

October 9, 2001

Ms. Kathleen Newcomer
Suffolk County Department of Health Services
Drinking Water Supply Section
220 Rabro Drive East
Hauppauge, New York 11788

Dear Ms. Newcomer:

SUBJECT: Monthly Water Treatment Plant Reports
Reference: Suffolk County Minimum Monitoring Requirements for September 2001

In accordance with the requirements of the BNL Potable Water System Sampling Plan and the 2001 SCDHS Minimum Monitoring Requirements for the BNL Potable Water Supply, included please find the following attachments for your records:

- Attachment I: BNL Potable Water Monthly Bacteriological and Operational Reports for September 2001.
- Attachment II: September 2001 Biweekly Water Quality Monitoring Data for BNL Potable Water Wells and Quarterly Water Quality Data for the BNL Distribution System.
- Attachment III: 2001 Third Quarter Radiological Analyses for the BNL Potable Water Wells.

All analytical results have been reviewed and have been found to be within New York State Department of Health Drinking Water Standards (NYSDOH DWS). Collection and analysis of these samples are performed in accordance with the guidelines of the BNL Quality Assurance program, the SCDHS Community Water Supply Monitoring Requirements, and the BNL Potable Water System Sampling Plan. Plant Engineering Division personnel using standard operating procedures collect routine monitoring samples; a contractor laboratory using standard methods of analysis performs the subsequent analyses. The Quality Assurance documentation is available from the Environmental Services Division and Plant Engineering Divisions. Based on this information, we believe the values contained in these reports are representative of the BNL potable water system.

Should there be any questions regarding this report or the analytical or operational data contained herein, please call either R. Lee at (631) 344-3148, M. Allocco at (631) 344-3166, or W. Chaloupka at (631) 344-7136.

Sincerely,



Lori Cunniff, CEP
Division Manager



LEC/MA:rt

Attachments: As noted

cc:	M. Allocco	w/attachments
	W. Chaloupka	w/attachments
	J. Granzen	w/attachments
	R. Lee	w/attachments
	E. Murphy	w/attachments
	P. Ponturo	SCDHS, w/o attachments
	L. Ross	w/o attachments
	T. Sheridan	w/o attachments

EC61ER.01

ATTACHMENT I

**Brookhaven National Laboratory
Potable Water Supply**

**Monthly Bacteriological and Operational
Reports for September 2001**

BROOKHAVEN NATIONAL LABORATORY

WATER SYSTEMS OPERATION REPORT

PUBLIC WATER SUPPLY PROTECTION

PROGRAM CODE 169	STATION 11515100	SUFFOLK COUNTY	REPORTING PERIOD: SEPTEMBER 2001
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LOCATION: Water Treatment Facility

Did an emergency occur in any part of the water system? YES NO

Source: Ground Water

Does the system have a chlorination waiver? YES NO

Day of month	CHLORINATION				pH		Totalizer Daily Totalizer 12401035
	Treated Water K Gals	Liquid Sodium Hypochlorite		Free Cl2 Residual mg/l	Lime	Totalizer	
		Gallons	Cl2 use per 24hrs		Sodium Hydroxide		
1	0						
2	0						
3	3,554	90	25	0.8	7	12404589	
4	0						
5	3,267	60+140	30	0.65	6.5	12407856	
6	1,365	188	12	0.83	7	12409221	
7	1,358	175	13	0.72	7	12410579	
8	0						
9	0						
10	4,121	142	33	0.74	7.4	12414700	
11	1,385	131	11	0.7	7.4	12416085	
12	1,433	120	11	0.95	7.4	12417518	
13	1,346	110	10	0.78	7.5	12418864	
14	1,374	99	11	0.75	7.9	12420238	
15	0					0	
16	0					0	
17	4,056	65+133	34	0.48	6.3	12424294	
18	1,387	188	10	0.91	6.6	12425681	
19	1,358	177	11	0.63	6.6	12427039	
20	1,409	161	16	0.71	6.7	12428448	
21	1,366	152	9	0.62	7	12429814	
22	0						
23	0						
24	2,451	140	12	0.8	7.2	12432265	
25	1,307	130	10	0.9	7.3	12433572	
26	1,393	119	11	1	7.4	12434965	
27	1,347	109	10	0.8	7.3	12436312	
28	1,359	95	14	0.68	7.3	12437671	
29	0						
30	0						
31	1,872	82	12	0.66	7.3	12439543	
TOT	38,508		305				
AVG.	1283.60		10.17	No. Days:	30		

Population Served 3,500

Number of routine samples 4

(Must collect a minimum of 5 routine samples the month following a repeat sample collection)

Number of actual routine samples 7

Does a M&AR violation exist? YES NO

If yes, check reason's below.

Actual number of samples fewer than required.

Failure to analyze for E. Coli if there was a positive result for total coliform from routine, repeat of high turbidity sample.

Failure to analyze repeat samples.

Does an MCL violation exist? YES NO

If yes, check reason(s) below.

Two or more positive total coliform samples for systems collecting 40 or more samples (routine, repeat or hiturb) per month.

Positive E. Coli result followed by a positive total coliform repeat sample.

Positive total coliform result followed by a positive E. Coli repeat sample.

Reported by: *J. J. [Signature]*

Date: 10-3-01

Title: Water Systems Supervisor

Certification No. NY0031941

BROOKHAVEN NATIONAL LABORATORY

WATER SYSTEMS OPERATION REPORT

PUBLIC WATER SUPPLY PROTECTION

PROGRAM CODE 169	STATION 11515100	SUFFOLK COUNTY	REPORTING PERIOD: SEPTEMBER 2001
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LOCATION: WELL NO. 4

Did an emergency occur in any part of the water system? YES NO

Source: Ground Water Does the system have a chlorination waiver? YES NO

Day of month	CHLORINATION				pH		Totalizer Daily Totalizer 1479844
	Treated Water K Gals	Liquid Sodium Hypochlorite		Free Cl2 Residual mg/l	Lime Sodium Hydroxide		
		Gallons	Cl2 use per 24hrs				
1	0						
2	0						
3	0	130	0	NR	NR	1479844	
4	0						
5	0	130	0	NR	NR	1479844	
6	0	130	0	NR	NR	1479844	
7	0	130	0	NR	NR	1479844	
8	0						
9	0						
10	0	130	0	NR	NR	1479844	
11	0	130	0	NR	NR	1479844	
12	0	130	0	NR	NR	1479844	
13	0	130	0	NR	NR	1479844	
14	0	130	0	NR	NR	1479844	
15	0						
16	0						
17	0	130	0	NR	NR	1479844	
18	0	130	0	NR	NR	1479844	
19	0	130	0	NR	NR	1479844	
20	0	130	0	NR	NR	1479844	
21	0	130	0	NR	NR	1479844	
22	0						
23	0						
24	0	130	0	NR	NR	1479844	
25	0	130	0	NR	NR	1479844	
26	0	130	0	NR	NR	1479844	
27	0	130	0	NR	NR	1479844	
28	0	130	0	NR	NR	1479844	
29	0						
30	0	130	0	NR	NR	1479844	
31	0						
TOT	0		0				
AVG.	0.00		0.00	No. Days.	30		

Population Served 3,500

Number of routine samples 4

(Must collect a minimum of 5 routine samples the month following a repeat sample collection)

Number of actual routine samples 7

Does a M&AR violation exist? YES NO

If yes, check reason's below.

Actual number of samples fewer than required.

Failure to analyze for E. Coli if there was a positive result for total coliform from routine, repeat of high turbidity sample.

Failure to analyze repeat samples.

Does an MCL violation exist? YES NO

If yes, check reason(s) below.

Two or more positive total coliform samples for systems collecting 40 or more samples (routine, repeat or hiturb) per month

Positive E. Coli result followed by a positive total coliform repeat sample

Positive total coliform result followed by a positive E. Coli repeat sample

Reported by: JC Ross

Date: 10-3-01

Title: Water Systems Supervisor

Certification No NY0031941

BROOKHAVEN NATIONAL LABORATORY

WATER SYSTEMS OPERATION REPORT

PUBLIC WATER SUPPLY PROTECTION

PROGRAM CODE 169	STATION 11515100	SUFFOLK COUNTY	REPORTING PERIOD: SEPTEMBER 2001
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LOCATION: WELL NO. 6

Did an emergency occur in any part of the water system? YES NO

Source: Ground Water

Does the system have a chlorination waiver? YES NO

Day of month	CHLORINATION			pH		Totalizer
	Treated Water	Liquid Sodium Hypochlorite	Free Cl ₂	___ Lime	Daily Totalizer	
	K Gals	Gallons 200	Cl ₂ use per 24hrs	Residual mg/l		___ Sodium Hydroxide
1	0					
2	0					
3	1,398	180	20	0.08	5.7	221561
4	0					
5	1,411	150	30	0.01	5.7	222972
6	572	140	10	0.01	5.6	223544
7	514	132+68	8	0.02	5.6	224058
8	0					
9	0					
10	1,417	177	23	0.03	5.9	225475
11	529	168	9	0.018	6	226004
12	598	154	14	0.02	6	226602
13	616	142	12	0.018	6.1	227218
14	454	137	5	0.02	5.7	227672
15	0					
16	0					
17	1,598	109	28	0.02	5.5	229270
18	610	95	9	0.02	5.7	229880
19	474	89	6	0.01	5.4	230354
20	647	75+125	14	0.01	5.4	231001
21	531	189	11	0.02	5.5	231532
22	0					
23	0					
24	1,300	168	21	0.02	5.8	232832
25	515	158	10	0.02	6	233347
26	822	140	18	0.03	6.1	234169
27	857	128	12	1.1	5.6	235026
28	935	110+55	18	0.18	5.8	235961
29	0					
30	1,290	145	20	0.09	5.8	237251
31	0					
TOT	17,088		298			
AVG.	569.60		9.93	No. Days:	30	

Population Served 3,500

Number of routine samples 4

(Must collect a minimum of 5 routine samples the month following a repeat sample collection)

Number of actual routine samples 7

Does a M&AR violation exist? YES NO

If yes, check reason's below.

___ Actual number of samples fewer than required.

___ Failure to analyze for E. Coli if there was a positive result for total coliform from routine, repeat of high turbidity sample.

___ Failure to analyze repeat samples.

Does an MCL violation exist? YES NO

If yes, check reason(s) below.

___ Two or more positive total coliform samples for systems collecting 40 or more samples (routine, repeat or hiturb) per month.

___ Positive E. Coli result followed by a positive total coliform repeat sample.

___ Positive total coliform result followed by a positive E. Coli repeat sample.

Reported by: J.C. [Signature]

Date: 10-3-01

Title: Water Systems Supervisor

Certification No. NY0031941

BROOKHAVEN NATIONAL LABORATORY

WATER SYSTEMS OPERATION REPORT

PUBLIC WATER SUPPLY PROTECTION

PROGRAM CODE 169	STATION 11515100	SUFFOLK COUNTY	REPORTING PERIOD: SEPTEMBER 2001
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LOCATION: WELL NO. 7

Did an emergency occur in any part of the water system? YES NO

Source: Ground Water

Does the system have a chlorination waiver? YES NO

Day of month	CHLORINATION				pH		Totalizer Daily Totalizer 586945
	Treated Water K Gals	Liquid Sodium Hypochlorite		Free Cl2 Residual mg/l	Lime Sodium Hydroxide		
		Gallons	Cl2 use per 24hrs		___ Lime	___ Sodium Hydroxide	
1	0	150					
2	0						
3	2,352	130	20	0.8	5.7	589297	
4	0						
5	4,441	110	20	0.01	5.7	593738	
6	1,369	105	5	0.01	5.6	595107	
7	1,337	100+100	5	0.02	5.6	596444	
8	0						
9	0						
10	4,290	178	22	0.03	5.9	600734	
11	1,324	170	8	0.018	6	602058	
12	1,304	163	7	0.018	6	603362	
13	1,381	159	4	0.018	6.1	604743	
14	1,352	151	8	0.02	5.7	606095	
15	0						
16	0						
17	3,945	138	13	0.02	5.5	610040	
18	1,429	138	0	0.02	5.7	611469	
19	1,427	138	0	0.01	5.4	612896	
20	1,282	120+10	18	0.16	5.4	614178	
21	1,390	115	15	0.02	5.5	615568	
22	0						
23	0						
24	2,499	80	35	0.02	5.9	618067	
25	1,190	80+100	0	0.018	6	619257	
26	1,419	147	33	0.03	6.1	620676	
27	1,422	118	29	1.1	5.6	622098	
28	1,427	90+110	28	0.18	5.9	623525	
29	0						
30	1,986	170	30	0.011	5.8	625511	
31	0						
TOT	38,566		300				
AVG.	1285.53		10.00	No. Days:	30		

Population Served 3,500

Number of routine samples 4
 (Must collect a minimum of 5 routine samples the month following a repeat sample collection)

Number of actual routine samples 7

Does a M&AR violation exist? YES NO

If yes, check reason's below.
 ___ Actual number of samples fewer than required.

___ Failure to analyze for E. Coli if there was a positive result for total coliform from routine, repeat of high turbidity sample.

___ Failure to analyze repeat samples

Does an MCL violation exist? YES NO

If yes, check reason(s) below.
 ___ Two or more positive total coliform samples for systems collecting 40 or more samples (routine, repeat or hiturb) per month

___ Positive E. Coli result followed by a positive total coliform repeat sample

___ Positive total coliform result followed by a positive E. Coli repeat sample

Reported by: *M. J. Smith*

Date: 10-3-01

Title: Water Systems Supervisor

Certification No: NY0031941

BROOKHAVEN NATIONAL LABORATORY

WATER SYSTEMS OPERATION REPORT

PUBLIC WATER SUPPLY PROTECTION

PROGRAM CODE 169	STATION 11515100	SUFFOLK COUNTY	REPORTING PERIOD: SEPTEMBER 2001
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LOCATION: WELL NO. 10

Did an emergency occur in any part of the water system? YES NO

Source: Ground Water Does the system have a chlorination waiver? YES NO

Day of month	CHLORINATION				pH		Totalizer Daily Totalizer 764243
	Treated Water K Gals	Liquid Sodium Hypochlorite		Free Cl2 Residual mg/l	Lime Sodium Hydroxide		
		Gallons	Cl2 use per 24hrs				
1	0						
2	0						
3	0	58	0	NR	NR	764243	
4	0						
5	0	58	0	NR	NR	764243	
6	0	58	0	NR	NR	764243	
7	0	58	0	NR	NR	764243	
8	0						
9	0						
10	0	58	0	NR	NR	764243	
11	0	58	0	NR	NR	764243	
12	0	58	0	NR	NR	764243	
13	0	58	0	NR	NR	764243	
14	0	58	0	NR	NR	764243	
15	0						
16	0						
17	0	58	0	NR	NR	764243	
18	0	58	0	NR	NR	764243	
19	0	58	0	NR	NR	764243	
20	0	58	0	NR	NR	764243	
21	0	58	0	NR	NR	764243	
22	0						
23	0						
24	0	58	0	NR	NR	764243	
25	0	58	0	NR	NR	764243	
26	0	58	0	NR	NR	764243	
27	0	58	0	NR	NR	764243	
28	0	58	0	NR	NR	764243	
29	0						
30	0	58	0	NR	NR	764243	
31	0						
TOT	0		0				
AVG.	0.00		0.00	No. Days:	30		

Population Served 3,500

Number of routine samples 4

(Must collect a minimum of 5 routine samples the month following a repeat sample collection)

Number of actual routine samples 7

Does a M&AR violation exist? YES NO

If yes, check reason's below.

Actual number of samples fewer than required.

Failure to analyze for E. Coli if there was a positive result for total coliform from routine, repeat of high turbidity sample.

Failure to analyze repeat samples.

Does an MCL violation exist? YES NO

If yes, check reason(s) below.

Two or more positive total coliform samples for systems collecting 40 or more samples (routine, repeat or hiturb) per month.

Positive E. Coli result followed by a positive total coliform repeat sample.

Positive total coliform result followed by a positive E. Coli repeat sample.

Reported by: *J. D. Reed*

Date: 10-3-01

Title: Water Systems Supervisor

Certification No. NY0031941

BROOKHAVEN NATIONAL LABORATORY

WATER SYSTEMS OPERATION REPORT

PUBLIC WATER SUPPLY PROTECTION

PROGRAM CODE 169

STATION 11515100

SUFFOLK COUNTY

REPORTING PERIOD: SEPTEMBER 2001

LOCATION: WELL NO. 11

Did an emergency occur in any part of the water system? YES NO

Source: Ground Water

Does the system have a chlorination waiver? YES NO

Day of month	CHLORINATION				pH		Totalizer Daily Totalizer 364657
	Treated Water K Gals	Liquid Sodium Hypochlorite		Free Cl2 Residual mg/l	Lime Sodium Hydroxide		
		Gallons	Cl2 use per 24hrs				
1	0						
2	0						
3	0	95	0	NR	NR	364657	
4	0						
5	0	95	0	0.45	7.4	364657	
6	4	92	3	0.56	7.6	364661	
7	2	92+108	0	NR	NR	364663	
8	0						
9	0						
10	0	200	0	NR	NR	364663	
11	5	200	0	NR	NR	364668	
12	0	200	0	NR	NR	364668	
13	0	200	0	7.3	0.5	364668	
14	2	200	0	NR	NR	364670	
15	0						
16	0						
17	0	200	0	NR	NR	364670	
18	0	200	0	NR	NR	364670	
19	0	200	0	NR	NR	364670	
20	0	200	0	NR	NR	364670	
21	5	200	0	1	7.3	364675	
22	0						
23	0						
24	1,600	187	13	0.76	6.5	366275	
25	2	182	5	0.72	7.4	366277	
26	2	182	0	0.55	6.2	366279	
27	2	185	0	0.6	6.6	366281	
28	1	185	0	0.57	7.8	366282	
29	0						
30	1	185	0	0.62	7.4	366283	
31	0						
TOT	1,626		21				
AVG.	54.20		0.70	No. Days.	30		

Population Served 3,500

Number of routine samples 4

(Must collect a minimum of 5 routine samples the month following a repeat sample collection)

Number of actual routine samples 7

Does a M&AR violation exist? YES NO

If yes, check reason's below.

Actual number of samples fewer than required.

Failure to analyze for E. Coli if there was a positive result for total coliform from routine, repeat of high turbidity sample.

Failure to analyze repeat samples.

Does an MCL violation exist? YES NO

If yes, check reason(s) below.

Two or more positive total coliform samples for systems collecting 40 or more samples (routine, repeat or hiturb) per month.

Positive E. Coli result followed by a positive total coliform repeat sample

Positive total coliform result followed by a positive E. Coli repeat sample

Reported by: JCC [Signature]

Date: 10-3-01

Title: Water Systems Supervisor

Certification No NY0031941

BROOKHAVEN NATIONAL LABORATORY

WATER SYSTEMS OPERATION REPORT

PUBLIC WATER SUPPLY PROTECTION

PROGRAM CODE 169

STATION 11515100

SUFFOLK COUNTY

REPORTING PERIOD: SEPTEMBER 2001

LOCATION: WELL NO. 12

Did an emergency occur in any part of the water system? YES NO

Source: Ground Water

Does the system have a chlorination waiver? YES NO

Day of month	CHLORINATION				pH		Totalizer Daily Totalizer
	Treated Water	Liquid Sodium Hypochlorite		Free Cl ₂ Residual	Lime		
		Gallons	Cl ₂ use per 24hrs		Sodium Hydroxide		
	K Gals	125		mg/l			351478
1	0						
2	0						
3	875	120	5	6.5	7.5		352353
4	0						
5	382	112	8	0.98	7.6		352715
6	198	112	0	0.61	7.7		352913
7	217	110+75	2	NR	NR		353130
8	0						0
9	0						
10	1,175	175	10	0.57	7.6		354305
11	674	175	10	0.57	7.6		354979
12	0	170	5	0.58	7.7		354979
13	3	165	5	1	8		354982
14	500	165	0	0.56	7.2		355482
15	0						
16	0						
17	1	165	1	0.43	7.8		355483
18	172	160	5	0.52	8		355655
19	206	160	0	0.52	7.5		355861
20	175	159	1	0.52	7.6		356036
21	471	154	5	NR	NR		356507
22	0						
23	0						
24	1,971	140	14	0.78	7.8		358478
25	871	132	8	0.68	7.9		359349
26	368	130	2	0.44	7.7		359717
27	242	130	0	0.57	7.6		359959
28	142	130	0	0.6	7.6		360101
29	0						
30	250	130	0	0.5	7.6		360351
31	0						
TOT	8,873		81				
AVG.	295.77		2.70	No. Days:	30		

Population Served 3,500

Number of routine samples 4

(Must collect a minimum of 5 routine samples the month following a repeat sample collection)

Number of actual routine samples 7

Does a M&AR violation exist? YES NO

If yes, check reason's below.

Actual number of samples fewer than required.

Failure to analyze for E. Coli if there was a positive result for total coliform from routine, repeat of high turbidity sample.

Failure to analyze repeat samples.

Does an MCL violation exist? YES NO

If yes, check reason(s) below.

Two or more positive total coliform samples for systems collecting 40 or more samples (routine, repeat or hiturb) per month.

Positive E. Coli result followed by a positive total coliform repeat sample

Positive total coliform result followed by a positive E. Coli repeat sample.

Reported by: J.C. West

Date: 10-3-01

Title: Water Systems Supervisor

Certification No. NY0031941

10/1/01
Pump Data

MONTHLY GALLONAGE REPORT
2001SEPTEMBER

Date	Well 4	Well 6	Well 7	Well10	Well11	Well12	Daily Total
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	1,398	2,352	0	0	875	4,625
4	0	0	0	0	0	0	0
5	0	1,411	4,441	0	0	362	6,214
6	0	572	1,369	0	4	198	2,143
7	0	514	1,337	0	2	217	2,070
8	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0
10	0	1,417	4,290	0	0	1,175	6,882
11	0	529	1,324	0	5	674	2,532
12	0	598	1,304	0	0	0	1,902
13	0	616	1,381	0	0	3	2,000
14	0	454	1,352	0	2	500	2,308
15	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0
17	0	1,598	3,945	0	0	1	5,544
18	0	610	1,429	0	0	172	2,211
19	0	474	1,427	0	0	206	2,107
20	0	647	1,282	0	0	175	2,104
21	0	531	1,390	0	5	471	2,397
22	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0
24	0	1,300	2,499	0	1,600	1,971	7,370
25	0	515	1,190	0	2	871	2,578
26	0	822	1,419	0	2	368	2,611
27	0	857	1,422	0	2	242	2,523
28	0	935	1,427	0	1	142	2,505
29	0	0	0	0	0	0	0
30	0	1,290	1,986	0	1	250	3,527
31	0	0	0	0	0	0	0
Total	0	17,088	38,566	0	1,626	8,873	66,153
			Totalizer		Totalizer		Total(x1,000)
			This Month		Last Month		Gallons
	Well 4		1,479,844		1,479,844		0
	Well 6		237,251		220,163		17,088
	Well 7		625,511		586,945		38,566
	Well 10		764,243		764,243		0
	Well 11		366,283		364,657		1,626
	Well 12		360,351		351,478		8,873
AGS Water Supply Meter			301,525		289,525		12000.00
Medical Reactor - Well 105			91,710,910		91,710,910		0.00
Biology Building - Well 9			6,164,050		6,141,960		22.09

H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747
(631) 694-3040, FAX: (631) 420-8436 NYSDOH ID# 10478

LABORATORY RESULTS

BROOKHAVEN NATIONAL LAB.-BNLM
70 BELL AVE.
UPTON, NY 11973
Attn To : BOB LEE

Lab No. : 0109112-001A

Sample Information...
Type : Potable Water
Origin : Dist.
Routine

Federal ID : 5111891

Client ID. : 8450-001

Collected : 9/6/01 8:45:00 AM

Point No : 1

Received : 9/6/01 3:00:00 PM

Location : B-49 WATER TOWER

Collected By : CLIENT

Copies To : TONY ROSS

<u>Parameter(s)</u>	<u>Results</u>	<u>Units</u>	<u>Limit</u>	<u>Method Number</u>	<u>Analyzed</u>
Total Coliform	Negative		Negative	M9223	9/6/01 4:18:00 PM
E_Coliform	Absent		Absent	M9223	9/6/01 4:18:00 PM
Total Residual Chlorine	0.5	mg/L		M4500-Cl G	9/6/01

Result(s) reported meet(s) Regulatory Limit(s).
Result(s) flagged with * Exceed Regulatory Limit(s). Limit noted.

Date Reported : 9/10/01



H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

LABORATORY RESULTS

BROOKHAVEN NATIONAL LAB.-BNLM
70 BELL AVE.
UPTON, NY 11973
Attn To : BOB LEE

Lab No. : 0109112-002A

Sample Information...
Type : Potable Water
Origin : Dist.
Routine

Federal ID : 5111891
Collected : 9/6/01 8:55:00 AM
Received : 9/6/01 3:00:00 PM
Collected By : CLIENT
Copies To : TONY ROSS

Client ID. : 8450-002

Point No : 2
Location : B-640 WATER TOWER

<u>Parameter(s)</u>	<u>Results</u>	<u>Units</u>	<u>Limit</u>	<u>Method Number</u>	<u>Analyzed</u>
Total Coliform	Negative		Negative	M9223	9/6/01 4:18:00 PM
E_Coliform	Absent		Absent	M9223	9/6/01 4:18:00 PM
Total Residual Chlorine	0.4	mg/L		M4500-Cl G	9/6/01

Result(s) reported meet(s) Regulatory Limit(s).
Result(s) flagged with * Exceed Regulatory Limit(s). Limit noted.

Date Reported : 9/10/01



H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

LABORATORY RESULTS

BROOKHAVEN NATIONAL LAB.-BNLM
70 BELL AVE.
UPTON, NY 11973
Attn To : BOB LEE

Lab No. : 0109112-003A

Sample Information...
Type : Potable Water
Origin : Dist.
Routine

Federal ID : 5111891
Collected : 9/6/01 9:05:00 AM
Received : 9/6/01 3:00:00 PM
Collected By : CLIENT
Copies To : TONY ROSS

Point No : 3
Location : B-1005 RHIC

Client ID. : 8450-003

<u>Parameter(s)</u>	<u>Results</u>	<u>Units</u>	<u>Limit</u>	<u>Method Number</u>	<u>Analyzed</u>
Total Coliform	Negative		Negative	M9223	9/6/01 4:18:00 PM
E_Coliform	Absent		Absent	M9223	9/6/01 4:18:00 PM
Total Residual Chlorine	0.4	mg/L		M4500-Cl G	9/6/01

Result(s) reported meet(s) Regulatory Limit(s).
Result(s) flagged with * Exceed Regulatory Limit(s). Limit noted.

Date Reported : 9/10/01



H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

LABORATORY RESULTS

BROOKHAVEN NATIONAL LAB.-BNLM
70 BELL AVE.
UPTON, NY 11973
Attn To : BOB LEE

Lab No. : 0109112-004A

Sample Information...
Type : Potable Water
Origin : Dist.
Routine

Federal ID : 5111891
Collected : 9/6/01 10:05:00 AM
Received : 9/6/01 3:00:00 PM
Collected By : CLIENT
Copies To : TONY ROSS

Point No : 4
Location : B-363 APT.LAUNDRY

Client ID. : 8450-004

<u>Parameter(s)</u>	<u>Results</u>	<u>Units</u>	<u>Limit</u>	<u>Method Number</u>	<u>Analyzed</u>
Total Coliform	Negative		Negative	M9223	9/6/01 4:18:00 PM
E_Coliform	Absent		Absent	M9223	9/6/01 4:18:00 PM
Total Residual Chlorine	0.4	mg/L		M4500-Cl G	9/6/01

Result(s) reported meet(s) Regulatory Limit(s).
Result(s) flagged with * Exceed Regulatory Limit(s). Limit noted.

Date Reported : 9/10/01



H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

LABORATORY RESULTS

BROOKHAVEN NATIONAL LAB.-BNLM
70 BELL AVE.
UPTON, NY 11973
Attn To : BOB LEE

Lab No. : 0109112-005A

Sample Information...
Type : Potable Water
Origin : Dist.
Routine

Federal ID : 5111891
Collected : 9/6/01 10:25:00 AM
Received : 9/6/01 3:00:00 PM
Collected By : CLIENT
Copies To : TONY ROSS

Point No : 5
Location : B-930 LINAC

Client ID. : 8450-005

<u>Parameter(s)</u>	<u>Results</u>	<u>Units</u>	<u>Limit</u>	<u>Method Number</u>	<u>Analyzed</u>
Total Coliform	Negative		Negative	M9223	9/6/01 4:18:00 PM
E_Coliform	Absent		Absent	M9223	9/6/01 4:18:00 PM
Total Residual Chlorine	0.2	mg/L		M4500-Cl G	9/6/01

Result(s) reported meet(s) Regulatory Limit(s).
Result(s) flagged with * Exceed Regulatory Limit(s). Limit noted."

Date Reported : 9/10/01



H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747
(631) 694-3040. FAX: (631) 420-8436 NYSDOH ID# 10478

LABORATORY RESULTS

BROOKHAVEN NATIONAL LAB.-BNLM
70 BELL AVE.
UPTON, NY 11973
Attn To : BOB LEE

Lab No. : 0109112-006A

Sample Information...
Type : Potable Water
Origin : Dist.
Routine

Federal ID 5111891

Client ID : 8450-006

Collected : 9/6/01 10:45:00 AM

Point No : 6

Received : 9/6/01 3:00:00 PM

Location : B-490 OUTPATIENT CLINIC

Collected By : CLIENT

Copies To : TONY ROSS

<u>Parameter(s)</u>	<u>Results</u>	<u>Units</u>	<u>Limit</u>	<u>Method Number</u>	<u>Analyzed</u>
Total Coliform	Negative		Negative	M9223	9/6/01 4:18:00 PM
E_Coliform	Absent		Absent	M9223	9/6/01 4:18:00 PM
Total Residual Chlorine	0.5	mg/L		M4500-CI G	9/6/01

Result(s) reported meet(s) Regulatory Limit(s).

Result(s) flagged with * Exceed Regulatory Limit(s). Limit noted.

Date Reported : 9/10/01



H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

LABORATORY RESULTS

BROOKHAVEN NATIONAL LAB.-BNLM
70 BELL AVE.
UPTON, NY 11973
Attn To : BOB LEE

Lab No. : 0109112-007A

Sample Information...
Type : Potable Water
Origin : Dist.
Routine

Federal ID : 5111891
Collected : 9/6/01 10:50:00 AM
Received : 9/6/01 3:00:00 PM
Collected By : CLIENT
Copies To : TONY ROSS

Point No : 7
Location : B-490 BLOCK 11

Client ID. : 8450-007

<u>Parameter(s)</u>	<u>Results</u>	<u>Units</u>	<u>Limit</u>	<u>Method Number</u>	<u>Analyzed</u>
Total Coliform	Negative		Negative	M9223	9/6/01 4:18:00 PM
E_Coliform	Absent		Absent	M9223	9/6/01 4:18:00 PM
Total Residual Chlorine	0.4	mg/L		M4500-CI G	9/6/01

Result(s) reported meet(s) Regulatory Limit(s).
Result(s) flagged with * Exceed Regulatory Limit(s). Limit noted.

Date Reported : 9/10/01



H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747
(631) 694-3040 .FAX: (631) 420-8436 NYSDOH ID# 10478

LABORATORY RESULTS

BROOKHAVEN NATIONAL LAB.-BNLM
70 BELL AVE.
UPTON, NY 11973
Attn To : BOB LEE

Lab No. : 0109112-008A

Sample Information...
Type : Potable Water
Origin : Dist.
Routine

Federal ID : 5111891
Collected : 9/6/01 8:55:00 AM
Received : 9/6/01 3:00:00 PM
Collected By : CLIENT
Copies To : TONY ROSS

Client ID. : 8450-008

Point No : 26
Location : DUPLICATE

<u>Parameter(s)</u>	<u>Results</u>	<u>Units</u>	<u>Limit</u>	<u>Method Number</u>	<u>Analyzed</u>
Total Coliform	Negative		Negative	M9223	9/6/01 4:18:00 PM
E_Coliform	Absent		Absent	M9223	9/6/01 4:18:00 PM
Total Residual Chlorine	0.3	mg/L		M4500-Cl G	9/6/01

Result(s) reported meet(s) Regulatory Limit(s).
Result(s) flagged with * Exceed Regulatory Limit(s). Limit noted.

Date Reported : 9/10/01



ATTACHMENT II

**Brookhaven National Laboratory
Potable Water Supply**

**September 2001 Biweekly Water Quality Monitoring Data for
the BNL Potable Water Wells and
BNL Distribution System**

Attachment II
Table 1
Summary of Water Quality Analyses
for the BNL Potable Water System
September 2001

Sample Location	Sample Date	pH (SU)	Temperature (Degrees F)	Conductivity (µmhos)	Alkalinity (mg/L)	Calcium (mg/L)
WTP	9/6/01	7.0	56	128	NR	NR
WTP	9/11/01	7.4	57	129	NR	NR
WTP	9/13/01	7.5	56	128	NR	NR
WTP	9/18/01	6.3	55	126	NR	NR
WTP	9/20/01	6.7	58	131	NR	NR
WTP	9/25/01	7.3	57	134	NR	NR
WTP	9/27/01	7.3	56	131	NR	NR
Well 12	9/6/01	7.7	56	122	NR	NR
Well 12	9/11/01	7.7	56	121	NR	NR
Well 12	9/13/01	8.0	56	176	NR	NR
Well 12	9/18/01	8.0	56	152	NR	NR
Well 12	9/20/01	7.6	56	139	NR	NR
Well 12	9/25/01	7.9	56	163	NR	NR
Well 12	9/27/01	7.6	55	142	NR	NR

NR - Analysis Not Required or Not Reported

WTP - Water Treatment Plant

Note: Field parameters are only conducted for facilities that are in operation on the day of measurement.

ATTACHMENT III

**Brookhaven National Laboratory
Potable Water Supply**

**2001 Third Quarter Radiological Analyses
for the BNL Potable Water Wells**

ATTACHMENT III
Table 2
Brookhaven National Laboratory
Potable Water Supply

Summary of Radiological Results for the BNL Potable Water Wells 2001 Third Quarter Monitoring Results				
Well ID	Gross Alpha pCi/L	Gross Beta pCi/L	Tritium pCi/L	Sr-90 pCi/L
Well # 6	< 0.83	< 2.37	< 300	< 0.275
Well # 7	0.95	< 2.37	< 300	< 0.325
Well # 11	< 0.83	< 2.37	< 300	< 0.371
Well # 12	2.49	3.12	< 300	< 0.356
Well # 12 (Duplicate)	1.50	< 2.37	< 300	< 0.402

C. O. C. Number
21072407

BROOKHAVEN NATIONAL LABORATORY
RADIOLOGICAL CONTROL DIVISION

BNL P.O. No: 10580

Contractor Number

ANALYTICAL SERVICES LABORATORY

BLDG 490
UPTON, N.Y. 11973-5000

Ship to: _____
Pick Up by: _____
Attention: _____

Page 1 of 1

Chain of Custody Information

Bioassay samples will not be accepted
if bottles are filled above the shoulder.

Project Name: F Wells		E-Mail Reports to:		SAMPLER: R Metz		Priority Authorization Group Leader or Higher CALL x2502 (Rad) x4860 (Non-Rad)
Requested by: B Lee		EP Manager: B Lee		SAMPLER: L Lettieri		
Life Number: 20222 ext 3148		FSS Manager:		SAMPLER:		
Account No.: 07089 Dept. Code: ES						

FILL OUT ONLY SHADED AREAS. CANNOT ACCEPT SAMPLES WITH ACTIVITY >1mR/hr

ASL Number	Sample Information								Container		Analysis Requested***									
	Grid	ID	Date	C	Time	Depth	Matrix	Description	#	vol.	αβ	3H	γ	Sr90	MET	WQ	VOA	PCB	pH	
21072407-01	056	401	07/24/01		1326	92-137	W	Well #12	1	4 L	X		X							
21072407-01	056	401	07/24/01		1326	92-137	W	Well #12	1	500 mL		X								
21072407-02	BD-1		07/24/01				W	Well #12	1	4 L	X		X							
21072407-02	BD-1		07/24/01				W	Well #12	1	500 mL		X								
21072407-03	056	400	07/24/01		1340	93-142	W	Well #11	1	4 L	X		X							
21072407-03	056	400	07/24/01		1340	93-142	W	Well #11	1	500 mL		X								
21072407-04	092	400	07/24/01		1450	99-150	W	Well #7	1	4 L	X		X							
21072407-04	092	400	07/24/01		1450	99-150	W	Well #7	1	500 mL		X								
21072407-05	093	400	07/24/01		1455	99-150	W	Well #6	1	4 L	X		X							
21072407-05	093	400	07/24/01		1455	99-150	W	Well #6	1	500 mL		X								

Must be one of the samplers

Transferred to :	R Metz	V Lettieri		
Signed by:	R Metz	V Lettieri		
Date/time	7/24/2001 1447	7/24/2001 1450		

***OTHER ANALYSIS NOT LISTED	COMMENTS
------------------------------	----------

46282%

ASL Prefix No. 2/072410

DQL

BROOKHAVEN NATIONAL LABORATORY

Page 1 of 1

Chain of Custody No.

10561

Requires EDD ①

Carrier/Waybill # _____

P.O. # _____

SAMPLING CHAIN OF CUSTODY

Analysis Requested By		Sampling Contractor		Analytical Laboratory	
Name: B Lee	Name: ESD Field Sampling	Name: Gel			
Life: No: 20222 Ext: 3148	Contact:	Address:			
Acct. No: 09089 Dept: ES	Phone:	City: St: Zip:			
Email Reports To: B Lee	Email/Fax:	Contact:			
1	Sampler: L Lettieri / B Metz	Phone:			
2	Email/Fax:				
Project Name: F Wells	Project Manager: B Lee	Field Engineer:			

Comments:

Analysis Requested									
Alpha/Beta	Tritium	Gamma	Strontium	524.2	624	Nuclide-specific Alpha	PCBs	Metals	
			X						
			X						
			X						
			X						
			X						

Sample Information							Additional Sample Information				
UID	TYP	Site ID/Bldg/Life #	Depth/RWVP	Date	Time	Matrix	Name/Description	Conc/Vol/Units	Conc. Type	N of Cont	Preservative
001	e	056-401	92-137	7/24/01	1326	w	well #12	42	P	1	HNO3
002	e	BD-1	-	7/24/01	-	w	- Well #036	42	P	1	HNO3
003	c	056-400	93-142	7/24/01	1340	w	well #11	42	P	1	HNO3
004	e	092-400	99-150	7/24/01	1450	w	well #7	42	P	1	HNO3
005	e	093-400	99-150	7/24/01	1455	w	well #6	42	P	1	HNO3

1 Relinquished By/Date/Time Print C Lettieri 7/25/01 Signature [Signature] 0914	2 Relinquished By/Date/Time Print Signature	3 Relinquished By/Date/Time Print Signature
1 Received By/Date/Time Print Gustavus Chandler 7-26-01 Signature [Signature] 0934	2 Received By/Date/Time Print Signature	3 Received By/Date/Time Print Signature

Contractor Lab Sample Disposal:

Return To Client Disposal by Lab

Archive For _____ Months

Turn-Around Time Required:

Rush (1 Day) 14 Days 30 Days

7 Days Other ()

190907010002



GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Certificate of Analysis

Company : Brookhaven National Laboratory
 Address : OER
 Building 51M
 Upton, New York 11973--5000
 Contact: Ms. Susan Young
 Project: Brookhaven ERD Contract

Report Date: August 22, 2001

Page 1 of 1

Client Sample ID:	10581-001	Project:	BRKL02000
Sample ID:	46282001	Client ID:	BRKL003
Matrix:	Water	COC:	10581
Collect Date:	24-JUL-01 13:26	Samp Recv.:	10581
Receive Date:	26-JUL-01 09:30	Client Desc.:	056-401
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow											
GFPC, Sr90, liquid											
Strontium-90	U	0.00967	+/-0.207	0.356	0.800	pCi/L	LOM1	08/17/01	0631	101937	1

The following Analytical Methods were performed

Method	Description	Analyst	Comments
1	EPA 905.0		

Notes:

The Qualifiers in this report are defined as follows :

- DL Failed required detection limit.
- J Estimated value; the result was greater than the MDA but less than the required detection limit.
- JN Presumptive evidence of the analyte at an estimated quantity.
- R The data are unusable (radionuclide may or may not be present).
- U Undetected; sample result < MDA
- UI Uncertain identification for gamma spectroscopy.

Potable Well # 12

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, Valerie Davis.

Reviewed by *M. [Signature]*



GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Certificate of Analysis

Company : Brookhaven National Laboratory
 Address : OER
 Building 51M
 Upton, New York 11973-5000
 Contact: Ms. Susan Young
 Project: Brookhaven ERD Contract

Report Date: August 22, 2001

Page 1 of 1

Client Sample ID:	10581-002	Project:	BRKL02000
Sample ID:	46282002	Client ID:	BRKL003
Matrix:	Water	COC:	10581
Collect Date:	24-JUL-01 00:00	Sample Recv.:	10581
Receive Date:	26-JUL-01 09:30	Client Desc.:	BD-1
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gas Flow										
<i>GFPC, Sr90, liquid</i>										
Strontium-90	U	-0.0537	+/-0.232	0.402	0.800	pCi/L	LOM108/17/01	0631	101937	1

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 905.0	

Notes:

The Qualifiers in this report are defined as follows :

- DL Failed required detection limit.
- J Estimated value; the result was greater than the MDA but less than the required detection limit.
- JN Presumptive evidence of the analyte at an estimated quantity.
- R The data are unusable (radionuclide may or may not be present).
- U Undetected; sample result < MDA
- UI Uncertain identification for gamma spectroscopy.

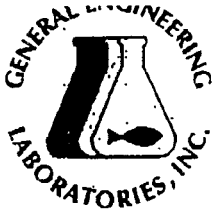
The above sample is reported on an "as received" basis.

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, Valerie Davis.

*Potable Well #12
Duplicate*

M. Rowe

Reviewed by



GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Certificate of Analysis

Company : Brookhaven National Laboratory
 Address : OER
 Building 51M
 Upton, New York 11973-5000
 Contact: Ms. Susan Young
 Project: Brookhaven ERD Contract

Report Date: August 22, 2001

Page 1 of 1

Client Sample ID:	10581-003	Project:	BRKL02000
Sample ID:	46282003	Client ID:	BRKL003
Matrix:	Water	COC:	10581
Collect Date:	24-JUL-01 13:40	Samp Recv.:	10581
Receive Date:	26-JUL-01 09:30	Client Desc.:	056-400
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gas Flow										
GFPC, Sr90, liquid Strontium-90	U	0.0225	+/-0.217	0.371	0.800	pCi/L	LOM108/17/01	0630	101937	1

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 905.0	

Notes:

The Qualifiers in this report are defined as follows :

- DL Failed required detection limit.
- J Estimated value; the result was greater than the MDA but less than the required detection limit.
- JN Presumptive evidence of the analyte at an estimated quantity.
- R The data are unusable (radionuclide may or may not be present).
- U Undetected; sample result < MDA
- UI Uncertain identification for gamma spectroscopy.

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, Valerie Davis.

M. Monroe

Reviewed by

Potable Water # 11



GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Certificate of Analysis

Company : Brookhaven National Laboratory
 Address : OER
 Building 51M
 Upton, New York 11973--5000
 Contact: Ms. Susan Young
 Project: Brookhaven.ERD Contract

Report Date: August 22, 2001

Page 1 of 1

Client Sample ID:	10581-004	Project:	BRKL02000
Sample ID:	46282004	Client ID:	BRKL003
Matrix:	Water	COC:	10581
Collect Date:	24-JUL-01 14:50	Sampl Recv.:	10581
Receive Date:	26-JUL-01 09:30	Client Desc.:	092-400
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gas Flow										
<i>GFPC, Sr-90, liquid</i>										
Strontium-90	U	0.0881	+/-0.192	0.325	0.800	pCi/L	LOM108/17/01	0630	101937	1

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 905.0	

Notes:

The Qualifiers in this report are defined as follows :

- DL Failed required detection limit.
- J Estimated value; the result was greater than the MDA but less than the required detection limit.
- JN Presumptive evidence of the analyte at an estimated quantity.
- R The data are unusable (radionuclide may or may not be present).
- U Undetected; sample result < MDA
- UI Uncertain identification for gamma spectroscopy.

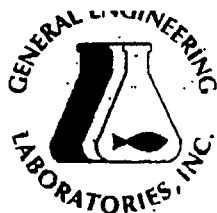
Potable Well #7

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, Valerie Davis.

J. Davis

Reviewed by _____



GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Certificate of Analysis

Company : Brookhaven National Laboratory
 Address : OER
 Building 51M
 Upton, New York 11973-5000
 Contact : Ms. Susan Young
 Project : Brookhaven ERD Contract

Report Date: August 22, 2001

Page 1 of 1

Client Sample ID: 10581-005
 Sample ID: 46282005
 Matrix: Water
 Collect Date: 24-JUL-01 14:55
 Receive Date: 26-JUL-01 09:30
 Collector: Client

Project: BRKL02000
 Client ID: BRKL003
 COC: 10581
 Samp Recv.: 10581
 Client Desc.: 093-400

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gas Flow										
GFPC, Sr90, liquid Strontium-90	U	0.161 +/-0.166	0.275	0.800	pCi/L		LOM1 08/17/01	0630	101937	1

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 905.0	

Notes:

The Qualifiers in this report are defined as follows :

- DL Failed required detection limit.
- J Estimated value; the result was greater than the MDA but less than the required detection limit.
- JN Presumptive evidence of the analyte at an estimated quantity.
- R The data are unusable (radionuclide may or may not be present).
- U Undetected; sample result < MDA
- UI Uncertain identification for gamma spectroscopy.

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, Valerie Davis.

Reviewed by _____