002 Client ID: 076-401000314-18

Contract: BRKL00297 Lab Code: Case No.: SAS No.:

Matrix: WATER Date Received: 3/16/2000 Level: LOW % Solids: 0.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7429-90-5	Aluminum	6.5	µg/L	U		P	6.5	TJA61 Trace ICP2	32100
7440-36-0	Antimony	3.9	µg/L	B		P	2.0	TJA61 Trace ICP2	32100
7440-38-2	Arsenic	2.1	µg/L	U		P	2.1	TJA61 Trace ICP2	32100
7440-39-3	Barium	0.48	µg/L	B		P	0.24	TJA61 Trace ICP2	32100
7440-41-7	Beryllium	0.17	µg/L	U		P	0.17	TJA61 Trace ICP2	32100
7440-43-9	Cadmium	0.23	µg/L	U		P	0.23	TJA61 Trace ICP2	32100
7440-70-2	Calcium	84.5	µg/L	B		P	5.6	TJA61 Trace ICP2	32100
7440-47-3	Chromium	1.0	µg/L	B		P	0.61	TJA61 Trace ICP2	32100
7440-48-4	Cobalt	0.67	µg/L	U		P	0.67	TJA61 Trace ICP2	32100
7440-50-8	Copper	2.7	µg/L	B		P	1.0	TJA61 Trace ICP2	32100
7439-89-6	Iron	25.1	µg/L	B		P	2.0	TJA61 Trace ICP2	32100
7439-92-1	Lead	2.2	µg/L	B		P	1.1	TJA61 Trace ICP2	32100
7439-95-4	Magnesium	15.5	µg/L	B		P	7.5	TJA61 Trace ICP2	32100
7439-96-5	Manganese	1.2	µg/L	B		P	0.34	TJA61 Trace ICP2	32100
7440-02-0	Nickel	2.6	µg/L	B		P	1.1	TJA61 Trace ICP2	32100
7440-09-7	Potassium	41.5	µg/L	U		P	41.5	TJA61 Trace ICP2	32100
7782-49-2	Selenium	2.1	µg/L	U		P	2.1	TJA61 Trace ICP2	32100
7440-22-4	Silver	1.1	µg/L	U		P	1.1	TJA61 Trace ICP2	32100
7440-23-5	Sodium	64.1	µg/L	B		P	7.0	TJA61 Trace ICP2	32100
7440-28-0	Thallium	3.6	µg/L	U		P	3.6	TJA61 Trace ICP2	32100
7440-62-2	Vanadium	0.63	µg/L	U		P	0.63	TJA61 Trace ICP2	32100
7440-66-6	Zinc	6.3	µg/L	B		P	0.47	TJA61 Trace ICP2	32100

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Certificate of Analysis

Company : Brookhaven National Laboratory
Address : OER
Building 51M
Upton, NY 11973-5000
Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 18, 2000

Client Sample ID:	065-002000314-30	Project:	BRKL00297
Sample ID:	23260006	Client ID:	BRKL001
Matrix:	Soil	COC:	6514
Collect Date:	14-MAR-00 11:43		
Receive Date:	16-MAR-00 11:00		
Collector:	Client		
Moisture:	5.69%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis Federal											
7471 Cold Vapor Hg in Solid											
Mercury	J	22.5	14.2	31.2	ug/kg	1	RMJ	03/22/00	1728	17479	1
Metals Analysis-ICP Federal											
6010 TAL Metals Soil Federal											
Antimony	U	114	165	1010	ug/kg	2	KAR	03/21/00	2350	17350	2
Arsenic		736	264	505	ug/kg	2					
Barium		8000	93.8	505	ug/kg	2					
Beryllium	J	119	62.8	505	ug/kg	2					
Cadmium	U	0.199	77.0	505	ug/kg	2					
Calcium		550000	3480	10100	ug/kg	2					
Chromium		3810	130	505	ug/kg	2					
Cobalt		1090	112	505	ug/kg	2					
Copper		3070	202	505	ug/kg	2					
Iron		3080000	2300	5050	ug/kg	2					
Lead		6900	200	505	ug/kg	2					
Magnesium		515000	372	2020	ug/kg	2					
Manganese		43400	179	1010	ug/kg	2					
Nickel		2280	145	505	ug/kg	2					
Potassium		161000	4630	10100	ug/kg	2					
Selenium	U	150	294	505	ug/kg	2					
Silver	U	38.3	203	505	ug/kg	2					
Thallium	U	-547	414	1010	ug/kg	2					
Vanadium		5710	149	505	ug/kg	2					
Zinc		21200	278	505	ug/kg	2					
Sodium		37000	648	10600	ug/kg	2	KAR	04/04/00	1844	19407	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	846 3050BS PREP	AJM	04/03/00	1915	19148
SW846 3050B	846 3050BS PREP	FDG	03/21/00	1350	17195
SW846 3050B	846 3050BS PREP	FDG	03/28/00	1300	18293
SW846 5035	5030/8260A and 5035/8260B Prep	SM	03/22/00	1725	17546
SW846 7471A	EPA 7471 Mercury Prep Soil	ARD	03/21/00	1945	17182

The following Analytical Methods were performed

Method	Description

Certificate of Analysis

Company : Brookhaven National Laboratory
Address : OER
Building 51M
Upton, NY 11973-5000
Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 18, 2000

Client Sample ID: 065-002000314-30
Sample ID: 23260006

Project: BRKL00297
Client ID: BRKL001
COC: 6514

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
1	SW846 7471A									
2	SW846 6010B									
3	SW846 6010B									
4	SW846 6010B									

Notes:
The Qualifiers in this report are defined as follows :

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
** Indicates the analyte is a surrogate compound.
DL Failed required detection limit.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
RI Not quantified due to interference.
U Indicates the compound was analyzed for but not detected above the detection limit
U Sample result < .5*MDA and MDA <= RDL.
UJ .5*MDA < Sample result < MDA and MDA <= RDL.
UJ-Q Not quantified due to low abundance.

The above sample is reported on a dry weight basis.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Nancy Slater at 843-556-8171 Ext. 4438 .

Reviewed by

Certificate of Analysis

Company : Brookhaven National Laboratory
Address : OER
Building 51M
Upton, NY 11973-5000
Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 18, 2000

Client Sample ID:	065-003000314-30	Project:	BRKL00297
Sample ID:	23260007	Client ID:	BRKL001
Matrix:	Soil	COC:	6514
Collect Date:	14-MAR-00 12:08		
Receive Date:	16-MAR-00 11:00		
Collector:	Client		
Moisture:	4.52%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis Federal											
7471 Cold Vapor Hg in Solid											
Mercury		33.0	13.9	30.4	ug/kg	1	RMJ	03/22/00	1733	17479	1
Metals Analysis-ICP Federal											
6010 TAL Metals Soil Federal											
Antimony	U	-29.7	160	979	ug/kg	2	KAR	03/22/00	0020	17350	2
Arsenic		602	255	489	ug/kg	2					
Barium		4180	90.9	489	ug/kg	2					
Beryllium	U	60.2	60.9	489	ug/kg	2					
Cadmium	U	-38.8	74.7	489	ug/kg	2					
Calcium		301000	3380	9790	ug/kg	2					
Chromium		2390	126	489	ug/kg	2					
Cobalt		795	109	489	ug/kg	2					
Copper		1890	196	489	ug/kg	2					
Iron		1730000	2230	4890	ug/kg	2					
Lead		2500	194	489	ug/kg	2					
Magnesium		286000	360	1960	ug/kg	2					
Manganese		30800	173	979	ug/kg	2					
Nickel		1200	141	489	ug/kg	2					
Potassium		117000	4490	9790	ug/kg	2					
Selenium	U	-72.5	285	489	ug/kg	2					
Silver	U	9.79	197	489	ug/kg	2					
Thallium	U	-598	401	979	ug/kg	2					
Vanadium		3050	145	489	ug/kg	2					
Zinc		6380	269	489	ug/kg	2					
Sodium		20000	621	10200	ug/kg	2	KAR	04/04/00	1908	19407	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	846 3050BS PREP	AJM	04/03/00	1915	19148
SW846 3050B	846 3050BS PREP	FDG	03/21/00	1350	17195
SW846 3050B	846 3050BS PREP	FDG	03/28/00	1300	18293
SW846 5035	5030/8260A and 5035/8260B Prep	SM	03/22/00	1725	17546
SW846 7471A	EPA 7471 Mercury Prep Soil	ARD	03/21/00	1945	17182

The following Analytical Methods were performed

Method	Description

Certificate of Analysis

Company : Brookhaven National Laboratory
Address : OER
Building 51M
Upton, NY 11973-5000
Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 18, 2000

Client Sample ID: 065-003000314-30
Sample ID: 23260007

Project: BRKL00297
Client ID: BRKL001
COC: 6514

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
1	SW846 7471A									
2	SW846 6010B									
3	SW846 6010B									
4	SW846 6010B									

Notes:
The Qualifiers in this report are defined as follows :

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- ** Indicates the analyte is a surrogate compound.
- DL Failed required detection limit.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- RI Not quantified due to interference.
- U Indicates the compound was analyzed for but not detected above the detection limit
- U Sample result < .5*MDA and MDA <= RDL.
- UJ .5*MDA < Sample result < MDA and MDA <= RDL.
- UJ-Q Not quantified due to low abundance.

The above sample is reported on a dry weight basis.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Nancy Slater at 843-556-8171 Ext. 4438 .

Reviewed by

Certificate of Analysis

Company : Brookhaven National Laboratory
Address : OER
Building 51M
Upton, NY 11973-5000
Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 18, 2000

Client Sample ID:	065-004000314-30	Project:	BRKL00297
Sample ID:	23260008	Client ID:	BRKL001
Matrix:	Soil	COC:	6514
Collect Date:	14-MAR-00 12:14		
Receive Date:	16-MAR-00 11:00		
Collector:	Client		
Moisture:	2.96%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis Federal											
7471 Cold Vapor Hg in Solid											
Mercury	J	28.8	14.9	32.8	ug/kg	1	RMJ	03/22/00	1735	17479	1
Metals Analysis-ICP Federal											
6010 TAL Metals Soil Federal											
Antimony	U	-34.8	157	963	ug/kg	2	KAR	03/22/00	0026	17350	2
Arsenic	J	420	251	482	ug/kg	2					
Barium		2720	89.5	482	ug/kg	2					
Beryllium	U	54.8	59.9	482	ug/kg	2					
Cadmium	U	-53.1	73.5	482	ug/kg	2					
Calcium		140000	3320	9630	ug/kg	2					
Chromium		2130	124	482	ug/kg	2					
Cobalt		685	107	482	ug/kg	2					
Copper		2490	193	482	ug/kg	2					
Iron		1930000	2200	4820	ug/kg	2					
Lead		1660	191	482	ug/kg	2					
Magnesium		306000	354	1930	ug/kg	2					
Manganese		37900	170	963	ug/kg	2					
Nickel		1320	139	482	ug/kg	2					
Potassium		87800	4420	9630	ug/kg	2					
Selenium	U	-68.5	280	482	ug/kg	2					
Silver	U	29.7	194	482	ug/kg	2					
Thallium	U	-500	395	963	ug/kg	2					
Vanadium		5670	143	482	ug/kg	2					
Zinc		5340	265	482	ug/kg	2					
Sodium		11800	578	9450	ug/kg	2	KAR	04/04/00	1914	19407	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	846 3050BS PREP	AJM	04/03/00	1915	19148
SW846 3050B	846 3050BS PREP	FDG	03/21/00	1350	17195
SW846 3050B	846 3050BS PREP	FDG	03/28/00	1300	18293
SW846 5035	5030/8260A and 5035/8260B Prep	SM	03/22/00	1725	17546
SW846 7471A	EPA 7471 Mercury Prep Soil	ARD	03/21/00	1945	17182

The following Analytical Methods were performed

Method	Description

Certificate of Analysis

Company : Brookhaven National Laboratory
Address : OER
Building 51M
Upton, NY 11973-5000
Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 18, 2000

Client Sample ID: 065-004000314-30
Sample ID: 23260008

Project: BRKL00297
Client ID: BRKL001
COC: 6514

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
1	SW846 7471A									
2	SW846 6010B									
3	SW846 6010B									
4	SW846 6010B									

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- DL Failed required detection limit.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- RI Not quantified due to interference.
- U Indicates the compound was analyzed for but not detected above the detection limit
- U Sample result < .5*MDA and MDA <= RDL.
- UJ .5*MDA < Sample result < MDA and MDA <= RDL.
- UJ-Q Not quantified due to low abundance.

The above sample is reported on a dry weight basis.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Nancy Slater at 843-556-8171 Ext. 4438 .

Reviewed by

Certificate of Analysis

Company : Brookhaven National Laboratory
Address : OER
Building 51M
Upton, NY 11973-5000
Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 18, 2000

Client Sample ID:	065-005000314-30	Project:	BRKL00297
Sample ID:	23260009	Client ID:	BRKL001
Matrix:	Soil	COC:	6514
Collect Date:	14-MAR-00 12:23		
Receive Date:	16-MAR-00 11:00		
Collector:	Client		
Moisture:	5.02%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis Federal											
7471 Cold Vapor Hg in Solid											
Mercury	J	28.7	14.7	32.2	ug/kg	1	RMJ	03/22/00	1737	17479	1
Metals Analysis-ICP Federal											
6010 TAL Metals Soil Federal											
Antimony	U	5.88	165	1010	ug/kg	2	KAR	03/22/00	0032	17350	2
Arsenic	J	469	264	506	ug/kg	2					
Barium		4300	94.0	506	ug/kg	2					
Beryllium	J	67.8	63.0	506	ug/kg	2					
Cadmium	U	-63.9	77.2	506	ug/kg	2					
Calcium		190000	3490	10100	ug/kg	2					
Chromium		2310	131	506	ug/kg	2					
Cobalt		906	112	506	ug/kg	2					
Copper		2680	202	506	ug/kg	2					
Iron		2210000	2310	5060	ug/kg	2					
Lead		2460	200	506	ug/kg	2					
Magnesium		390000	373	2020	ug/kg	2					
Manganese		38600	179	1010	ug/kg	2					
Nickel		1570	146	506	ug/kg	2					
Potassium		127000	4650	10100	ug/kg	2					
Selenium	U	165	295	506	ug/kg	2					
Silver	U	34.4	203	506	ug/kg	2					
Thallium	U	-492	415	1010	ug/kg	2					
Vanadium		3800	150	506	ug/kg	2					
Zinc		7500	278	506	ug/kg	2					
Sodium		17100	585	9570	ug/kg	2	KAR	04/04/00	1921	19407	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	846 3050BS PREP	AJM	04/03/00	1915	19148
SW846 3050B	846 3050BS PREP	FDG	03/21/00	1350	17195
SW846 3050B	846 3050BS PREP	FDG	03/28/00	1300	18293
SW846 5035	5030/8260A and 5035/8260B Prep	SM	03/22/00	1725	17546
SW846 7471A	EPA 7471 Mercury Prep Soil	ARD	03/21/00	1945	17182

The following Analytical Methods were performed

Method	Description

Certificate of Analysis

Company : Brookhaven National Laboratory
Address : OER
Building 51M
Upton, NY 11973-5000
Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 18, 2000

Client Sample ID: 065-005000314-30
Sample ID: 23260009

Project: BRKL00297
Client ID: BRKL001
COC: 6514

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
1	SW846 7471A										
2	SW846 6010B										
3	SW846 6010B										
4	SW846 6010B										

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- DL Failed required detection limit.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- RI Not quantified due to interference.
- U Indicates the compound was analyzed for but not detected above the detection limit
- U Sample result < .5*MDA and MDA <= RDL.
- UJ .5*MDA < Sample result < MDA and MDA <= RDL.
- UJ-Q Not quantified due to low abundance.

The above sample is reported on a dry weight basis.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Nancy Slater at 843-556-8171 Ext. 4438 .

Reviewed by

Certificate of Analysis

Company : Brookhaven National Laboratory
Address : OER
Building 51M
Upton, NY 11973-5000
Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 18, 2000

Client Sample ID: 065-005000314-31
Sample ID: 23260^
Matrix:
Collect Date:
Receive Date:
Collector: Client
Moisture: 5.55%

Project: BRKL00297
Client ID: BRKL001
COC: 6514

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis Federal											
7471 Cold Vapor Hg in Solid											
Mercury		46.7	13.5	29.7	ug/kg	1	RMJ	03/22/00	1738	17479	1
Metals Analysis-ICP Federal											
6010 TAL Metals Soil Federal											
Antimony	U	-94.6	160	980	ug/kg	2	AME	03/22/00	1037	17350	2
Arsenic	J	285	256	490	ug/kg	2					
Barium		3440	91.1	490	ug/kg	2					
Beryllium	U	52.3	61.0	490	ug/kg	2					
Cadmium	U	-25.2	74.8	490	ug/kg	2					
Calcium		289000	3380	9800	ug/kg	2					
Chromium		1830	126	490	ug/kg	2					
Cobalt		605	109	490	ug/kg	2					
Copper		3580	196	490	ug/kg	2					
Iron		1610000	2240	4900	ug/kg	2					
Lead		2040	194	490	ug/kg	2					
Magnesium		248000	361	1960	ug/kg	2					
Manganese		30100	174	980	ug/kg	2					
Nickel		1190	141	490	ug/kg	2					
Potassium		91500	4500	9800	ug/kg	2					
Selenium	U	-24.2	285	490	ug/kg	2					
Silver	U	-32.2	197	490	ug/kg	2					
Thallium	U	-592	402	980	ug/kg	2					
Vanadium		2570	145	490	ug/kg	2					
Zinc		5360	270	490	ug/kg	2					
Sodium		17600	647	10600	ug/kg	2	KAR	04/04/00	1927	19407	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	846 3050BS PREP	AJM	04/03/00	1915	19148
SW846 3050B	846 3050BS PREP	FDG	03/21/00	1350	17195
SW846 3050B	846 3050BS PREP	FDG	03/28/00	1300	18293
SW846 5035	5030/8260A and 5035/8260B Prep	SM	03/22/00	1725	17546
SW846 7471A	EPA 7471 Mercury Prep Soil	ARD	03/21/00	1945	17182

The following Analytical Methods were performed

Method	Description

Certificate of Analysis

Company : Brookhaven National Laboratory
Address : OER
Building 51M
Upton, NY 11973-5000
Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 18, 2000

Client Sample ID: 065-005000314-31
Sample ID: 23260010

Project: BRKL00297
Client ID: BRKL001
COC: 6514

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
1	SW846 7471A									
2	SW846 6010B									
3	SW846 6010B									
4	SW846 6010B									

Notes:
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** Indicates the analyte is a surrogate compound.
DL Failed required detection limit.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
RI Not quantified due to interference.
U Indicates the compound was analyzed for but not detected above the detection limit
U Sample result < .5*MDA and MDA <= RDL.
UJ .5*MDA < Sample result < MDA and MDA <= RDL.
UJ-Q Not quantified due to low abundance.

The above sample is reported on a dry weight basis.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Nancy Slater at 843-556-8171 Ext. 4438 .

Reviewed by

Certificate of Analysis

Company : Brookhaven National Laboratory
Address : OER
Building 51M
Upton, NY 11973-5000
Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 18, 2000

Client Sample ID:	076-400000314-18	Project:	BRKL00297
Sample ID:	23262001	Client ID:	BRKL001
Matrix:	Ground Water	COC:	6514
Collect Date:	14-MAR-00 00:00		
Receive Date:	16-MAR-00 11:00		
Collector:	Client		

Parameter	Qualifier	Result		DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec												
Alphaspec Am241, Cm, liquid												
Americium-241		0.191	+/-0.314	0.575	1.00	pCi/L	1	CLC	03/23/00	2138	17223	1
Curium-242		-0.0938	+/-0.199	0.481	1.00	pCi/L	1					
Curium-243/244		-0.0439	+/-0.356	0.722	1.00	pCi/L	1					
Curium-245/246		0.274	+/-0.222	0.305	1.00	pCi/L	1					
Alphaspec Pu, liquid												
Plutonium-238	U	0.096	+/-0.401	0.772	1.00	pCi/L	1	CLC	03/23/00	2133	17225	2
Plutonium-239/240	U	-0.0663	+/-0.129	0.362	1.00	pCi/L	1					
Alphaspec Th, liquid												
Thorium-228	U	-0.053	+/-0.261	0.618	1.00	pCi/L	1	AMH	03/27/00	1932	17230	3
Thorium-230	U	0.0806	+/-0.117	0.204	1.00	pCi/L	1					
Thorium-232	U	0.016	+/-0.0724	0.204	1.00	pCi/L	1					
Alphaspec U, liquid												
Uranium-233/234	U	0.119	+/-0.197	0.384	26.0	pCi/L	1	CLC	03/24/00	0720	17226	4
Uranium-235/236	U	-0.0203	+/-0.0406	0.253	26.0	pCi/L	1					
Uranium-238		0.500	+/-0.296	0.252	26.0	pCi/L	1					
Rad Gamma Spec												
Gamma I129, liquid												
Iodine-129	U	0.280	+/-0.559	0.891	2.00	pCi/L	1	RDK	03/24/00	0632	17649	5
Gammaspec, Gamma, liquid												
Americium-241	U	-0.0626	+/-12.1	20.8	20.0	pCi/L	1	SRB	03/25/00	1157	17274	6
Beryllium-7	U	7.94	+/-12.0	22.2	200	pCi/L	1					
Cesium-134	U	-0.011	+/-1.41	2.17	10.0	pCi/L	1					
Cesium-137		2.56	+/-1.77	2.11	12.0	pCi/L	1					
Cobalt-57	U	0.614	+/-1.35	2.04	10.0	pCi/L	1					
Cobalt-60	U	-0.735	+/-1.54	2.67	22.0	pCi/L	1					
Europium-152	U	3.20	+/-4.61	6.76	40.0	pCi/L	1					
Europium-154	U	1.48	+/-4.41	7.46	20.0	pCi/L	1					
Europium-155	U	-2.37	+/-5.12	8.60	30.0	pCi/L	1					
Manganese-54	U	0.068	+/-1.40	2.46	10.0	pCi/L	1					
Sodium-22	U	0.510	+/-1.57	2.66	10.0	pCi/L	1					
Vanadium-48	U	0.032	+/-2.19	3.85	10.0	pCi/L	1					
Zinc-65	U	-0.984	+/-3.49	5.35	20.0	pCi/L	1					
Rad Gas Flow												
GFPC, Gross A/B, liquid												
Alpha	UUJ	0.143	+/-0.462	1.03	2.00	pCi/L	1	JDM	03/23/00	1239	16250	7
Beta	UUJ	0.0826	+/-0.559	1.24	4.00	pCi/L	1					

Certificate of Analysis

Company : Brookhaven National Laboratory
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Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 18, 2000

Client Sample ID: 076-400000314-18
Sample ID: 23262001

Project: BRKL00297
Client ID: BRKL001
COC: 6514

Parameter	Qualifier	Result		DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow												
GFPC, Sr90, liquid												
Strontium-90	UUJ	-0.0024	+/-0.194	0.412	0.800	pCi/L	1	AAK	03/23/00	2015	17238	8
Rad Liquid Scint												
LSC, Tritium Dist, liquid												
Tritium	UUJ	-122	+/-271	486	1000	pCi/L	1	PD	03/24/00	1810	16878	9
Liquid Scint C14, liquid												
Carbon-14	U	-2.99	+/-8.16	14.4	50.0	pCi/L	1	KDA	03/24/00	1901	17453	10
Liquid Scint Ni63, liquid												
Nickel-63	U	63.3	+/-68.8	168	500	pCi/L	1	AEA	03/27/00	1652	17456	11
Liquid Scint Tc99, liquid												
Technetium-99	UUJ	-0.963	+/-5.39	13.3	379	pCi/L	1	PD	03/28/00	2022	17492	12
Rad Radium-226												
Lucas Cell, Ra226, liquid												
Radium-226	UJ	0.775	+/-0.654	0.928	15.0	pCi/L	1	PD	03/24/00	1300	17246	13

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL 300
2	DOE EML HASL 300
3	DOE EML HASL 300
4	DOE EML HASL 300
5	LANL EM-9
6	EPA 901.1
7	EPA 900
8	EPA 905.0
9	EPA 906.0
10	EPA EERF C-01
11	DOE RESL Ni-1
12	DOE EML HASL 300
13	EPA 903.1

Notes:
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DL Failed required detection limit.

Certificate of Analysis

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Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 18, 2000

Client Sample ID: 076-400000314-18
Sample ID: 23262001

Project: BRKL00297
Client ID: BRKL001
COC: 6514

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
RI Not quantified due to interference.
U Indicates the compound was analyzed for but not detected above the detection limit
U Sample result < .5*MDA and MDA <= RDL.
UJ .5*MDA < Sample result < MDA and MDA <= RDL.
UJ-Q Not quantified due to low abundance.

The above sample is reported on an "as received" basis.

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Reviewed by

Certificate of Analysis

Company : Brookhaven National Laboratory
Address : OER
Building 51M
Upton, NY 11973-5000
Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 18, 2000

Client Sample ID:	076-401000314-18	Project:	BRKL00297
Sample ID:	23262002	Client ID:	BRKL001
Matrix:	Ground Water	COC:	6514
Collect Date:	14-MAR-00 00:00		
Receive Date:	16-MAR-00 11:00		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP Federal											
6010 TAL Metals Liquid Federal											
Aluminum	U	4.05	23.4	200	ug/L	1	KAR	03/22/00	0102	17355	1
Antimony	J	3.85	3.43	60.0	ug/L	1					
Arsenic	U	0.277	2.57	10.0	ug/L	1					
Barium	U	0.480	0.748	200	ug/L	1					
Beryllium	U	0.130	0.474	5.00	ug/L	1					
Cadmium	U	0.0702	0.631	5.00	ug/L	1					
Calcium	J	84.5	35.5	5000	ug/L	1					
Chromium	U	1.00	1.06	10.0	ug/L	1					
Cobalt	U	-0.495	0.627	50.0	ug/L	1					
Copper	J	2.71	1.84	25.0	ug/L	1					
Iron	J	25.1	19.9	100	ug/L	1					
Lead	J	2.19	1.83	5.00	ug/L	1					
Magnesium	J	15.5	3.54	5000	ug/L	1					
Manganese	J	1.24	1.15	15.0	ug/L	1					
Nickel	U	2.59	3.09	40.0	ug/L	1					
Potassium	J	20.9	16.4	5000	ug/L	1					
Selenium	U	-0.351	2.36	5.00	ug/L	1					
Silver	U	-0.215	0.529	10.0	ug/L	1					
Sodium	J	64.1	13.0	5000	ug/L	1					
Thallium	U	-2.62	3.93	10.0	ug/L	1					
Vanadium	U	-0.142	0.890	50.0	ug/L	1					
Zinc	J	6.30	3.89	20.0	ug/L	1					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-TRACE SW846 3005A	FDG	03/21/00	1050	17197
SW846 8260	8260A Volatiles In Liquid Federal	RMB	04/04/00	1358	19324

The following Analytical Methods were performed

Method	Description
1	SW846 6010B

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Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 18, 2000

Client Sample ID: 076-401000314-18
Sample ID: 23262002

Project: BRKL00297
Client ID: BRKL001
COC: 6514

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

DL Failed required detection limit.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
RI Not quantified due to interference.
U Indicates the compound was analyzed for but not detected above the detection limit
U Sample result < .5*MDA and MDA <= RDL.
UJ .5*MDA < Sample result < MDA and MDA <= RDL.
UJ-Q Not quantified due to low abundance.

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Certificate of Analysis

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Upton, NY 11973-5000
Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 18, 2000

Client Sample ID:	065-005000314-31	Project:	BRKL00297
Sample ID:	23260005	Client ID:	BRKL001
Matrix:	Soil	COC:	6514
Collect Date:	14-MAR-00 12:35		
Receive Date:	16-MAR-00 11:00		
Collector:	Client		

Parameter	Qualifier	Result		DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec												
Alphaspec Am241, Cm, solid												
Americium-241	UUJ	0.00869	+/-0.0344	0.0771	1.00	pCi/g	1	JAL	03/28/00	2030	17681	1
Alphaspec Pu, solid												
Plutonium-238	UUJ	-0.000514	+/-0.0477	0.113	6.60	pCi/g	1	JAL	03/28/00	2021	17680	2
Plutonium-239/240	UUJ	0.0219	+/-0.0313	0.0563	4.00	pCi/g	1					
Alphaspec Th, solid												
Thorium-228		0.264	+/-0.134	0.200	1.00	pCi/g	1	JAL	03/29/00	2215	17678	3
Thorium-230	UJ	0.0563	+/-0.0564	0.0952	1.00	pCi/g	1					
Thorium-232		0.134	+/-0.0648	0.0212	1.00	pCi/g	1					
Alphaspec U, solid												
Uranium-233/234	UJ	0.128	+/-0.104	0.150	0.900	pCi/g	1	JAL	03/28/00	1527	17677	4
Uranium-235/236	UUJ	0.00828	+/-0.0336	0.099	0.900	pCi/g	1					
Uranium-238		0.116	+/-0.0918	0.110	0.900	pCi/g	1					
Rad Gamma Spec												
Gamma I129, solid												
Iodine-129	U	0.0096	+/-0.185	0.250	1.00	pCi/g	1	SRB	03/23/00	2301	17256	5
Gammaspec, Gamma, solid												
Americium-241	UUJ	-0.0008	+/-0.0131	0.0265	4.00	pCi/g	1	SRB	03/22/00	1719	17475	6
Beryllium-7	UUJ	0.0226	+/-0.0909	0.167	1.00	pCi/g	1					
Cesium-134	UUJ	-0.00751	+/-0.00959	0.017	0.100	pCi/g	1					
Cesium-137		0.0674	+/-0.0271	0.0201	2.30	pCi/g	1					
Cobalt-57	UUJ	-0.00345	+/-0.00568	0.0107	0.100	pCi/g	1					
Cobalt-60	UUJ	0.00225	+/-0.0118	0.0223	0.100	pCi/g	1					
Europium-152	UUJ	-0.000162	+/-0.0275	0.0503	4.80	pCi/g	1					
Europium-154	UJ	0.0363	+/-0.0287	0.0637	17.0	pCi/g	1					
Europium-155	UUJ	0.00405	+/-0.0228	0.0452	0.200	pCi/g	1					
Manganese-54	UUJ	0.00742	+/-0.00991	0.020	0.100	pCi/g	1					
Radium-226		0.157	+/-0.0464	0.0374	1.00	pCi/g	1					
Sodium-22	UJ	0.013	+/-0.0102	0.0224	0.700	pCi/g	1					
Vanadium-48	UJ	0.0281	+/-0.0149	0.033	1.00	pCi/g	1					
Zinc-65	UUJ	-0.0052	+/-0.0276	0.0429	0.200	pCi/g	1					
Rad Gas Flow												
GFPC, Gross A/B, solid												
Alpha		1.19	+/-0.515	0.630	1.00	pCi/g	1	JDM	03/23/00	2155	17491	7
Beta		4.26	+/-1.13	1.73	1.00	pCi/g	1					
GFPC, Sr90, solid												
Strontium-90	UUJ	-0.118	+/-1.28	3.30	7.50	pCi/g	1	AAK	03/29/00	1754	18120	8

Certificate of Analysis

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Client Sample ID: 065-005000314-31
Sample ID: 23260005

Project: BRKL00297
Client ID: BRKL001
COC: 6514

Parameter	Qualifier	Result		DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scint												
LSC, Tritium Dist, solid												
Tritium	UJ	2.47	+/-2.57	4.29	6.00	pCi/g	1	PD	03/24/00	0149	17459	9
Liquid Scint C14, solid												
Carbon-14	UJ	0.129	+/-0.125	0.209	1.00	pCi/g	1	KDA	03/23/00	0000	17321	10
Liquid Scint Ni63, solid												
Nickel-63		3.90	+/-1.07	2.58	2.00	pCi/g	1	AEA	03/27/00	2113	17871	11
Liquid Scint Tc99, solid												
Technetium-99	U	0.026	+/-0.492	1.20	5.00	pCi/g	1	ADD	03/28/00	1502	16974	12

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep EPI A-021,A-021B,A-026	CRS	03/22/00	1521	17470
Dry Soil Prep	Dry Soil Prep EPI A-021,A-021B,A-026	CRS	03/21/00	1251	17210

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL 300
2	DOE EML HASL 300
3	DOE EML HASL 300
4	DOE EML HASL 300
5	LANL EM-9
6	DOE EML HASL 300
7	EPA 900
8	EPA 905.0
9	EPA 906.0
10	EPA 504.1
11	DOE RESL Ni-1
12	DOE EML HASL 300

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- DL Failed required detection limit.
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Project: Routine Analytical

Report Date: April 18, 2000

Client Sample ID: 065-005000314-31
Sample ID: 23260005

Project: BRKL00297
Client ID: BRKL001
COC: 6514

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

RI Not quantified due to interference.
U Indicates the compound was analyzed for but not detected above the detection limit
U Sample result < .5*MDA and MDA <= RDL.
UJ .5*MDA < Sample result < MDA and MDA <= RDL.
UJ-Q Not quantified due to low abundance.

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