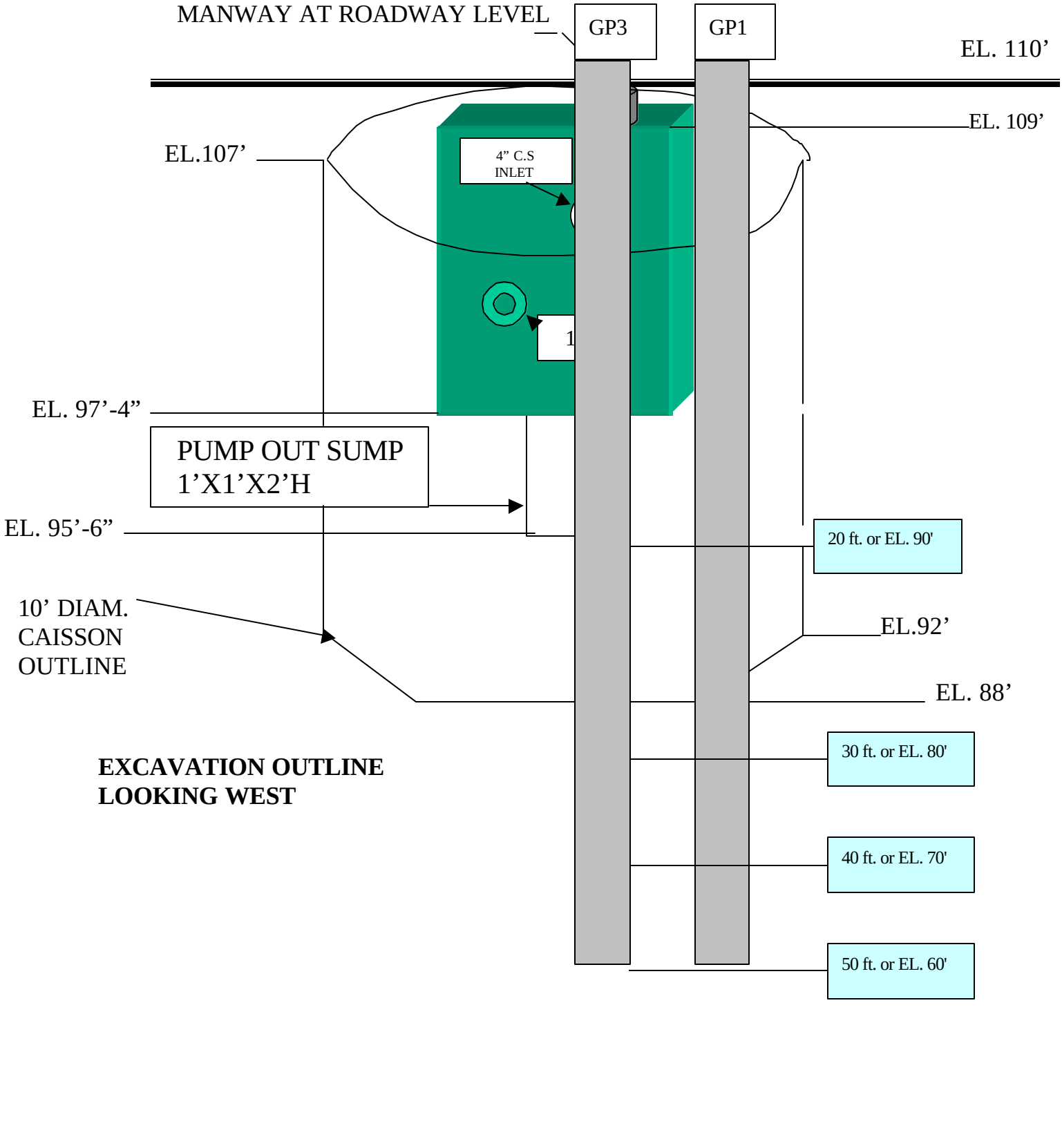
PFS Remediation -Final Verification Sampling

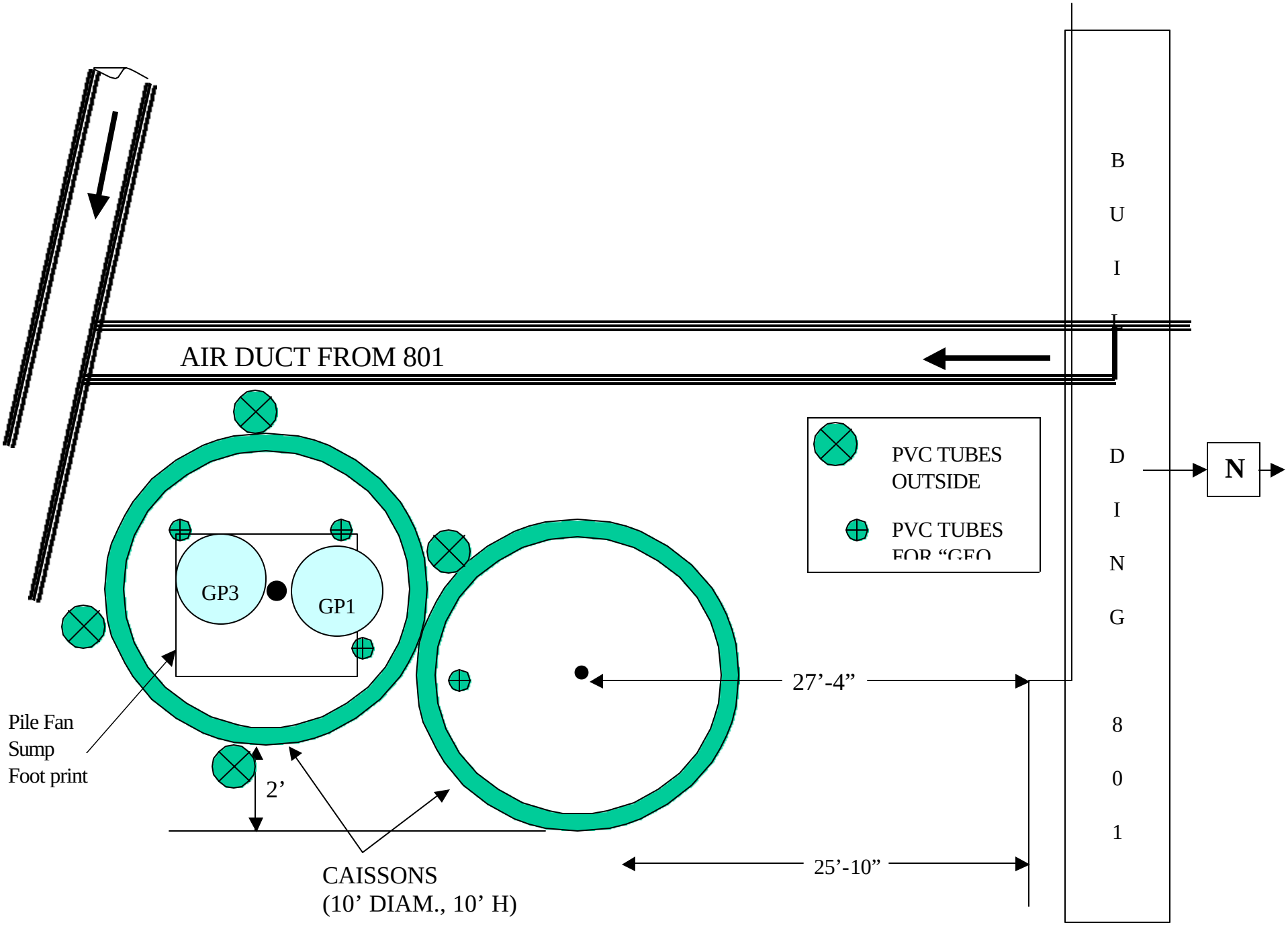
Data Package 8

COC #	SDG#	Sample Description	Sample Number	Location #
6567	23714/23720	G1 - Geoprobe (30-32')	065-001000324-30	GP1
6567	23714/23720	G1 - Geoprobe (composite 20-50')	065-002000328-36	GP1
6567	23714/23720	S14 - Geoprobe (30-32')	065-003000325-30	GP3
6567	23714/23720	BD-1	065-003000325-31	
6567	23714/23720	S14 - Geoprobe (composite 20-50')	065-002000328-36	GP3
6567	23714/23720	BD-2	065-004000325-31	
6567	23714/23720	TB-1	076-400000323-12	
6567	23714/23720	TB-2	076-400000327-12	
6567	23714/23720	EB-1	076-401000328-18	



EXCAVATION OUTLINE
LOOKING WEST

Data Package 8 Geoprobe Soil Samples GP1 & GP3



Data Package 8 Geoprobe Soil Samples GP1 & GP3

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 25, 2000

Client Sample ID: 065-002000328-36
Sample ID: 23714001
Matrix: Soil
Collect Date: 28-MAR-00 11:00
Receive Date: 30-MAR-00 09:30
Collector: Client

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result		DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec												
Alphaspec Am241, Cm, solid												
Americium-241		0.0909	+/-0.065	0.0341	1.00	pCi/g	1	RDK	04/15/00	2315	19429	1
Alphaspec Pu, solid												
Plutonium-238	U	-0.00403	+/-0.0457	0.163	6.60	pCi/g	1	RDK	04/14/00	1100	19457	2
Plutonium-239/240		0.0604	+/-0.0704	0.0604	4.00	pCi/g	1					
Alphaspec Th, solid												
Thorium-228		0.247	+/-0.142	0.205	1.00	pCi/g	1	RDK	04/15/00	2303	19461	3
Thorium-230	UJ-B	0.154	+/-0.0854	0.0902	1.00	pCi/g	1					
Thorium-232		0.168	+/-0.0837	0.0637	1.00	pCi/g	1					
Alphaspec U, solid												
Uranium-233/234		0.241	+/-0.186	0.227	0.900	pCi/g	1	RDK	04/17/00	0923	19470	4
Uranium-235/236	U	0.0157	+/-0.0637	0.187	0.900	pCi/g	1					
Uranium-238	UJ-K	0.189	+/-0.163	0.209	0.900	pCi/g	1					
Rad Gamma Spec												
Gamma I129, solid												
Iodine-129	UJ	0.114	+/-0.1499	0.140	1.00	pCi/g	1	SRB	04/18/00	1051	19189	5
Gammaspec, Gamma, solid												
Americium-241	U	-0.0222	+/-0.05809	0.115	4.00	pCi/g	1	SRB	04/06/00	1201	19183	6
Beryllium-7	UJ-K	0.032	+/-0.1027	0.200	1.00	pCi/g	1					
Cesium-134	UJ-K	-0.0214	+/-0.01249	0.0196	0.100	pCi/g	1					
Cesium-137	UJ	0.0204	+/-0.02249	0.0243	2.30	pCi/g	1					
Cobalt-57	UJ-K	-0.000622	+/-0.00735	0.0142	0.100	pCi/g	1					
Cobalt-60	U	-0.00755	+/-0.01221	0.0214	0.100	pCi/g	1					
Europium-152	U	0.0127	+/-0.03152	0.0592	4.80	pCi/g	1					
Europium-154	UJ-K	-0.0112	+/-0.03841	0.0709	17.0	pCi/g	1					
Europium-155	UJ-K	0.0439	+/-0.06346	0.0612	0.200	pCi/g	1					
Manganese-54	U	0.00332	+/-0.01199	0.0229	0.100	pCi/g	1					
Radium-226		0.148	+/-0.05362	0.0438	1.00	pCi/g	1					
Sodium-22	UJ-K	-0.00396	+/-0.01371	0.0253	0.700	pCi/g	1					
Vanadium-48	U	0.0183	+/-0.01946	0.0393	1.00	pCi/g	1					
Zinc-65	U	-0.0021	+/-0.0317	0.0524	0.200	pCi/g	1					
Rad Gas Flow												
GFPC, Gross A/B, solid												
Alpha		1.24	+/-0.51235	0.580	1.00	pCi/g	1	TMC	04/24/00	1407	19549	7
Beta		2.72	+/-0.80947	1.36	1.00	pCi/g	1					
GFPC, Sr90, solid												

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 25, 2000

Client Sample ID: 065-002000328-36
Sample ID: 23714001

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result		DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow												
GFPC, Sr90, solid												
Strontium-90	UJ-K	-0.098	+/-1.3592	3.46	7.50	pCi/g	1	AAK	04/12/00	1503	19531	8
Rad Liquid Scint												
LSC, Tritium Dist, solid												
Tritium	UJ-K	0.253	+/-1.3222	2.27	6.00	pCi/g	1	CSM1	04/18/00	0955	19091	9
Liquid Scint C14, solid												
Carbon-14	UJ-K	0.0207	+/-0.1311	0.226	1.00	pCi/g	1	KDA	04/21/00	0806	19067	10
Liquid Scint Ni63, solid												
Nickel-63	UJ-K	-0.214	+/-1.3363	3.24	2.00	pCi/g	1	ADD	04/18/00	0116	18248	11
Liquid Scint Tc99, solid												
Technetium-99	U	0.250	+/-0.2685	0.597	5.00	pCi/g	1	AEA	04/23/00	1157	19062	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	04/03/00	0911	19112
Dry Soil Prep	Dry Soil Prep EPI A-021,A-021B,A-026	TC1	03/31/00	0954	18872

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

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

DL Failed required detection limit.
RI Not quantified due to interference.

Certificate of Analysis

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

Report Date: April 25, 2000

Project: Routine Analytical

Client Sample ID: 065-002000328-36
Sample ID: 23714001

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method

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.

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 25, 2000

Client Sample ID: 065-004000328-31
Sample ID: 23714003
Matrix: Soil
Collect Date: 28-MAR-00 11:26
Receive Date: 30-MAR-00 09:30
Collector: Client

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result		DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec												
Alphaspec Am241, Cm, solid												
Americium-241		0.0363	+/-0.0421	0.0363	1.00	pCi/g	1	RDK	04/15/00	2315	19429	1
Alphaspec Pu, solid												
Plutonium-238	U	-0.0203	+/-0.0206	0.160	6.60	pCi/g	1	RDK	04/14/00	1100	19457	2
Plutonium-239/240	U	-0.00507	+/-0.0102	0.111	4.00	pCi/g	1					
Alphaspec Th, solid												
Thorium-228	UJ	0.120	+/-0.11	0.182	1.00	pCi/g	1	RDK	04/15/00	2303	19461	3
Thorium-230	UJ-B	0.168	+/-0.0854	0.0774	1.00	pCi/g	1					
Thorium-232	UJ	0.0567	+/-0.05	0.0627	1.00	pCi/g	1					
Alphaspec U, solid												
Uranium-233/234		0.644	+/-0.363	0.526	0.900	pCi/g	1	RDK	04/17/00	0923	19470	4
Uranium-235/236	UJ	0.307	+/-0.244	0.384	0.900	pCi/g	1					
Uranium-238	UJ-K	0.0716	+/-0.13	0.279	0.900	pCi/g	1					
Rad Gamma Spec												
Gamma I129, solid												
Iodine-129	U	0.0572	+/-0.1481	0.280	1.00	pCi/g	1	SRB	04/18/00	2207	19189	5
Gammaspec, Gamma, solid												
Americium-241	U	-0.0218	+/-0.08794	0.148	4.00	pCi/g	1	SRB	04/06/00	1202	19183	6
Beryllium-7	UJ-K	-0.0173	+/-0.1011	0.178	1.00	pCi/g	1					
Cesium-134	UJ-K	0.00249	+/-0.01136	0.0194	0.100	pCi/g	1					
Cesium-137	UJ	0.0212	+/-0.02417	0.0212	2.30	pCi/g	1					
Cobalt-57	UJ-K	0.00278	+/-0.00717	0.0144	0.100	pCi/g	1					
Cobalt-60	U	-0.000629	+/-0.00974	0.019	0.100	pCi/g	1					
Europium-152	U	-0.0128	+/-0.03152	0.0559	4.80	pCi/g	1					
Europium-154	UJ-K	-0.00329	+/-0.03426	0.0651	17.0	pCi/g	1					
Europium-155	UJ-K	0.00212	+/-0.03126	0.0622	0.200	pCi/g	1					
Manganese-54	U	-0.00388	+/-0.01212	0.0216	0.100	pCi/g	1					
Radium-226		0.161	+/-0.05181	0.0418	1.00	pCi/g	1					
Sodium-22	UJ-K	-0.00106	+/-0.01224	0.0233	0.700	pCi/g	1					
Vanadium-48	U	-0.00225	+/-0.01559	0.0284	1.00	pCi/g	1					
Zinc-65	U	0.00513	+/-0.03175	0.0514	0.200	pCi/g	1					
Rad Gas Flow												
GFPC, Gross A/B, solid												
Alpha	UJ-K	0.690	+/-0.53193	0.931	1.00	pCi/g	1	TMC	04/24/00	1407	19549	7
Beta		3.00	+/-0.8492	1.44	1.00	pCi/g	1					
GFPC, Sr90, solid												
Strontium-90	UJ-K	0.581	+/-1.0927	2.53	7.50	pCi/g	1	AAK	04/12/00	1503	19531	8

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 25, 2000

Client Sample ID: 065-004000328-31
Sample ID: 23714003

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result		DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scint												
LSC, Tritium Dist, solid												
Tritium	UJ-K	0.762	+/-1.1053	1.87	6.00	pCi/g	1	CSM1	04/18/00	1200	19091	9
Liquid Scint C14, solid												
Carbon-14	UJ-K	-0.0501	+/-0.1274	0.224	1.00	pCi/g	1	KDA	04/21/00	0910	19067	10
Liquid Scint Ni63, solid												
Nickel-63	UJ-K	0.416	+/-1.0466	2.54	2.00	pCi/g	1	ADD	04/18/00	0321	18248	11
Liquid Scint Tc99, solid												
Technetium-99	U	0.125	+/-0.2394	0.555	5.00	pCi/g	1	AEA	04/23/00	1301	19062	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	04/03/00	0912	19112
Dry Soil Prep	Dry Soil Prep EPI A-021,A-021B,A-026	TC1	03/31/00	0954	18872

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

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

DL Failed required detection limit.
RI Not quantified due to interference.
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.

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 25, 2000

Client Sample ID: 065-004000328-31
Sample ID: 23714003

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method

The above sample is reported on an "as received" 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 25, 2000

Client Sample ID: 065-004000328-36
Sample ID: 23714002
Matrix: Soil
Collect Date: 28-MAR-00 11:26
Receive Date: 30-MAR-00 09:30
Collector: Client

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result		DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec												
Alphaspec Am241, Cm, solid												
Americium-241		0.0712	+/-0.0544	0.0305	1.00	pCi/g	1	RDK	04/15/00	2315	19429	1
Alphaspec Pu, solid												
Plutonium-238	U	0.0156	+/-0.0313	0.0468	6.60	pCi/g	1	RDK	04/14/00	1100	19457	2
Plutonium-239/240	UJ	0.043	+/-0.0549	0.0823	4.00	pCi/g	1					
Alphaspec Th, solid												
Thorium-228	UJ	0.132	+/-0.107	0.168	1.00	pCi/g	1	RDK	04/15/00	2303	19461	3
Thorium-230	UJ-B	0.100	+/-0.0718	0.0912	1.00	pCi/g	1					
Thorium-232	UJ	0.0634	+/-0.0607	0.0912	1.00	pCi/g	1					
Alphaspec U, solid												
Uranium-233/234	U	0.0672	+/-0.147	0.331	0.900	pCi/g	1	RDK	04/17/00	0923	19470	4
Uranium-235/236	U	0.0595	+/-0.134	0.306	0.900	pCi/g	1					
Uranium-238	UJ-K	0.218	+/-0.174	0.227	0.900	pCi/g	1					
Rad Gamma Spec												
Gamma I129, solid												
Iodine-129	U	0.0635	+/-0.1328	0.258	1.00	pCi/g	1	SRB	04/18/00	2006	19189	5
Gammaspec, Gamma, solid												
Americium-241	UJ	0.015	+/-0.01321	0.0274	4.00	pCi/g	1	SRB	04/06/00	1201	19183	6
Beryllium-7	UJ-K	-0.0507	+/-0.09298	0.158	1.00	pCi/g	1					
Cesium-134	UJ-K	-0.00337	+/-0.01001	0.0184	0.100	pCi/g	1					
Cesium-137		0.0194	+/-0.02266	0.0181	2.30	pCi/g	1					
Cobalt-57	UJ-K	0.00659	+/-0.00621	0.0124	0.100	pCi/g	1					
Cobalt-60	U	0.0025	+/-0.0113	0.0217	0.100	pCi/g	1					
Europium-152	UJ	0.0359	+/-0.02833	0.0559	4.80	pCi/g	1					
Europium-154	UJ-K	0.028	+/-0.03206	0.0596	17.0	pCi/g	1					
Europium-155	UJ-K	0.00562	+/-0.02248	0.0444	0.200	pCi/g	1					
Manganese-54	U	0.0014	+/-0.01056	0.020	0.100	pCi/g	1					
Radium-226		0.156	+/-0.05119	0.0391	1.00	pCi/g	1					
Sodium-22	UJ-K	0.010	+/-0.01142	0.0209	0.700	pCi/g	1					
Vanadium-48	U	-0.0141	+/-0.01651	0.0273	1.00	pCi/g	1					
Zinc-65	U	0.00587	+/-0.02828	0.0525	0.200	pCi/g	1					
Rad Gas Flow												
GFPC, Gross A/B, solid												
Alpha		2.27	+/-1.50617	1.95	1.00	pCi/g	1	TMC	04/19/00	1533	19549	7
Beta		4.74	+/-1.72075	2.90	1.00	pCi/g	1					
GFPC, Sr90, solid												
Strontium-90	UJ-K	-0.469	+/-0.8046	2.30	7.50	pCi/g	1	AAK	04/12/00	1503	19531	8

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 25, 2000

Client Sample ID: 065-004000328-36
Sample ID: 23714002

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result		DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scint												
LSC, Tritium Dist, solid												
Tritium	UJ-K	0.326	+/-1.3351	2.29	6.00	pCi/g	1	CSM1	04/18/00	1057	19091	9
Liquid Scint C14, solid												
Carbon-14	UJ-K	-0.0833	+/-0.1258	0.224	1.00	pCi/g	1	KDA	04/21/00	0838	19067	10
Liquid Scint Ni63, solid												
Nickel-63	UJ-K	0.124	+/-0.9	2.18	2.00	pCi/g	1	ADD	04/18/00	0218	18248	11
Liquid Scint Tc99, solid												
Technetium-99	U	0.0363	+/-0.262	0.633	5.00	pCi/g	1	AEA	04/23/00	1229	19062	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	04/03/00	0912	19112
Dry Soil Prep	Dry Soil Prep EPI A-021,A-021B,A-026	TC1	03/31/00	0954	18872

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

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

DL Failed required detection limit.
RI Not quantified due to interference.
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.

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 25, 2000

Client Sample ID: 065-004000328-36
Sample ID: 23714002

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method

The above sample is reported on an "as received" 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 25, 2000

Client Sample ID: 076-401000328-18
Sample ID: 23720004
Matrix: Ground Water
Collect Date: 29-MAR-00 09:15
Receive Date: 30-MAR-00 09:30
Collector: Client

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result		DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec												
Alphaspec Am241, Cm, liquid												
Americium-241	U	-0.0215	+/-0.0194	0.145	1.00	pCi/L	1	MTE	04/05/00	1758	19024	1
Curium-242	UJ-K	-0.00887	+/-0.0126	0.115	1.00	pCi/L	1					
Curium-243/244	U	0.0916	+/-0.106	0.195	1.00	pCi/L	1					
Curium-245/246	U	0.0158	+/-0.0427	0.110	1.00	pCi/L	1					
Alphaspec Pu, liquid												
Plutonium-238	UJ-K	-0.0586	+/-0.0814	0.177	1.00	pCi/L	1	MTE	04/05/00	1748	19026	2
Plutonium-239/240	UJ	0.0276	+/-0.0323	0.052	1.00	pCi/L	1					
Alphaspec Th, liquid												
Thorium-228	UJ-K	0.0254	+/-0.0439	0.0818	1.00	pCi/L	1	MTE	04/06/00	1656	19027	3
Thorium-230	U	0.0253	+/-0.0308	0.0515	1.00	pCi/L	1					
Thorium-232	U	0.00147	+/-0.0129	0.0364	1.00	pCi/L	1					
Alphaspec U, liquid												
Uranium-233/234	U	-0.0124	+/-0.0433	0.165	26.0	pCi/L	1	MTE	04/05/00	1805	19029	4
Uranium-235/236	UJ-K	0.00	+/-0	0.055	26.0	pCi/L	1					
Uranium-238	U	-0.00439	+/-0.00879	0.0965	26.0	pCi/L	1					
Rad Gamma Spec												
Gamma I129, liquid												
Iodine-129	U	0.402	+/-0.4699	0.995	2.00	pCi/L	1	SRB	04/11/00	0827	19042	5
Gammaspec, Gamma, liquid												
Americium-241		0.404	+/-2.456	3.99	20.0	pCi/L	1	SRB	04/07/00	1048	18981	6
Beryllium-7		-0.411	+/-12.18	20.6	200	pCi/L	1					
Cesium-134		-0.844	+/-1.398	2.07	10.0	pCi/L	1					
Cesium-137		0.00	+/-2.078	4.18	12.0	pCi/L	1					
Cobalt-57		0.165	+/-1.044	1.84	10.0	pCi/L	1					
Cobalt-60		-0.469	+/-1.394	2.39	22.0	pCi/L	1					
Europium-152		0.844	+/-4.449	6.89	40.0	pCi/L	1					
Europium-154		-0.192	+/-3.913	7.04	20.0	pCi/L	1					
Europium-155		-4.14	+/-4.078	6.82	30.0	pCi/L	1					
Manganese-54		-1.16	+/-1.273	2.06	10.0	pCi/L	1					
Sodium-22		-0.0685	+/-1.397	2.51	10.0	pCi/L	1					
Vanadium-48		0.135	+/-2.14	3.45	10.0	pCi/L	1					
Zinc-65		0.0236	+/-3.673	5.73	20.0	pCi/L	1					
Rad Gas Flow												
GFPC, Sr90, liquid												
Strontium-90	U	-0.0544	+/-0.2664	0.545	0.800	pCi/L	1	AAK	04/12/00	1949	19527	7
Rad Liquid Scint												

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 25, 2000

Client Sample ID: 076-401000328-18
Sample ID: 23720004

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result		DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scint												
LSC, Tritium Dist, liquid												
Tritium	UJ-K	-174	+/-262.6	475	1000	pCi/L	1	CSM1	04/10/00	1603	19082	8
Liquid Scint C14, liquid												
Carbon-14	U	1.93	+/-20.1524	34.7	50.0	pCi/L	1	TC1	04/22/00	1836	19070	9
Liquid Scint Ni63, liquid												
Nickel-63	U	-32.2	+/-172.5665	423	500	pCi/L	1	ADD	04/20/00	0058	19074	10
Liquid Scint Tc99, liquid												
Technetium-99	U	-4.17	+/-8.2277	21.2	379	pCi/L	1	PD	04/11/00	0717	19059	11
Rad Radium-226												
Lucas Cell, Ra226, liquid												
Radium-226	UJ	1.69	+/-1.7099	2.25	15.0	pCi/L	1	RDD	04/14/00	0830	20420	12

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 905.0
8	EPA 906.0
9	EPA EERF C-01
10	DOE RESL Ni-1
11	DOE EML HASL 300
12	EPA 903.1

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

DL Failed required detection limit.
RI Not quantified due to interference.
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.

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 25, 2000

Client Sample ID: 076-401000328-18
Sample ID: 23720004

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method

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 25, 2000

Client Sample ID: 065-002000328-36
Sample ID: 23714004
Matrix: Soil
Collect Date: 28-MAR-00 11:00
Receive Date: 30-MAR-00 09:30
Collector: Client
Moisture: 18.2%

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis Federal											
7471 Cold Vapor Hg in Solid											
Mercury	U	5.12	15.9	34.9	ug/kg	1	RMJ	04/05/00	1713	19657	1
Metals Analysis-ICP Federal											
6010 TAL Metals Soil Federal											
Calcium		223000	3940	11400	ug/kg	2	KAR	04/07/00	0036	19899	2
Zinc		4160	314	571	ug/kg	2					
Aluminum		1090000	1400	5710	ug/kg	2	AME	04/07/00	1217	19899	3
Antimony	U	167	186	1140	ug/kg	2					
Arsenic	U	74.3	298	571	ug/kg	2					
Barium		4790	106	571	ug/kg	2					
Beryllium	U	49.4	71.0	571	ug/kg	2					
Cadmium	U	-33.3	87.2	571	ug/kg	2					
Chromium		3180	147	571	ug/kg	2					
Cobalt		711	127	571	ug/kg	2					
Copper		3240	228	571	ug/kg	2					
Iron		2000000	2600	5710	ug/kg	2					
Lead		883	226	571	ug/kg	2					
Magnesium		346000	420	2280	ug/kg	2					
Manganese		55000	202	1140	ug/kg	2					
Nickel		2090	164	571	ug/kg	2					
Potassium		109000	5240	11400	ug/kg	2					
Selenium	J	344	332	571	ug/kg	2					
Silver	U	-67.3	230	571	ug/kg	2					
Sodium		27700	698	11400	ug/kg	2					
Thallium	J	541	468	1140	ug/kg	2					
Vanadium		2370	169	571	ug/kg	2					
Semi-Volatiles-GC/MS Federal											
3550C/8270C BNA Soil Federal											
1,2,4-Trichlorobenzene	U	0.00	5.70	407	ug/kg	1	JWF	04/03/00	2220	19205	4
1,2-Dichlorobenzene	U	0.00	5.30	407	ug/kg	1					
1,3-Dichlorobenzene	U	0.00	4.07	407	ug/kg	1					
1,4-Dichlorobenzene	U	0.00	7.33	407	ug/kg	1					
2,4,6-Trichlorophenol	U	0.00	6.52	407	ug/kg	1					
2,4-Dichlorophenol	U	0.00	9.78	407	ug/kg	1					
2,4-Dimethylphenol	U	0.00	8.56	407	ug/kg	1					
2,4-Dinitrophenol	U	0.00	19.1	1700	ug/kg	1					
2,4-Dinitrotoluene	U	0.00	6.11	407	ug/kg	1					
2,6-Dinitrotoluene	U	0.00	3.67	407	ug/kg	1					

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 25, 2000

Client Sample ID: 065-002000328-36
Sample ID: 23714004

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Semi-Volatiles-GC/MS Federal											
3550C/8270C BNA Soil Federal											
2-Chloronaphthalene	U	0.00	4.48	330	ug/kg	1					
2-Methyl-4,6-dinitrophenol	U	0.00	40.7	1700	ug/kg	1					
2-Nitrophenol	U	0.00	4.48	407	ug/kg	1					
3,3'-Dichlorobenzidine	U	0.00	175	1300	ug/kg	1					
4-Bromophenylphenylether	U	0.00	5.70	407	ug/kg	1					
4-Chloro-3-methylphenol	U	0.00	24.0	407	ug/kg	1					
4-Chlorophenylphenylether	U	0.00	4.07	407	ug/kg	1					
4-Nitrophenol	U	0.00	191	1700	ug/kg	1					
Acenaphthene	U	0.00	4.89	330	ug/kg	1					
Acenaphthylene	U	0.00	4.48	330	ug/kg	1					
Anthracene	U	0.00	5.70	330	ug/kg	1					
Benzo(a)anthracene	U	0.00	7.33	330	ug/kg	1					
Benzo(a)pyrene	U	0.00	6.93	330	ug/kg	1					
Benzo(b)fluoranthene	U	0.00	11.0	330	ug/kg	1					
Benzo(ghi)perylene	U	0.00	11.0	330	ug/kg	1					
Benzo(k)fluoranthene	U	0.00	11.0	330	ug/kg	1					
Butylbenzylphthalate	U	0.00	14.7	407	ug/kg	1					
Chrysene	U	0.00	7.74	330	ug/kg	1					
Di-n-butylphthalate	U	0.00	17.1	407	ug/kg	1					
Di-n-octylphthalate	U	0.00	11.0	407	ug/kg	1					
Dibenzo(a,h)anthracene	U	0.00	5.70	330	ug/kg	1					
Diethylphthalate	U	0.00	7.74	407	ug/kg	1					
Dimethylphthalate	U	0.00	33.4	407	ug/kg	1					
Fluoranthene	U	0.00	6.11	330	ug/kg	1					
Fluorene	U	0.00	3.67	330	ug/kg	1					
Hexachlorobenzene	U	0.00	5.70	407	ug/kg	1					
Hexachlorobutadiene	U	0.00	8.15	407	ug/kg	1					
Hexachlorocyclopentadiene	U	0.00	2.85	407	ug/kg	1					
Hexachloroethane	U	0.00	5.30	407	ug/kg	1					
Indeno(1,2,3-cd)pyrene	U	0.00	11.0	330	ug/kg	1					
Isophorone	U	0.00	2.85	407	ug/kg	1					
N-Methyl-N-nitrosomethylamine	U	0.00	7.74	407	ug/kg	1					
N-Nitrosodiphenylamine	U	0.00	8.56	407	ug/kg	1					
N-Nitrosodipropylamine	U	0.00	8.15	407	ug/kg	1					
Naphthalene	U	0.00	4.07	330	ug/kg	1					
Nitrobenzene	U	0.00	13.4	407	ug/kg	1					
Pentachlorophenol	U	0.00	141	1700	ug/kg	1					
Phenanthrene	U	0.00	4.89	330	ug/kg	1					
Phenol	U	0.00	4.48	407	ug/kg	1					
Pyrene	U	0.00	10.6	330	ug/kg	1					
bis(2-Chloroethoxy)methane	U	0.00	7.33	407	ug/kg	1					

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 25, 2000

Client Sample ID: 065-002000328-36
Sample ID: 23714004

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Semi-Volatiles-GC/MS Federal											
3550C/8270C BNA Soil Federal											
bis(2-Chloroethyl) ether	U	0.00	8.15	407	ug/kg	1					
bis(2-Chloroisopropyl)ether	U	0.00	7.33	407	ug/kg	1					
bis(2-Ethylhexyl)phthalate	U	0.00	24.0	330	ug/kg	1					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	846 3050BS PREP	AJM	04/03/00	1945	19151
SW846 3550B	3550B BNA Soil Prep-8270C Analysis Fed	RDH	04/03/00	1314	19098
SW846 7471A	EPA 7471 Mercury Prep Soil	ARD	04/03/00	2100	18859

The following Analytical Methods were performed

Method	Description
1	SW846 7471A
2	SW846 6010B
3	SW846 6010B
4	SW846 8270C

Surrogate recovery	Test	Recovery%	Acceptable Limits
2,4,6-Tribromophenol	3550C/8270C BNA Soil Federal	91%	(45%-126%)
2-Fluorobiphenyl	3550C/8270C BNA Soil Federal	75%	(45%-110%)
2-Fluorophenol	3550C/8270C BNA Soil Federal	83%	(37%-102%)
Nitrobenzene-d5	3550C/8270C BNA Soil Federal	71%	(42%-107%)
Phenol-d5	3550C/8270C BNA Soil Federal	85%	(42%-102%)
p-Terphenyl-d14	3550C/8270C BNA Soil Federal	101%	(46%-104%)

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

DL Failed required detection limit.
RI Not quantified due to interference.
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.

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 25, 2000

Client Sample ID: 065-002000328-36
Sample ID: 23714004

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method

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 25, 2000

Client Sample ID: 065-004000328-36
Sample ID: 23714005
Matrix: Soil
Collect Date: 28-MAR-00 11:26
Receive Date: 30-MAR-00 09:30
Collector: Client
Moisture: 22.5%

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis Federal											
7471 Cold Vapor Hg in Solid											
Mercury	U	15.1	16.7	36.7	ug/kg	1	RMJ	04/05/00	1718	19657	1
Metals Analysis-ICP Federal											
6010 TAL Metals Soil Federal											
Calcium		122000	4360	12600	ug/kg	2	KAR	04/07/00	0055	19899	2
Zinc		3770	348	632	ug/kg	2					
Aluminum		850000	1560	6320	ug/kg	2	AME	04/07/00	1223	19899	3
Antimony	J	490	206	1260	ug/kg	2					
Arsenic	J	425	330	632	ug/kg	2					
Barium		3670	117	632	ug/kg	2					
Beryllium	U	25.9	78.6	632	ug/kg	2					
Cadmium	U	-42.7	96.5	632	ug/kg	2					
Chromium		3480	163	632	ug/kg	2					
Cobalt		714	140	632	ug/kg	2					
Copper		2160	253	632	ug/kg	2					
Iron		1740000	2880	6320	ug/kg	2					
Lead		1850	250	632	ug/kg	2					
Magnesium		301000	465	2530	ug/kg	2					
Manganese		70900	224	1260	ug/kg	2					
Nickel		2190	182	632	ug/kg	2					
Potassium		90800	5800	12600	ug/kg	2					
Selenium	J	494	368	632	ug/kg	2					
Silver	U	-55.6	254	632	ug/kg	2					
Sodium	J	3450	773	12600	ug/kg	2					
Thallium	U	-623	518	1260	ug/kg	2					
Vanadium		1560	187	632	ug/kg	2					
Semi-Volatiles-GC/MS Federal											
3550C/8270C BNA Soil Federal											
1,2,4-Trichlorobenzene	U	0.00	6.02	430	ug/kg	1	JWF	04/03/00	2249	19205	4
1,2-Dichlorobenzene	U	0.00	5.59	430	ug/kg	1					
1,3-Dichlorobenzene	U	0.00	4.30	430	ug/kg	1					
1,4-Dichlorobenzene	U	0.00	7.74	430	ug/kg	1					
2,4,6-Trichlorophenol	U	0.00	6.88	430	ug/kg	1					
2,4-Dichlorophenol	U	0.00	10.3	430	ug/kg	1					
2,4-Dimethylphenol	U	0.00	9.03	430	ug/kg	1					
2,4-Dinitrophenol	U	0.00	20.2	1700	ug/kg	1					
2,4-Dinitrotoluene	U	0.00	6.45	430	ug/kg	1					
2,6-Dinitrotoluene	U	0.00	3.87	430	ug/kg	1					

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 25, 2000

Client Sample ID: 065-004000328-36
Sample ID: 23714005

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Semi-Volatiles-GC/MS Federal											
3550C/8270C BNA Soil Federal											
2-Chloronaphthalene	U	0.00	4.73	330	ug/kg	1					
2-Methyl-4,6-dinitrophenol	U	0.00	43.0	1700	ug/kg	1					
2-Nitrophenol	U	0.00	4.73	430	ug/kg	1					
3,3'-Dichlorobenzidine	U	0.00	185	1300	ug/kg	1					
4-Bromophenylphenylether	U	0.00	6.02	430	ug/kg	1					
4-Chloro-3-methylphenol	U	0.00	25.4	430	ug/kg	1					
4-Chlorophenylphenylether	U	0.00	4.30	430	ug/kg	1					
4-Nitrophenol	U	0.00	201	1700	ug/kg	1					
Acenaphthene	U	0.00	5.16	330	ug/kg	1					
Acenaphthylene	U	0.00	4.73	330	ug/kg	1					
Anthracene	U	0.00	6.02	330	ug/kg	1					
Benzo(a)anthracene	U	0.00	7.74	330	ug/kg	1					
Benzo(a)pyrene	U	0.00	7.31	330	ug/kg	1					
Benzo(b)fluoranthene	U	0.00	11.6	330	ug/kg	1					
Benzo(ghi)perylene	U	0.00	11.6	330	ug/kg	1					
Benzo(k)fluoranthene	U	0.00	11.6	330	ug/kg	1					
Butylbenzylphthalate	U	0.00	15.5	430	ug/kg	1					
Chrysene	U	0.00	8.17	330	ug/kg	1					
Di-n-butylphthalate	U	0.00	18.1	430	ug/kg	1					
Di-n-octylphthalate	U	0.00	11.6	430	ug/kg	1					
Dibenzo(a,h)anthracene	U	0.00	6.02	330	ug/kg	1					
Diethylphthalate	U	0.00	8.17	430	ug/kg	1					
Dimethylphthalate	U	0.00	35.3	430	ug/kg	1					
Fluoranthene	U	0.00	6.45	330	ug/kg	1					
Fluorene	U	0.00	3.87	330	ug/kg	1					
Hexachlorobenzene	U	0.00	6.02	430	ug/kg	1					
Hexachlorobutadiene	U	0.00	8.60	430	ug/kg	1					
Hexachlorocyclopentadiene	U	0.00	3.01	430	ug/kg	1					
Hexachloroethane	U	0.00	5.59	430	ug/kg	1					
Indeno(1,2,3-cd)pyrene	U	0.00	11.6	330	ug/kg	1					
Isophorone	U	0.00	3.01	430	ug/kg	1					
N-Methyl-N-nitrosomethylamine	U	0.00	8.17	430	ug/kg	1					
N-Nitrosodiphenylamine	U	0.00	9.03	430	ug/kg	1					
N-Nitrosodipropylamine	U	0.00	8.60	430	ug/kg	1					
Naphthalene	U	0.00	4.30	330	ug/kg	1					
Nitrobenzene	U	0.00	14.2	430	ug/kg	1					
Pentachlorophenol	U	0.00	149	1700	ug/kg	1					
Phenanthrene	U	0.00	5.16	330	ug/kg	1					
Phenol	U	0.00	4.73	430	ug/kg	1					
Pyrene	U	0.00	11.2	330	ug/kg	1					
bis(2-Chloroethoxy)methane	U	0.00	7.74	430	ug/kg	1					

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 25, 2000

Client Sample ID: 065-004000328-36
Sample ID: 23714005

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Semi-Volatiles-GC/MS Federal										
3550C/8270C BNA Soil Federal										
bis(2-Chloroethyl) ether	U	0.00	8.60	430	ug/kg	1				
bis(2-Chloroisopropyl)ether	U	0.00	7.74	430	ug/kg	1				
bis(2-Ethylhexyl)phthalate	U	0.00	25.4	330	ug/kg	1				

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	846 3050BS PREP	AJM	04/03/00	1945	19151
SW846 3550B	3550B BNA Soil Prep-8270C Analysis Fed	RDH	04/03/00	1314	19098
SW846 7471A	EPA 7471 Mercury Prep Soil	ARD	04/03/00	2100	18859

The following Analytical Methods were performed

Method	Description
1	SW846 7471A
2	SW846 6010B
3	SW846 6010B
4	SW846 8270C

Surrogate recovery	Test	Recovery%	Acceptable Limits
2,4,6-Tribromophenol	3550C/8270C BNA Soil Federal	91%	(45%-126%)
2-Fluorobiphenyl	3550C/8270C BNA Soil Federal	73%	(45%-110%)
2-Fluorophenol	3550C/8270C BNA Soil Federal	85%	(37%-102%)
Nitrobenzene-d5	3550C/8270C BNA Soil Federal	71%	(42%-107%)
Phenol-d5	3550C/8270C BNA Soil Federal	84%	(42%-102%)
p-Terphenyl-d14	3550C/8270C BNA Soil Federal	97%	(46%-104%)

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

DL Failed required detection limit.
RI Not quantified due to interference.
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.

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 25, 2000

Client Sample ID: 065-004000328-36
Sample ID: 23714005

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method

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 25, 2000

Client Sample ID: 065-004000328-31
Sample ID: 23714006
Matrix: Soil
Collect Date: 28-MAR-00 11:26
Receive Date: 30-MAR-00 09:30
Collector: Client
Moisture: 21.3%

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Mercury Analysis Federal											
7471 Cold Vapor Hg in Solid											
Mercury	U	14.0	17.6	38.8	ug/kg	1	RMJ	04/05/00	1720	19657	1
Metals Analysis-ICP Federal											
6010 TAL Metals Soil Federal											
Calcium		113000	4380	12700	ug/kg	2	KAR	04/07/00	0121	19899	2
Zinc		3690	349	635	ug/kg	2					
Aluminum		837000	1560	6350	ug/kg	2	AME	04/07/00	1246	19899	3
Antimony	J	301	207	1270	ug/kg	2					
Arsenic	J	471	332	635	ug/kg	2					
Barium		4710	118	635	ug/kg	2					
Beryllium	U	21.8	79.0	635	ug/kg	2					
Cadmium	U	-94.5	96.9	635	ug/kg	2					
Chromium		3920	164	635	ug/kg	2					
Cobalt	J	583	141	635	ug/kg	2					
Copper		1710	254	635	ug/kg	2					
Iron		1750000	2900	6350	ug/kg	2					
Lead		1050	252	635	ug/kg	2					
Magnesium		252000	467	2540	ug/kg	2					
Manganese		55500	225	1270	ug/kg	2					
Nickel		2180	183	635	ug/kg	2					
Potassium		120000	5830	12700	ug/kg	2					
Selenium	J	374	370	635	ug/kg	2					
Silver	U	-58.4	255	635	ug/kg	2					
Sodium	J	10500	776	12700	ug/kg	2					
Thallium	U	11.9	521	1270	ug/kg	2					
Vanadium		1720	188	635	ug/kg	2					
Semi-Volatiles-GC/MS Federal											
3550C/8270C BNA Soil Federal											
1,2,4-Trichlorobenzene	U	0.00	5.93	423	ug/kg	1	TSD	04/04/00	2326	19205	4
1,2-Dichlorobenzene	U	0.00	5.50	423	ug/kg	1					
1,3-Dichlorobenzene	U	0.00	4.23	423	ug/kg	1					
1,4-Dichlorobenzene	U	0.00	7.62	423	ug/kg	1					
2,4,6-Trichlorophenol	U	0.00	6.77	423	ug/kg	1					
2,4-Dichlorophenol	U	0.00	10.2	423	ug/kg	1					
2,4-Dimethylphenol	U	0.00	8.89	423	ug/kg	1					
2,4-Dinitrophenol	U	0.00	19.9	1700	ug/kg	1					
2,4-Dinitrotoluene	U	0.00	6.35	423	ug/kg	1					
2,6-Dinitrotoluene	U	0.00	3.81	423	ug/kg	1					

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 25, 2000

Client Sample ID: 065-004000328-31
Sample ID: 23714006

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Semi-Volatiles-GC/MS Federal										
3550C/8270C BNA Soil Federal										
2-Chloronaphthalene	U	0.00	4.66	330	ug/kg	1				
2-Methyl-4,6-dinitrophenol	U	0.00	42.3	1700	ug/kg	1				
2-Nitrophenol	U	0.00	4.66	423	ug/kg	1				
3,3'-Dichlorobenzidine	U	0.00	182	1300	ug/kg	1				
4-Bromophenylphenylether	U	0.00	5.93	423	ug/kg	1				
4-Chloro-3-methylphenol	U	0.00	25.0	423	ug/kg	1				
4-Chlorophenylphenylether	U	0.00	4.23	423	ug/kg	1				
4-Nitrophenol	U	0.00	198	1700	ug/kg	1				
Acenaphthene	U	0.00	5.08	330	ug/kg	1				
Acenaphthylene	U	0.00	4.66	330	ug/kg	1				
Anthracene	U	0.00	5.93	330	ug/kg	1				
Benzo(a)anthracene	U	0.00	7.62	330	ug/kg	1				
Benzo(a)pyrene	U	0.00	7.20	330	ug/kg	1				
Benzo(b)fluoranthene	U	0.00	11.4	330	ug/kg	1				
Benzo(ghi)perylene	U	0.00	11.4	330	ug/kg	1				
Benzo(k)fluoranthene	U	0.00	11.4	330	ug/kg	1				
Butylbenzylphthalate	U	0.00	15.2	423	ug/kg	1				
Chrysene	U	0.00	8.05	330	ug/kg	1				
Di-n-butylphthalate	U	0.00	17.8	423	ug/kg	1				
Di-n-octylphthalate	U	0.00	11.4	423	ug/kg	1				
Dibenzo(a,h)anthracene	U	0.00	5.93	330	ug/kg	1				
Diethylphthalate	U	0.00	8.05	423	ug/kg	1				
Dimethylphthalate	U	0.00	34.7	423	ug/kg	1				
Fluoranthene	U	0.00	6.35	330	ug/kg	1				
Fluorene	U	0.00	3.81	330	ug/kg	1				
Hexachlorobenzene	U	0.00	5.93	423	ug/kg	1				
Hexachlorobutadiene	U	0.00	8.47	423	ug/kg	1				
Hexachlorocyclopentadiene	U	0.00	2.96	423	ug/kg	1				
Hexachloroethane	U	0.00	5.50	423	ug/kg	1				
Indeno(1,2,3-cd)pyrene	U	0.00	11.4	330	ug/kg	1				
Isophorone	U	0.00	2.96	423	ug/kg	1				
N-Methyl-N-nitrosomethylamine	U	0.00	8.05	423	ug/kg	1				
N-Nitrosodiphenylamine	U	0.00	8.89	423	ug/kg	1				
N-Nitrosodipropylamine	U	0.00	8.47	423	ug/kg	1				
Naphthalene	U	0.00	4.23	330	ug/kg	1				
Nitrobenzene	U	0.00	14.0	423	ug/kg	1				
Pentachlorophenol	U	0.00	147	1700	ug/kg	1				
Phenanthrene	U	0.00	5.08	330	ug/kg	1				
Phenol	U	0.00	4.66	423	ug/kg	1				
Pyrene	U	0.00	11.0	330	ug/kg	1				
bis(2-Chloroethoxy)methane	U	0.00	7.62	423	ug/kg	1				

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 25, 2000

Client Sample ID: 065-004000328-31
Sample ID: 23714006

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Semi-Volatiles-GC/MS Federal										
3550C/8270C BNA Soil Federal										
bis(2-Chloroethyl) ether	U	0.00	8.47	423	ug/kg	1				
bis(2-Chloroisopropyl)ether	U	0.00	7.62	423	ug/kg	1				
bis(2-Ethylhexyl)phthalate	U	0.00	25.0	330	ug/kg	1				

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	846 3050BS PREP	AJM	04/03/00	1945	19151
SW846 3550B	3550B BNA Soil Prep-8270C Analysis Fed	RDH	04/03/00	1314	19098
SW846 7471A	EPA 7471 Mercury Prep Soil	ARD	04/03/00	2100	18859

The following Analytical Methods were performed

Method	Description
1	SW846 7471A
2	SW846 6010B
3	SW846 6010B
4	SW846 8270C

Surrogate recovery	Test	Recovery%	Acceptable Limits
2,4,6-Tribromophenol	3550C/8270C BNA Soil Federal	76%	(45%-126%)
2-Fluorobiphenyl	3550C/8270C BNA Soil Federal	65%	(45%-110%)
2-Fluorophenol	3550C/8270C BNA Soil Federal	62%	(37%-102%)
Nitrobenzene-d5	3550C/8270C BNA Soil Federal	48%	(42%-107%)
Phenol-d5	3550C/8270C BNA Soil Federal	57%	(42%-102%)
p-Terphenyl-d14	3550C/8270C BNA Soil Federal	73%	(46%-104%)

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

DL Failed required detection limit.
RI Not quantified due to interference.
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.
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Certificate of Analysis

Company : Brookhaven National Laboratory
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Project: Routine Analytical

Report Date: April 25, 2000

Client Sample ID: 065-004000328-31
Sample ID: 23714006

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method

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 25, 2000

Client Sample ID: 065-001000324-30
Sample ID: 23714007
Matrix: Soil
Collect Date: 24-MAR-00 09:36
Receive Date: 30-MAR-00 09:30
Collector: Client
Moisture: 9.41%

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Volatile Organics Federal										
5030/8260A TCL in Solid Fed										
1,1,1-Trichloroethane	U	0.00	0.173	1.10	ug/kg	1	MAP 03/31/00	1714	18955	1
1,1,2,2-Tetrachloroethane	U	0.00	0.215	1.10	ug/kg	1				
1,1,2-Trichloroethane	U	0.00	0.195	1.10	ug/kg	1				
1,1-Dichloroethane	U	0.00	0.255	1.10	ug/kg	1				
1,1-Dichloroethylene	U	0.00	0.289	1.10	ug/kg	1				
1,2-Dichloroethane	U	0.00	0.188	1.10	ug/kg	1				
1,2-Dichloroethylene (total)	U	0.00	0.408	2.21	ug/kg	1				
1,2-Dichloropropane	U	0.00	0.210	1.10	ug/kg	1				
2-Butanone	U	0.00	1.94	5.52	ug/kg	1				
2-Hexanone	U	0.00	1.47	5.52	ug/kg	1				
4-Methyl-2-pentanone	U	0.00	1.29	5.52	ug/kg	1				
Acetone	U	0.00	2.67	5.52	ug/kg	1				
Benzene	U	0.00	0.305	1.10	ug/kg	1				
Bromodichloromethane	U	0.00	0.214	1.10	ug/kg	1				
Bromoform	U	0.00	0.160	1.10	ug/kg	1				
Bromomethane	U	0.00	0.528	1.10	ug/kg	1				
Carbon disulfide	U	0.00	1.09	5.52	ug/kg	1				
Carbon tetrachloride	U	0.00	0.159	1.10	ug/kg	1				
Chlorobenzene	U	0.00	0.227	1.10	ug/kg	1				
Chloroethane	U	0.00	0.316	1.10	ug/kg	1				
Chloroform	U	0.00	0.225	1.10	ug/kg	1				
Chloromethane	U	0.00	0.212	1.10	ug/kg	1				
Dibromochloromethane	U	0.00	0.123	1.10	ug/kg	1				
Ethylbenzene	U	0.00	0.234	1.10	ug/kg	1				
Methylene chloride	J	1.45	1.07	5.52	ug/kg	1				
Styrene	U	0.00	0.219	1.10	ug/kg	1				
Tetrachloroethylene	U	0.00	0.642	1.10	ug/kg	1				
Toluene	J	0.438	0.286	1.10	ug/kg	1				
Trichloroethylene	U	0.00	1.10	1.10	ug/kg	1				
Vinyl acetate	U	0.00	3.53	5.52	ug/kg	1				
Vinyl chloride	U	0.00	0.282	1.10	ug/kg	1				
Xylenes (total)	U	0.00	0.751	3.31	ug/kg	1				
cis-1,3-Dichloropropylene	U	0.00	0.238	1.10	ug/kg	1				
trans-1,3-Dichloropropylene	U	0.00	0.180	1.10	ug/kg	1				

The following Prep Methods were performed

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 25, 2000

Client Sample ID: 065-001000324-30
Sample ID: 23714007

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035	5030/8260A and 5035/8260B Prep	MAP	03/31/00	1241	18953

The following Analytical Methods were performed

Method	Description
1	SW846 8260

Surrogate recovery	Test	Recovery%	Acceptable Limits
Bromofluorobenzene	5030/8260A TCL in Solid Fed	99%	(73%-129%)
Dibromofluoromethane	5030/8260A TCL in Solid Fed	109%	(66%-117%)
Toluene-d8	5030/8260A TCL in Solid Fed	98%	(73%-122%)

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

DL Failed required detection limit.
RI Not quantified due to interference.
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.
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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 25, 2000

Client Sample ID:	065-003000325-30	Project:	BRKL00297
Sample ID:	23714008	Client ID:	BRKL001
Matrix:	Soil	COC:	6567
Collect Date:	25-MAR-00 11:43		
Receive Date:	30-MAR-00 09:30		
Collector:	Client		
Moisture:	21.9%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Volatile Organics Federal											
5030/8260A TCL in Solid Fed											
1,1,1-Trichloroethane	U	0.00	0.201	1.28	ug/kg	1	MAP	03/31/00	1744	18955	1
1,1,2,2-Tetrachloroethane	U	0.00	0.250	1.28	ug/kg	1					
1,1,2-Trichloroethane	U	0.00	0.227	1.28	ug/kg	1					
1,1-Dichloroethane	U	0.00	0.296	1.28	ug/kg	1					
1,1-Dichloroethylene	U	0.00	0.336	1.28	ug/kg	1					
1,2-Dichloroethane	U	0.00	0.218	1.28	ug/kg	1					
1,2-Dichloroethylene (total)	U	0.00	0.474	2.56	ug/kg	1					
1,2-Dichloropropane	U	0.00	0.243	1.28	ug/kg	1					
2-Butanone	U	0.00	2.25	6.40	ug/kg	1					
2-Hexanone	U	0.00	1.70	6.40	ug/kg	1					
4-Methyl-2-pentanone	U	0.00	1.50	6.40	ug/kg	1					
Acetone	U	0.00	3.10	6.40	ug/kg	1					
Benzene	U	0.00	0.354	1.28	ug/kg	1					
Bromodichloromethane	U	0.00	0.248	1.28	ug/kg	1					
Bromoform	U	0.00	0.186	1.28	ug/kg	1					
Bromomethane	U	0.00	0.612	1.28	ug/kg	1					
Carbon disulfide	U	0.00	1.27	6.40	ug/kg	1					
Carbon tetrachloride	U	0.00	0.184	1.28	ug/kg	1					
Chlorobenzene	U	0.00	0.264	1.28	ug/kg	1					
Chloroethane	U	0.00	0.366	1.28	ug/kg	1					
Chloroform	U	0.00	0.261	1.28	ug/kg	1					
Chloromethane	U	0.00	0.246	1.28	ug/kg	1					
Dibromochloromethane	U	0.00	0.142	1.28	ug/kg	1					
Ethylbenzene	U	0.00	0.272	1.28	ug/kg	1					
Methylene chloride	J	1.32	1.24	6.40	ug/kg	1					
Styrene	U	0.00	0.254	1.28	ug/kg	1					
Tetrachloroethylene	U	0.00	0.745	1.28	ug/kg	1					
Toluene	J	0.507	0.332	1.28	ug/kg	1					
Trichloroethylene	U	0.00	1.28	1.28	ug/kg	1					
Vinyl acetate	U	0.00	4.10	6.40	ug/kg	1					
Vinyl chloride	U	0.00	0.327	1.28	ug/kg	1					
Xylenes (total)	U	0.00	0.871	3.84	ug/kg	1					
cis-1,3-Dichloropropylene	U	0.00	0.277	1.28	ug/kg	1					
trans-1,3-Dichloropropylene	U	0.00	0.209	1.28	ug/kg	1					

The following Prep Methods were performed

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 25, 2000

Client Sample ID: 065-003000325-30
Sample ID: 23714008

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035	5030/8260A and 5035/8260B Prep	MAP	03/31/00	1241	18953

The following Analytical Methods were performed

Method	Description
1	SW846 8260

Surrogate recovery	Test	Recovery%	Acceptable Limits
Bromofluorobenzene	5030/8260A TCL in Solid Fed	99%	(73%-129%)
Dibromofluoromethane	5030/8260A TCL in Solid Fed	109%	(66%-117%)
Toluene-d8	5030/8260A TCL in Solid Fed	97%	(73%-122%)

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

DL Failed required detection limit.
RI Not quantified due to interference.
U Sample result < .5*MDA and MDA <= RDL.
UJ .5*MDA < Sample result < MDA and MDA <= RDL.
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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 25, 2000

Client Sample ID:	065-003000325-31	Project:	BRKL00297
Sample ID:	23714009	Client ID:	BRKL001
Matrix:	Soil	COC:	6567
Collect Date:	25-MAR-00 11:43		
Receive Date:	30-MAR-00 09:30		
Collector:	Client		
Moisture:	4.51%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Volatile Organics Federal											
5030/8260A TCL in Solid Fed											
1,1,1-Trichloroethane	U	0.00	0.164	1.05	ug/kg	1	MAP	03/31/00	1814	18955	1
1,1,2,2-Tetrachloroethane	U	0.00	0.204	1.05	ug/kg	1					
1,1,2-Trichloroethane	U	0.00	0.185	1.05	ug/kg	1					
1,1-Dichloroethane	U	0.00	0.242	1.05	ug/kg	1					
1,1-Dichloroethylene	U	0.00	0.274	1.05	ug/kg	1					
1,2-Dichloroethane	U	0.00	0.178	1.05	ug/kg	1					
1,2-Dichloroethylene (total)	U	0.00	0.387	2.09	ug/kg	1					
1,2-Dichloropropane	U	0.00	0.199	1.05	ug/kg	1					
2-Butanone	U	0.00	1.84	5.24	ug/kg	1					
2-Hexanone	U	0.00	1.39	5.24	ug/kg	1					
4-Methyl-2-pentanone	U	0.00	1.23	5.24	ug/kg	1					
Acetone	U	0.00	2.53	5.24	ug/kg	1					
Benzene	U	0.00	0.289	1.05	ug/kg	1					
Bromodichloromethane	U	0.00	0.203	1.05	ug/kg	1					
Bromoform	U	0.00	0.152	1.05	ug/kg	1					
Bromomethane	U	0.00	0.501	1.05	ug/kg	1					
Carbon disulfide	U	0.00	1.03	5.24	ug/kg	1					
Carbon tetrachloride	U	0.00	0.151	1.05	ug/kg	1					
Chlorobenzene	U	0.00	0.216	1.05	ug/kg	1					
Chloroethane	U	0.00	0.299	1.05	ug/kg	1					
Chloroform	U	0.00	0.214	1.05	ug/kg	1					
Chloromethane	U	0.00	0.201	1.05	ug/kg	1					
Dibromochloromethane	U	0.00	0.116	1.05	ug/kg	1					
Ethylbenzene	U	0.00	0.222	1.05	ug/kg	1					
Methylene chloride	U	0.00	1.02	5.24	ug/kg	1					
Styrene	U	0.00	0.207	1.05	ug/kg	1					
Tetrachloroethylene	U	0.00	0.609	1.05	ug/kg	1					
Toluene	J	0.348	0.271	1.05	ug/kg	1					
Trichloroethylene	U	0.00	1.05	1.05	ug/kg	1					
Vinyl acetate	U	0.00	3.35	5.24	ug/kg	1					
Vinyl chloride	U	0.00	0.267	1.05	ug/kg	1					
Xylenes (total)	U	0.00	0.712	3.14	ug/kg	1					
cis-1,3-Dichloropropylene	U	0.00	0.226	1.05	ug/kg	1					
trans-1,3-Dichloropropylene	U	0.00	0.171	1.05	ug/kg	1					

The following Prep Methods were performed

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 25, 2000

Client Sample ID: 065-003000325-31
Sample ID: 23714009

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035	5030/8260A and 5035/8260B Prep	MAP	03/31/00	1241	18953

The following Analytical Methods were performed

Method	Description
1	SW846 8260

Surrogate recovery	Test	Recovery%	Acceptable Limits
Bromofluorobenzene	5030/8260A TCL in Solid Fed	100%	(73%-129%)
Dibromofluoromethane	5030/8260A TCL in Solid Fed	111%	(66%-117%)
Toluene-d8	5030/8260A TCL in Solid Fed	97%	(73%-122%)

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

DL Failed required detection limit.
RI Not quantified due to interference.
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 25, 2000

Client Sample ID: 076-400000323-12
Sample ID: 23720001
Matrix: Ground Water
Collect Date: 23-MAR-00 06:30
Receive Date: 30-MAR-00 09:30
Collector: Client

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Volatile Organics Federal											
5030/8260A TCL Liquid Federal											
1,1,1-Trichloroethane	U	0.00	0.093	1.00	ug/L	1	RMB	04/03/00	1541	18949	1
1,1,2,2-Tetrachloroethane	U	0.00	0.273	1.00	ug/L	1					
1,1,2-Trichloroethane	U	0.00	0.193	1.00	ug/L	1					
1,1-Dichloroethane	U	0.00	0.099	1.00	ug/L	1					
1,1-Dichloroethylene	U	0.00	0.090	1.00	ug/L	1					
1,2-Dichloroethane	U	0.00	0.158	1.00	ug/L	1					
1,2-Dichloroethylene (total)	U	0.00	0.370	2.00	ug/L	1					
1,2-Dichloropropane	U	0.00	0.070	1.00	ug/L	1					
2-Butanone		7.35	1.18	5.00	ug/L	1					
2-Hexanone	U	0.00	1.74	5.00	ug/L	1					
4-Methyl-2-pentanone	U	0.00	0.696	5.00	ug/L	1					
Acetone		18.3	0.224	5.00	ug/L	1					
Benzene	U	0.00	0.149	1.00	ug/L	1					
Bromodichloromethane	U	0.00	0.024	1.00	ug/L	1					
Bromoform	U	0.00	0.085	1.00	ug/L	1					
Bromomethane	U	0.00	0.628	1.00	ug/L	1					
Carbon disulfide	U	0.00	0.349	5.00	ug/L	1					
Carbon tetrachloride	U	0.00	0.124	1.00	ug/L	1					
Chlorobenzene	U	0.00	0.603	1.00	ug/L	1					
Chloroethane	U	0.00	0.140	1.00	ug/L	1					
Chloroform	U	0.00	0.198	1.00	ug/L	1					
Chloromethane	U	0.00	0.179	1.00	ug/L	1					
Dibromochloromethane	U	0.00	0.089	1.00	ug/L	1					
Ethylbenzene	J	0.146	0.051	1.00	ug/L	1					
Methylene chloride	U	0.00	0.971	5.00	ug/L	1					
Styrene	U	0.00	0.078	1.00	ug/L	1					
Tetrachloroethylene	U	0.00	0.385	1.00	ug/L	1					
Toluene	U	0.00	0.262	1.00	ug/L	1					
Trichloroethylene	U	0.00	0.150	1.00	ug/L	1					
Vinyl acetate	U	0.00	1.86	5.00	ug/L	1					
Vinyl chloride	U	0.00	0.096	1.00	ug/L	1					
Xylenes (total)	J	1.46	0.437	3.00	ug/L	1					
cis-1,2-Dichloroethylene	U	0.00	0.129	1.00	ug/L	1					
cis-1,3-Dichloropropylene	U	0.00	0.035	1.00	ug/L	1					
trans-1,2-Dichloroethylene	U	0.00	0.105	1.00	ug/L	1					
trans-1,3-Dichloropropylene	U	0.00	0.106	1.00	ug/L	1					

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Contact: Ms. Anna Bou
Project: Routine Analytical

Report Date: April 25, 2000

Client Sample ID: 076-400000323-12
Sample ID: 23720001

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 8260	8260A Volatiles In Liquid Federal	RMB	04/03/00	1541	18949

The following Analytical Methods were performed

Method	Description
1	SW846 8260

Surrogate recovery	Test	Recovery%	Acceptable Limits
Bromofluorobenzene	5030/8260A TCL Liquid Federal	102%	(73%-129%)
Dibromofluoromethane	5030/8260A TCL Liquid Federal	99%	(66%-117%)
Toluene-d8	5030/8260A TCL Liquid Federal	106%	(73%-122%)

Notes:
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RI Not quantified due to interference.
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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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 25, 2000

Client Sample ID: 076-400000327-12
Sample ID: 23720002
Matrix: Ground Water
Collect Date: 27-MAR-00 08:25
Receive Date: 30-MAR-00 09:30
Collector: Client

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Volatile Organics Federal											
5030/8260A TCL Liquid Federal											
1,1,1-Trichloroethane	U	0.00	0.093	1.00	ug/L	1	RMB	04/03/00	1612	18949	1
1,1,2,2-Tetrachloroethane	U	0.00	0.273	1.00	ug/L	1					
1,1,2-Trichloroethane	U	0.00	0.193	1.00	ug/L	1					
1,1-Dichloroethane	U	0.00	0.099	1.00	ug/L	1					
1,1-Dichloroethylene	U	0.00	0.090	1.00	ug/L	1					
1,2-Dichloroethane	U	0.00	0.158	1.00	ug/L	1					
1,2-Dichloroethylene (total)	U	0.00	0.370	2.00	ug/L	1					
1,2-Dichloropropane	U	0.00	0.070	1.00	ug/L	1					
2-Butanone	J	4.30	1.18	5.00	ug/L	1					
2-Hexanone	U	0.00	1.74	5.00	ug/L	1					
4-Methyl-2-pentanone	U	0.00	0.696	5.00	ug/L	1					
Acetone		12.7	0.224	5.00	ug/L	1					
Benzene	U	0.00	0.149	1.00	ug/L	1					
Bromodichloromethane	U	0.00	0.024	1.00	ug/L	1					
Bromoform	U	0.00	0.085	1.00	ug/L	1					
Bromomethane	U	0.00	0.628	1.00	ug/L	1					
Carbon disulfide	U	0.00	0.349	5.00	ug/L	1					
Carbon tetrachloride	U	0.00	0.124	1.00	ug/L	1					
Chlorobenzene	U	0.00	0.603	1.00	ug/L	1					
Chloroethane	U	0.00	0.140	1.00	ug/L	1					
Chloroform	U	0.00	0.198	1.00	ug/L	1					
Chloromethane	U	0.00	0.179	1.00	ug/L	1					
Dibromochloromethane	U	0.00	0.089	1.00	ug/L	1					
Ethylbenzene	J	0.134	0.051	1.00	ug/L	1					
Methylene chloride	J	1.03	0.971	5.00	ug/L	1					
Styrene	U	0.00	0.078	1.00	ug/L	1					
Tetrachloroethylene	U	0.00	0.385	1.00	ug/L	1					
Toluene	U	0.00	0.262	1.00	ug/L	1					
Trichloroethylene	U	0.00	0.150	1.00	ug/L	1					
Vinyl acetate	U	0.00	1.86	5.00	ug/L	1					
Vinyl chloride	U	0.00	0.096	1.00	ug/L	1					
Xylenes (total)	J	1.31	0.437	3.00	ug/L	1					
cis-1,2-Dichloroethylene	U	0.00	0.129	1.00	ug/L	1					
cis-1,3-Dichloropropylene	U	0.00	0.035	1.00	ug/L	1					
trans-1,2-Dichloroethylene	U	0.00	0.105	1.00	ug/L	1					
trans-1,3-Dichloropropylene	U	0.00	0.106	1.00	ug/L	1					

The following Prep Methods were performed

Certificate of Analysis

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

Report Date: April 25, 2000

Client Sample ID: 076-400000327-12
Sample ID: 23720002

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 8260	8260A Volatiles In Liquid Federal	RMB	04/03/00	1612	18949

The following Analytical Methods were performed

Method	Description
1	SW846 8260

Surrogate recovery	Test	Recovery%	Acceptable Limits
Bromofluorobenzene	5030/8260A TCL Liquid Federal	102%	(73%-129%)
Dibromofluoromethane	5030/8260A TCL Liquid Federal	100%	(66%-117%)
Toluene-d8	5030/8260A TCL Liquid Federal	106%	(73%-122%)

Notes:
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DL Failed required detection limit.
RI Not quantified due to interference.
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 25, 2000

Client Sample ID: 076-401000328-18
Sample ID: 23720003
Matrix: Ground Water
Collect Date: 28-MAR-00 09:04
Receive Date: 30-MAR-00 09:30
Collector: Client

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Volatile Organics Federal											
5030/8260A TCL Liquid Federal											
1,1,1-Trichloroethane	U	0.00	0.093	1.00	ug/L	1	RMB	04/03/00	1643	18949	1
1,1,2,2-Tetrachloroethane	U	0.00	0.273	1.00	ug/L	1					
1,1,2-Trichloroethane	U	0.00	0.193	1.00	ug/L	1					
1,1-Dichloroethane	U	0.00	0.099	1.00	ug/L	1					
1,1-Dichloroethylene	U	0.00	0.090	1.00	ug/L	1					
1,2-Dichloroethane	U	0.00	0.158	1.00	ug/L	1					
1,2-Dichloroethylene (total)	U	0.00	0.370	2.00	ug/L	1					
1,2-Dichloropropane	U	0.00	0.070	1.00	ug/L	1					
2-Butanone	U	0.00	1.18	5.00	ug/L	1					
2-Hexanone	U	0.00	1.74	5.00	ug/L	1					
4-Methyl-2-pentanone	U	0.00	0.696	5.00	ug/L	1					
Acetone	J	4.17	0.224	5.00	ug/L	1					
Benzene	U	0.00	0.149	1.00	ug/L	1					
Bromodichloromethane	U	0.00	0.024	1.00	ug/L	1					
Bromoform	U	0.00	0.085	1.00	ug/L	1					
Bromomethane	U	0.00	0.628	1.00	ug/L	1					
Carbon disulfide	U	0.00	0.349	5.00	ug/L	1					
Carbon tetrachloride	U	0.00	0.124	1.00	ug/L	1					
Chlorobenzene	U	0.00	0.603	1.00	ug/L	1					
Chloroethane	U	0.00	0.140	1.00	ug/L	1					
Chloroform	U	0.00	0.198	1.00	ug/L	1					
Chloromethane	U	0.00	0.179	1.00	ug/L	1					
Dibromochloromethane	U	0.00	0.089	1.00	ug/L	1					
Ethylbenzene	J	0.142	0.051	1.00	ug/L	1					
Methylene chloride		5.99	0.971	5.00	ug/L	1					
Styrene	U	0.00	0.078	1.00	ug/L	1					
Tetrachloroethylene	U	0.00	0.385	1.00	ug/L	1					
Toluene	U	0.00	0.262	1.00	ug/L	1					
Trichloroethylene	U	0.00	0.150	1.00	ug/L	1					
Vinyl acetate	U	0.00	1.86	5.00	ug/L	1					
Vinyl chloride	U	0.00	0.096	1.00	ug/L	1					
Xylenes (total)	J	1.48	0.437	3.00	ug/L	1					
cis-1,2-Dichloroethylene	U	0.00	0.129	1.00	ug/L	1					
cis-1,3-Dichloropropylene	U	0.00	0.035	1.00	ug/L	1					
trans-1,2-Dichloroethylene	U	0.00	0.105	1.00	ug/L	1					
trans-1,3-Dichloropropylene	U	0.00	0.106	1.00	ug/L	1					

The following Prep Methods were performed

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 25, 2000

Client Sample ID: 076-401000328-18
Sample ID: 23720003

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 8260	8260A Volatiles In Liquid Federal	RMB	04/03/00	1643	18949

The following Analytical Methods were performed

Method	Description
1	SW846 8260

Surrogate recovery	Test	Recovery%	Acceptable Limits
Bromofluorobenzene	5030/8260A TCL Liquid Federal	101%	(73%-129%)
Dibromofluoromethane	5030/8260A TCL Liquid Federal	99%	(66%-117%)
Toluene-d8	5030/8260A TCL Liquid Federal	106%	(73%-122%)

Notes:
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DL Failed required detection limit.
RI Not quantified due to interference.
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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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 25, 2000

Client Sample ID:	076-401000328-18	Project:	BRKL00297
Sample ID:	23720005	Client ID:	BRKL001
Matrix:	Ground Water	COC:	6567
Collect Date:	29-MAR-00 09:08		
Receive Date:	30-MAR-00 09:30		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP Federal											
6010 TAL Metals Liquid Federal											
Aluminum	J	34.2	23.4	200	ug/L	1	KAR	04/07/00	1731	19895	1
Antimony	U	0.265	3.43	60.0	ug/L	1					
Arsenic	U	-0.338	2.57	10.0	ug/L	1					
Barium	U	0.395	0.748	200	ug/L	1					
Beryllium	U	-0.0903	0.474	5.00	ug/L	1					
Cadmium	U	0.227	0.631	5.00	ug/L	1					
Calcium	U	26.4	35.5	5000	ug/L	1					
Chromium	U	-0.0726	1.06	10.0	ug/L	1					
Cobalt	U	-0.0509	0.627	50.0	ug/L	1					
Copper	U	-1.12	1.84	25.0	ug/L	1					
Iron	U	7.65	19.9	100	ug/L	1					
Lead	U	-0.486	1.83	5.00	ug/L	1					
Magnesium	J	7.81	3.54	5000	ug/L	1					
Manganese	U	0.342	1.15	15.0	ug/L	1					
Nickel	U	0.361	3.09	40.0	ug/L	1					
Potassium	U	-1.51	16.4	5000	ug/L	1					
Selenium	U	-0.845	2.36	5.00	ug/L	1					
Silver	J	0.826	0.529	10.0	ug/L	1					
Sodium	J	55.1	13.0	5000	ug/L	1					
Thallium	U	-2.76	3.93	10.0	ug/L	1					
Vanadium	U	-0.283	0.890	50.0	ug/L	1					
Zinc	J	4.33	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	AJM	04/03/00	1845	18858
SW846 7470A	EPA 7470 Mercury Prep Liquid Federal	ARD	04/03/00	1930	18855

The following Analytical Methods were performed

Method	Description
1	SW846 6010B

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

DL Failed required detection limit.
RI Not quantified due to interference.

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 25, 2000

Client Sample ID: 076-401000328-18
Sample ID: 23720005

Project: BRKL00297
Client ID: BRKL001
COC: 6567

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method

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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