Environmental and Waste Management Services

BROOKHAVEN
NATIONAL LABORATORY

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Managed by Brookhaven Science Associates
for the U.S. Department of Energy

October 7, 2004

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

Dear Ms. Kathleen Newcomer:

Subject: Monthly Water Treatment Plant Reports
Reference: Suffolk County Minimum Monitoring Requirements for September 2004

In accordance with the requirements of the BNL Potable Water System Sampling Plan and the 2004 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 Operational Data for September.
Attachment II:	September 2004 Biweekly and Fourth Quarter Water Quality Monitoring Data for the BNL Distribution System and Semi-Annual Monitoring Data for the Potable Water Wells.
Attachment III:	September 2004 Stage 1 Disinfectants & Disinfection Byproduct Rule Monitoring Data and Bacteriological Analyses for the BNL Distribution System.
Attachment IV:	2004 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 and Waste Management 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.

NSF
REGISTERED TO
ISO 14001: 1996

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

Sincerely,

Robert Lee, P.E. (Hon)

George A. Goode
Environmental & Waste Management Services
Division Manager

GAG/MA:car
Attachments: As noted

cc:	M. Allocco	w/attachments
	L. Ambroszkiewicz, SCDHS	w/attachments
	W. Chaloupka	w/attachments
	J. Granzen	w/attachments
	G. Goode	w/o attachments
	R. Lee	w/attachments
	E. Murphy	w/attachments
	P. Ponturo, SCDHS	w/o attachments
	L. Ross	w/o attachments
	J. Tarpinian	w/o attachments

File: EC61ER.04

ATTACHMENT I

Brookhaven National Laboratory

Potable Water Supply

Monthly Operational Data for September 2004

for the BNL Potable Water System

BROOKHAVEN NATIONAL LABORATORY

WATER SYSTEMS OPERATION REPORT

PUBLIC WATER SUPPLY PROTECTION

PROGRAM CODE 169	STATION 11515100	SUFFOLK COUNTY	REPORTING PERIOD: SEPT. 2004

LOCATION: **Water Treatment Facility**

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

Source: Ground Water

Does the system have a chlorination waiver? YES ____ NO X

	CHLORINATION				pH	
	Treated	Liquid Sodium Hypochlorite		Free Cl2	__ Lime	Totalizer
Day of	Water	Gallons	Cl2 use	Residual	__ Sodium	Daily Totalizer
month	K Gals	130	per 24hrs	mg/l	Hydroxide	13206111
1	1,019	122	8	0.85	7.4	13207130
2	1,075	115	7	0.82	7.4	13208205
3	855	105	10	0.99	7.1	13209060
4	0					
5	0					
6	2,506	75	30	1	7.6	13211566
7	778	70	5	0.45	7.3	13212344
8	1,060	50	20	0.9	7.3	13213404
9	984	40+160	10	0.77	7.3	13214388
10	1,069	197	3	0.21	7.3	13215457
11	0					
12	0					
13	2,377	173	24	0.83	7.4	13217834
14	979	167	6	1.2	7.2	13218813
15	864	160	7	0.72	7.3	13219677
16	863	150	10	1	7.4	13220540
17	930	142	8	1.1	7.2	13221470
18	0					
19	0					
20	2,387	125	17	0.75	7.4	13223857
21	710	118	7	0.87	7.5	13224567
22	763	110	8	1.2	7.2	13225330
23	790	100	10	1	7.5	13226120
24	710	95	5	0.65	7.5	13226830
25	0					
26	0					
27	2,285	70	25	0.95	7.5	13229115
28	1,150	62	8	0.96	7.6	13230265
29	1,186	48+152	14	0.86	7.6	13231451
30	1,121	180	20	1	7.5	13232572
31	0					
TOT	26,461		262			
AVG.	882.03		8.73	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 X

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 X

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: [signature]

Date: 10-9-04

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: SEPT. 2004

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 ✓

	CHLORINATION				pH	
	Treated	Liquid Sodium Hypochlorite		Free Cl2	__ Lime	Totalizer
Day of	Water	Gallons	Cl2 use	Residual	__ Sodium	Daily Totalizer
month	K Gals	0	per 24hrs	mg/l	Hydroxide	1648622
1	0	0	0	NR	NR	1648622
2	0	0	0	NR	NR	1648622
3	0	0	0	NR	NR	1648622
4	0					
5	0					
6	0	0	0	NR	NR	1648622
7	0	0	0	NR	NR	1648622
8	0	0	0	NR	NR	1648622
9	0	0	0	NR	NR	1648622
10	0	0	0	NR	NR	1648622
11	0					
12	0					
13	0	0	0	NR	NR	1648622
14	0	0	0	NR	NR	1648622
15	0	0	0	NR	NR	1648622
16	0	0	0	NR	NR	1648622
17	0	0	0	NR	NR	1648622
18	0					
19	0					
20	0	0	0	NR	NR	1648622
21	0	0	0	NR	NR	1648622
22	0	0	0	NR	NR	1648622
23	0	0	0	NR	NR	1648622
24	0	0	0	NR	NR	1648622
25	0					
26	0					
27	0	0	0	NR	NR	1648622
28	0	0	0	NR	NR	1648622
29	0	0	0	NR	NR	1648622
30	0	0	0	NR	NR	1648622
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: [signature]

Date: 10-4-04

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: SEPT. 2004

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 ✓

	CHLORINATION				pH	
	Treated	Liquid Sodium Hypochlorite		Free Cl2	__ Lime	Totalizer
Day of	Water	Gallons	Cl2 use	Residual	__ Sodium	Daily Totalizer
month	K Gals	10+85	per 24hrs	mg/l	Hydroxide	471755
1	487	67	28	1.3	6	472242
2	468	48	19	0.58	6.1	472710
3	384	45+105	3	1.06	6	473094
4	0					
5	0					
6	1,099	132	18	0.03	6.1	474193
7	398	129	3	0.38	6.1	474591
8	509	114	15	0.03	6	475100
9	377	111	3	0.3	6.1	475477
10	384	96	15	0.27	6.1	475861
11	0					
12	0					
13	1,363	45	51	0.1	6.3	477224
14	380	36+114	9	0.07	6	477604
15	497	132	18	0.72	6	478101
16	304	120	12	0.43	6	478405
17	553	96+54	24	0.31	6	478958
18	0					
19	0					
20	1,112	108	42	0.45	6.1	480070
21	440	90	18	0.22	6.2	480510
22	400	75+75	15	0.2	6	480910
23	465	126	24	0.38	6	481375
24	307	111+39	15	0.2	6.1	481682
25	0					
26	0					
27	1,219	96	54	0.11	6.2	482901
28	603	72	24	0.27	6.1	483504
29	777	36+114	36	0.24	6.1	484281
30	574	123	27	0.31	6.2	484855
31	0					
TOT	13,100		473			
AVG.	436.67		15.77	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: [signature]

Date: 10-4-04

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: SEPT. 2004

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 ✓

	CHLORINATION				pH	
	Treated	Liquid Sodium Hypochlorite		Free Cl2	__ Lime	Totalizer
Day of	Water	Gallons	Cl2 use	Residual	__ Sodium	Daily Totalizer
month	K Gals	24+126	per 24hrs	mg/l	Hydroxide	1488042
1	1,212	120	30	1.3	6	1489254
2	1,310	84	36	0.58	6.1	1490564
3	1,077	65+85	19	1.06	6	1491641
4	0					
5	0					
6	2,831	78	72	0.03	6.1	1494472
7	863	60	18	0.38	6.1	1495335
8	1,281	33	27	0.03	6	1496616
9	1,263	6+144	27	0.3	6.1	1497879
10	1,171	126	24	0.27	6.1	1499050
11	0					
12	0					
13	2,890	60	60	0.1	6.3	1501940
14	1,214	33+117	27	0.07	6	1503154
15	1,188	123	27	1.1	6	1504342
16	932	103	20	0.43	6	1505274
17	1,120	75+75	28	0.31	6	1506394
18	0					
19	0					
20	2,838	90	60	0.45	6.1	1509232
21	896	69	21	0.22	6.2	1510128
22	804	51+99	18	0.2	6	1510932
23	974	123	27	0.38	6	1511906
24	900	105+45	18	0.2	6.1	1512806
25	0					
26	0					
27	2,794	84	66	0.11	6.2	1515600
28	1,336	57	27	0.27	6.1	1516936
29	1,342	30+120	27	0.24	6.1	1518278
30	1,304	117	33	0.31	6.2	1519582
31	0					
TOT	31,540		712			
AVG.	1051.33		23.73	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 hilurb) 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 [signature]

Date 10-4-04

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: SEPT. 2004

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 ✓

	CHLORINATION				pH	
	Treated	Liquid Sodium Hypochlorite		Free Cl2	Lime	Totalizer
Day of	Water	Gallons	Cl2 use	Residual	Sodium	Daily Totalizer
month	K Gals	38	per 24hrs	mg/l	Hydroxide	769821
1	0	38	0	NR	NR	769821
2	0	38	0	NR	NR	769821
3	215	38	0	NR	NR	770036
4	0					
5	0					
6	76	38	0	NR	NR	770112
7	0	38	0	NR	NR	770112
8	0	38	0	NR	NR	770112
9	0	38	0	NR	NR	770112
10	0	38	0	NR	NR	770112
11	0					
12	0					
13	0	38	0	NR	NR	770112
14	0	38	0	NR	NR	770112
15	0	38	0	NR	NR	770112
16	0	38	0	NR	NR	770112
17	0	38	0	NR	NR	770112
18	0					
19	0					
20	0	38	0	NR	NR	770112
21	0	38	0	NR	NR	770112
22	0	38	0	NR	NR	770112
23	0	38	0	NR	NR	770112
24	0	38	0	NR	NR	770112
25	0					
26	0					
27	0	38	0	NR	NR	770112
28	0	38	0	NR	NR	770112
29	0	38	0	NR	NR	770112
30	0	38	0	NR	NR	770112
31	0					
TOT	291		0			
AVG.	9.70		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.

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

Reported by: S A Ross

Date: 10-4-04

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: SEPT. 2004

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 ✓

	CHLORINATION				pH	
	Treated	Liquid Sodium Hypochlorite		Free Cl2	__ Lime	Totalizer
Day of	Water	Gallons	Cl2 use	Residual	__ Sodium	Daily Totalizer
month	K Gals	102	per 24hrs	mg/l	Hydroxide	611453
1	5	102	0	NR	NR	611458
2	0	102	0	0.5	7	611458
3	73	102	0	NR	NR	611531
4	0					
5	0					
6	11	102	0	NR	NR	611542
7	0	102	0	NR	NR	611542
8	4	102	0	NR	NR	611546
9	0	102	0	NR	NR	611546
10	2	102	0	NR	NR	611548
11	0					
12	0					
13	97	102	0	NR	NR	611645
14	0	102	0	0.37	7.1	611645
15	3	102	0	NR	NR	611648
16	2	102	0	0.3	6.7	611650
17	2	102	0	NR	NR	611652
18	0					
19	0					
20	0	102	0	NR	NR	611652
21	0	102	0	NR	NR	611652
22	1	102	0	NR	NR	611653
23	2	102	0	0.53	7	611655
24	0	102	0	NR	NR	611655
25	0					
26	0					
27	0	102	0	NR	NR	611655
28	31	102	0	0.11	6	611686
29	2	102	0	NR	NR	611688
30	0	102	0	NR	NR	611688
31	0					
TOT	235		0			
AVG.	7.83		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.

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Reported by: [signature]

Date: 10-4-04

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: SEPT. 2004

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 ✓

	CHLORINATION				pH	
	Treated	Liquid Sodium Hypochlorite		Free Cl2	__ Lime	Totalizer
Day of	Water	Gallons	Cl2 use	Residual	__ Sodium	Daily Totalizer
month	K Gals	72	per 24hrs	mg/l	Hydroxide	693074
1	0	72	0	NR	NR	693074
2	0	72	0	0.6	7.3	693074
3	61	72	0	NR	NR	693135
4	0					
5	0					
6	6	72	0	NR	NR	693141
7	0	72	0	NR	NR	693141
8	5	72	0	NR	NR	693146
9	0	72	0	NR	NR	693146
10	1	72	0	NR	NR	693147
11	0					
12	0					
13	98	72	0	NR	NR	693245
14	0	72	0	0.96	7.4	693245
15	3	72	0	NR	NR	693248
16	0	72	0	0.45	7.1	693248
17	5	72	0	NR	NR	693253
18	0					
19	0					
20	0	72	0	NR	NR	693253
21	0	72	0	NR	NR	693253
22	2	72	0	NR	NR	693255
23	2	72	0	0.79	7.3	693257
24	0	72	0	NR	NR	693257
25	0					
26	0					
27	729	69	3	NR	NR	693986
28	15	69	0	0.29	6.3	694001
29	95	69	0	1	6.2	694096
30	198	66	3	NR	NR	694294
31	0					
TOT	1,220		6			
AVG.	40.67		0.20	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 ✓

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

Reported by: [signature]

Date: 10-4-04

Title: **Water Systems Supervisor**

Certification No. **NY0031941**

ATTACHMENT II

Brookhaven National Laboratory

Potable Water Supply

September 2004 Biweekly and Fourth Quarter Water Quality Monitoring Data

for the BNL Distribution System

and Semi-Annual Water Quality Monitoring Data

for the Potable Water Wells

Attachment II
Table 1 - Summary of Water Quality Analyses
for the BNL Potable Water System
September 2004

Sample Location	Sample Date	pH (SU)	Temperature (Degrees F)	Conductivity (µmhos)	Alkalinity (mg/L)	Calcium (mg/L)
WTP	9/2/04	7.4	56	178	ANR	ANR
WTP	9/7/04	7.3	57	145	ANR	ANR
WTP	9/9/04	7.3	57	145	ANR	ANR
WTP	9/14/04	7.2	57	158	ANR	ANR
WTP	9/16/04	7.4	57	191	ANR	ANR
WTP	9/21/04	7.5	56	211	ANR	ANR
WTP	9/23/04	7.5	55	145	ANR	ANR
WTP	9/28/04	7.6	57	143	ANR	ANR
Well #11	9/2/04	7.0	55	145	ANR	ANR
Well #11	9/7/04	6.3	55	168	ANR	ANR
Well #11	9/9/04	7.3	56	250	ANR	ANR
Well #11	9/14/04	7.1	55	212	ANR	ANR
Well #11	9/16/04	6.7	55	193	ANR	ANR
Well #11	9/21/04	7.0	55	154	ANR	ANR
Well #11	9/23/04	7.1	55	158	ANR	ANR
Well #11	9/28/04	6.3	55	189	ANR	ANR
Well #12	9/2/04	7.3	56	148	ANR	ANR
Well #12	9/7/04	7.5	55	157	ANR	ANR
Well #12	9/9/04	7.5	55	181	ANR	ANR
Well #12	9/14/04	7.4	55	185	ANR	ANR
Well #12	9/16/04	7.1	55	196	ANR	ANR
Well #12	9/21/04	7.3	56	178	ANR	ANR
Well #12	9/23/04	7.5	56	174	ANR	ANR
Well #12	9/28/04	6.3	56	160	ANR	ANR
Well #6	9/3/04	6.5	61	116	8.4	4.77
Well #7	9/3/04	6.7	63	134	9.2	4.86
Well #10	9/3/04	6.1	65	100	14.6	4.63
Well #11	9/3/04	6.5	61	119	13.0	5.91
Well #12	9/3/04	6.6	63	134	16.6	7.10

ANR- Analysis Not Required
NR- Not Reported
Note: Field parameters are only conducted for facilities that are in operation on the day of measurement.

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 : S. Scarpitta

Lab No. : 0409196-009

Sample Information...
Type : Potable Water
Origin: Raw Well

Federal ID 5111891
Collected 9/3/2004 1:05:00 PM Point No 093-07
Received 9/3/2004 3:05:00 PM Location: Well #6 Raw
Collected By CLIENT
Copy : Original
CC

Client ID. : 19600-009

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Alkalinity, Total (As CaCO3)	8.4	mg/L		M2320 B	09/07/2004 12:10 PM

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

Joann M. Slavin
Laboratory Manager

Date Reported : 9/24/2004

BNLM153 A27

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

19600-009

Lab Name: H2M LABS, INC. Contract:

Lab Code: 10478 Case No. SAS No.: SDG No.: BNLM153

Matrix (soil/water): WATER Lab Sample ID: 0409196-009

Level (low/med): LOW Date Received: 9/3/2004

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-70-2	Calcium	4770			P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Well #6 - Raw

Comments:

DATE REPORTED 9/28/04

BNLM153 A26

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 : S. Scarpitta

Lab No. : 0409196-010

Sample Information...
Type : Potable Water
Origin: Raw Well

Federal ID 5111891
Collected 9/3/2004 12:50:00 PM Point No 092-03
Received 9/3/2004 3:05:00 PM Location: Well #7 Raw
Collected By CLIENT
Copy : Original
CC

Client ID. : 19600-010

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Alkalinity, Total (As CaCO3)	9.2	mg/L		M2320 B	09/07/2004 12:15 PM

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

Joann M. Slavin
Laboratory Manager

Date Reported : 9/24/2004

BNLM153 A29

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

19600-010

Lab Name: H2M LABS, INC. Contract:

Lab Code: 10478 Case No. SAS No.: SDG No.: BNLM153

Matrix (soil/water): WATER Lab Sample ID: 0409196-010

Level (low/med): LOW Date Received: 9/3/2004

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-70-2	Calcium	4860			P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Well #7 - Raw Water

Comments:

DATE REPORTED 9/28/04

BNLM153 A28

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 : S. Scarpitta

Lab No. : 0409196-013

Sample Information...
Type : Potable Water
Origin: Raw Well

Federal ID 5111891
Collected 9/3/2004 11:15:00 AM Point No 055-09
Received 9/3/2004 3:05:00 PM Location: Well #10 Raw
Collected By CLIENT
Copy : Original
CC

Client ID. : 19600-013

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Alkalinity, Total (As CaCO3)	14.6	mg/L		M2320 B	09/07/2004 12:30 PM

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

Joann M. Slavin
Laboratory Manager

Date Reported : 9/24/2004

BNLM153 A35

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

19600-013

Lab Name: H2M LABS, INC. Contract:

Lab Code: 10478 Case No. SAS No.: SDG No.: BNLM153

Matrix (soil/water): WATER Lab Sample ID: 0409196-013

Level (low/med): LOW Date Received: 9/3/2004

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-70-2	Calcium	4630			P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Well #10- Raw Water

Comments:

DATE REPORTED 9/28/04

FORM I - IN ILM04.1

BNLM153 A34

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 : S. Scarpitta

Lab No. : 0409196-011

Sample Information...
Type : Potable Water
Origin: Raw Well

Federal ID 5111891
Collected 9/3/2004 11:35:00 AM Point No 056-19
Received 9/3/2004 3:05:00 PM Location: Well #11 Raw
Collected By CLIENT
Copy : Original
CC

Client ID. : 19600-011

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Alkalinity, Total (As CaCO3)	13.0	mg/L		M2320 B	09/07/2004 12:20 PM

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

Date Reported : 9/24/2004

Joann M. Slavin
Laboratory Manager

BNLM153 A31

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

19600-011

Lab Name: H2M LABS, INC. Contract:

Lab Code: 10478 Case No. SAS No.: SDG No.: BNLM153

Matrix (soil/water): WATER Lab Sample ID: 0409196-011

Level (low/med): LOW Date Received: 9/3/2004

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-70-2	Calcium	5910			P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Well #11 - Raw Water

Comments:

DATE REPORTED 9/28/04

BNLM153 A30

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 : S. Scarpitta

Lab No. : 0409196-012

Sample Information...
Type : Potable Water
Origin: Raw Well

Federal ID 5111891
Collected 9/3/2004 11:30:00 AM
Received 9/3/2004 3:05:00 PM
Collected By CLIENT
Copy : Original
CC

Point No 056-20
Location: Well #12 Raw

Client ID. : 19600-012

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Alkalinity, Total (As CaCO3)	16.6	mg/L		M2320 B	09/07/2004 12:25 PM

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

Joann M. Slavin
Laboratory Manager

Date Reported : 9/24/2004

BNLM153 A33

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

19600-012

Lab Name: H2M LABS, INC. Contract:

Lab Code: 10478 Case No. SAS No.: SDG No.: BNLM153

Matrix (soil/water): WATER Lab Sample ID: 0409196-012

Level (low/med): LOW Date Received: 9/3/2004

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-70-2	Calcium	7100			P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Well #12- Raw Water

Comments:

DATE REPORTED 9/28/04

BNLM153 A32

ATTACHMENT III

Brookhaven National Laboratory

Potable Water Supply

September 2004 Stage 1 Disinfectants & Disinfection Byproduct Rule

Monitoring Data and Bacteriological Analyses for the BNL Distribution System

Attachment III

September 2004 Stage 1 Disinfectants & Disinfection Byproduct Rule Monitoring Data
Table II - Maximum Residual Disinfectant Level (MRDL) Compliance

	Total Residual Chlorine (mg/L)											
Location	**Oct. 03**	**Nov. 03**	**Dec. 03**	**Jan. 04**	**Feb. 04**	**Mar. 04**	**Apr. 04**	**May 04**	**June 04**	**July 04**	**Aug. 04**	**Sept. 04**
Bldg. 49 Water Tower	0.9	0.9	0.9	0.8	0.7	1.1	1.0	1.0	0.8	0.8	1.0	0.7
Bldg. 640 Water Tower	0.5	0.9	0.8	0.9	0.6	1.1	0.6	1.0	0.6	0.5	0.5	0.3
Bldg. 363 Apt. Laundry	0.6	0.5	0.9	0.4	0.5	0.9	0.3	0.8	0.4	0.6	0.5	0.6
Bldg. 1005 RHIC	0.6	0.6	1.0	0.4	0.7	0.5	0.4	0.6	0.5	0.6	0.5	0.5
Bldg. 930 LINAC	NS	0.9	NS	0.8	NS	1.1	NS	0.9	NS	0.8	NS	0.9
Bldg. 725 NSLS	0.7	NS	0.6	NS	0.5	NS	1.7	NS	0.8	NS	0.9	NS
Bldg. 490 Outpatient Clinic	NS	0.6	NS	0.8	NS	1.0	NS	1.0	NS	0.8	NS	0.7
Bldg. 490 Block 11	NS	0.4	NS	0.8	NS	1.0	NS	1.0	NS	0.6	NS	0.3
Bldg. 490 Block 1 ACF	0.7	NS	0.8	NS	0.5	NS	1.0	NS	0.6	NS	0.4	NS
Bldg. 490 Block 4 MRC	0.7	NS	1.0	NS	0.5	NS	1.1	NS	0.6	NS	0.9	NS
Monthly Average	0.7	0.7	0.9	0.7	0.6	1.0	0.9	0.9	0.6	0.7	0.7	0.6

NA - Not Applicable

NS- Not Scheduled for sampling

Running Annual Average (mg/L) **0.7** (Total Residual Chlorine)

MRDL (mg/L) **4.0**

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 : S. Scarpitta

Lab No. : 0409196-001

Sample Information...
Type : Potable Water
Origin: Distribution

Federal ID 5111891
Collected 9/3/2004 9:15:00 AM
Received 9/3/2004 3:05:00 PM
Collected By CLIENT
Copy : Original
CC

Point No 094-273
Location: B-49 Water Tower

Client ID. : 19600-001

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Total Coliform	Negative		Negative	M9223	09/04/2004 10:30 AM
E_Coliform	Absent		Absent	M9223	09/04/2004 10:30 AM
Total Residual Chlorine	0.7	mg/L		M4500-Cl G	09/03/2004

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

Date Reported : 9/24/2004

Joann M. Slavin
Laboratory Manager

BNLM153 A18

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 : S. Scarpitta

Lab No. : 0409196-002

Sample Information...
Type : Potable Water
Origin: Distribution

Federal ID 5111891
Client ID. : 19600-002
Collected 9/3/2004 11:45:00 AM Point No 076-408
Received 9/3/2004 3:05:00 PM Location: B-640 Water Tower
Collected By CLIENT
Copy : Original
CC

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Total Coliform	Negative		Negative	M9223	09/04/2004 10:30 AM
E_Coliform	Absent		Absent	M9223	09/04/2004 10:30 AM
Total Residual Chlorine	0.3	mg/L		M4500-Cl G	09/03/2004

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

Joann M. Slavin
Laboratory Manager

Date Reported : 9/24/2004

BNLM153 A19

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 : S. Scarpitta

Lab No. : 0409196-003

Sample Information...
Type : Potable Water
Origin: Distribution

Federal ID 5111891
Collected 9/3/2004 8:50:00 AM
Received 9/3/2004 3:05:00 PM
Collected By CLIENT
Copy : Original
CC

Point No 109-19
Location: B-363 Apt.Laundry

Client ID. : 19600-003

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Total Coliform	Negative		Negative	M9223	09/04/2004 10:30 AM
E_Coliform	Absent		Absent	M9223	09/04/2004 10:30 AM
Total Residual Chlorine	0.6	mg/L		M4500-Cl G	09/03/2004

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

Date Reported : 9/24/2004

Joann M. Slavin
Laboratory Manager

BNLM153 A20

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 : S. Scarpitta

Lab No. : 0409196-004

Sample Information...
Type : Potable Water
Origin: Distribution

Federal ID 5111891
Collected 9/3/2004 1:00:00 PM Point No 045-12
Received 9/3/2004 3:05:00 PM Location: B-1005 RHIC
Collected By CLIENT
Copy : Original
CC

Client ID. : 19600-004

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Total Coliform	Negative		Negative	M9223	09/04/2004 10:30 AM
E_Coliform	Absent		Absent	M9223	09/04/2004 10:30 AM
Total Residual Chlorine	0.5	mg/L		M4500-Cl G	09/03/2004

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

Joann M. Slavin
Laboratory Manager

Date Reported : 9/24/2004

BNLM153 A21

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 : S. Scarpitta

Lab No. : 0409196-005

Sample Information...
Type : Potable Water
Origin: Distribution

Federal ID 5111891
Collected 9/3/2004 11:50:00 AM Point No 054-187
Received 9/3/2004 3:05:00 PM Location: B-930 LINAC
Collected By CLIENT
Copy : Original
CC

Client ID. : 19600-005

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Total Coliform	Negative		Negative	M9223	09/04/2004 10:30 AM
E_Coliform	Absent		Absent	M9223	09/04/2004 10:30 AM
Total Residual Chlorine	0.9	mg/L		M4500-Cl G	09/03/2004

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

Joann M. Slavin
Laboratory Manager

Date Reported : 9/24/2004

BNLM153 A22

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 : S. Scarpitta

Lab No. : 0409196-006

Sample Information...
Type : Potable Water
Origin: Distribution

Federal ID 5111891
Client ID. : 19600-006
Collected 9/3/2004 12:05:00 PM Point No 084-70
Received 9/3/2004 3:05:00 PM Location: B-490 Outpatient Clinic
Collected By CLIENT
Copy : Original
CC

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Total Coliform	Negative		Negative	M9223	09/04/2004 10:30 AM
E_Coliform	Absent		Absent	M9223	09/04/2004 10:30 AM
Total Residual Chlorine	0.7	mg/L		M4500-Cl G	09/03/2004

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

Date Reported : 9/24/2004

Joann M. Slavin
Laboratory Manager

BNLM153 A23

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 : S. Scarpitta

Lab No. : 0409196-007

Sample Information...
Type : Potable Water
Origin: Distribution

Federal ID 5111891
Client ID. : 19600-007
Collected 9/3/2004 12:40:00 PM Point No 084-67
Received 9/3/2004 3:05:00 PM Location: B-490 Block 11
Collected By CLIENT
Copy : Original
CC

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Total Coliform	Negative		Negative	M9223	09/04/2004 10:30 AM
E_Coliform	Absent		Absent	M9223	09/04/2004 10:30 AM
Total Residual Chlorine	0.3	mg/L		M4500-Cl G	09/03/2004

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

Joann M. Slavin
Laboratory Manager

Date Reported : 9/24/2004

BNLM153 A24

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 : S. Scarpitta

Lab No. : 0409196-008

Sample Information...
Type : Potable Water
Origin: Distribution

Federal ID 5111891
Collected 9/3/2004 12:40:00 PM Point No 1
Received 9/3/2004 3:05:00 PM Location: Duplicate
Collected By CLIENT
Copy : Original
CC

Client ID. : 19600-008

Bldg. 490 Block 11 - Duplicate

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Total Coliform	Negative		Negative	M9223	09/04/2004 10:30 AM
E_Coliform	Absent		Absent	M9223	09/04/2004 10:30 AM
Total Residual Chlorine	0.3	mg/L		M4500-Cl G	09/03/2004

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

Joann M. Slavin
Laboratory Manager

Date Reported : 9/24/2004

BNLM153 A25

ATTACHMENT IV

Brookhaven National Laboratory

Potable Water Supply

2004 Third Quarter Radiological Analyses

for the BNL Potable Water Wells

ATTACHMENT IV

Table 3
Summary of 2004 Third Quarter Radiological Analyses for the BNL Potable Water Wells

Well ID	**Sample Date**	**Gross Alpha** (pCi/L)	**Gross Beta** (pCi/L)	**Tritium** (pCi/L)	**Sr-90** (pCi/L)
Well # 6	7/27/04	< 0.88	< 1.7	< 300	< 0.89
Well # 7	7/27/04	< 1.1	< 1.7	< 290	< 0.74
Well # 11	7/27/04	< 1.1	< 1.6	< 300	< 0.69
Well # 12	7/27/04	< 0.84	< 1.7	< 300	< 0.78
Well #12 (Duplicate)	7/27/04	< 1.0	< 1.7	< 300	< 0.78

NA – Not Analyzed
NS – Not Sampled/Shutdown
* - The reported concentration is estimated at less than the method detection limit but greater than the instrument detection limit.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 19501-003

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4G290209-003
Work Order: GL4NH
Matrix: WATER

Date Collected: 07/27/04 1415
Date Received: 07/29/04 0830

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/L	901.1 MOD			
Americium 241	3.3	U	6.8	12	07/30/04	08/02/04	4212295	
Beryllium 7	8	U	38	70	07/30/04	08/02/04	4212295	
Cesium 134	-10.4	U	6.0	8.5	07/30/04	08/02/04	4212295	
Cesium 137	10.3	J	5.7	8.4	07/30/04	08/02/04	4212295	
Cobalt 57	0.7	U	2.3	4.2	07/30/04	08/02/04	4212295	
Cobalt 60	-0.5	U	6.5	12	07/30/04	08/02/04	4212295	
Europium 152	11	U	41	83	07/30/04	08/02/04	4212295	
Europium 154	-20	U	49	86	07/30/04	08/02/04	4212295	
Europium 155	1.0	U	9.5	17	07/30/04	08/02/04	4212295	
Manganese 54	0.4	U	5.4	10	07/30/04	08/02/04	4212295	
Sodium 22	1	U	6.3	12	07/30/04	08/02/04	4212295	
Zinc 65	-5	U	13	23	07/30/04	08/02/04	4212295	
SR-90 BY GFPC EPA-905 MOD				pCi/L	905 MOD			
Strontium 90	0.15	U	0.53	0.89	08/02/04	08/10/04	4215113	57
GROSS A/B BY GFPC EPA 900.0 MOD				pCi/L	900.0 MOD			
Gross Alpha	0.26	U	0.51	0.88	08/11/04	08/15/04	4223316	
Gross Beta	1.0	U	1.0	1.7	08/11/04	08/15/04	4223316	
TRITIUM (Distill) by EPA 906.0 MOD				pCi/L	906.0 MOD			
Tritium	-50	U	160	300	08/02/04	08/02/04	4215108	

Well #6
Sampled 7-27-04

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.
Bold results are greater than the MDC

J Result is greater than sample detection limit but less than stated reporting limit.
U Result is less than the sample detection limit.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 19501-004

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4G290209-004
Work Order: GL4NL
Matrix: WATER

Date Collected: 07/27/04 1405
Date Received: 07/29/04 0830

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/L	901.1 MOD			
Americium 241	3.8	U	6.8	13	07/30/04	08/02/04	4212295	
Beryllium 7	3	U	37	69	07/30/04	08/02/04	4212295	
Cesium 134	-4.4	U	4.9	7.8	07/30/04	08/02/04	4212295	
Cesium 137	-2.3	U	3.9	6.9	07/30/04	08/02/04	4212295	
Cobalt 57	-0.7	U	2.6	4.6	07/30/04	08/02/04	4212295	
Cobalt 60	0.4	U	5.9	12	07/30/04	08/02/04	4212295	
Europium 152	-0.1	U	40	78	07/30/04	08/02/04	4212295	
Europium 154	22	U	43	87	07/30/04	08/02/04	4212295	
Europium 155	-1	U	10	18	07/30/04	08/02/04	4212295	
Manganese 54	1.8	U	4.5	9.2	07/30/04	08/02/04	4212295	
Sodium 22	1.1	U	5.8	12	07/30/04	08/02/04	4212295	
Zinc 65	-7.0	U	9.5	16	07/30/04	08/02/04	4212295	
SR-90 BY GFPC EPA-905 MOD				pCi/L	905 MOD			
Strontium 90	0.02	U	0.44	0.74	08/02/04	08/10/04	4215113	68
GROSS A/B BY GFPC EPA 900.0 MOD				pCi/L	900.0 MOD			
Gross Alpha	-0.28	U	0.53	1.1	08/11/04	08/15/04	4223316	
Gross Beta	0.266	U	0.997	1.7	08/11/04	08/15/04	4223316	
TRITIUM (Distill) by EPA 906.0 MOD				pCi/L	906.0 MOD			
Tritium	5	U	59	290	08/02/04	08/02/04	4215108	

Well #7
Sampled 7-27-04

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.
Bold results are greater than the MDC

U Result is less than the sample detection limit.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 19501-002

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4G290209-002
Work Order: GL4NC
Matrix: WATER

Date Collected: 07/27/04 1352
Date Received: 07/29/04 0830

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/L**	**901.1 MOD**			
Americium 241	-2.3	U	7.1	12	07/30/04	08/02/04	4212295	
Beryllium 7	-9	U	33	59	07/30/04	08/02/04	4212295	
Cesium 134	-0.6	U	4.7	7.8	07/30/04	08/02/04	4212295	
Cesium 137	0.7	U	4.9	9.4	07/30/04	08/02/04	4212295	
Cobalt 57	0.2	U	2.6	4.6	07/30/04	08/02/04	4212295	
Cobalt 60	-0.08	U	5.4	11	07/30/04	08/02/04	4212295	
Europium 152	-29	U	45	77	07/30/04	08/02/04	4212295	
Europium 154	-3	U	42	81	07/30/04	08/02/04	4212295	
Europium 155	1.6	U	9.4	17	07/30/04	08/02/04	4212295	
Manganese 54	1.3	U	4.6	9.3	07/30/04	08/02/04	4212295	
Sodium 22	-4.5	U	5.8	9.4	07/30/04	08/02/04	4212295	
Zinc 65	6	U	13	26	07/30/04	08/02/04	4212295	
SR-90 BY GFPC EPA-905 MOD				**pCi/L**	**905 MOD**			
Strontium 90	-0.13	U	0.40	0.69	08/02/04	08/10/04	4215113	75
GROSS A/B BY GFPC EPA 900.0 MOD				**pCi/L**	**900.0 MOD**			
Gross Alpha	-0.33	U	0.49	1.1	08/11/04	08/15/04	4223316	
Gross Beta	0.26	U	0.95	1.6	08/11/04	08/15/04	4223316	
TRITIUM (Distill) by EPA 906.0 MOD				**pCi/L**	**906.0 MOD**			
Tritium	60	U	170	300	08/02/04	08/02/04	4215108	

Well # 11
Sampled 7-27-04

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.
Bold results are greater than the MDC

U Result is less than the sample detection limit.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 19501-001

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4G290209-001
Work Order: GL4MM
Matrix: WATER

Date Collected: 07/27/04 1343
Date Received: 07/29/04 0830

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/L**	**901.1 MOD**			
Americium 241	2.8	U	6.5	12	07/30/04	08/02/04	4212295	
Beryllium 7	-16	U	31	54	07/30/04	08/02/04	4212295	
Cesium 134	-8.7	U	5.1	7.3	07/30/04	08/02/04	4212295	
Cesium 137	-0.6	U	6.8	13	07/30/04	08/02/04	4212295	
Cobalt 57	1	U	2.3	4.1	07/30/04	08/02/04	4212295	
Cobalt 60	-3.4	U	7.6	15	07/30/04	08/02/04	4212295	
Europium 152	-19	U	37	66	07/30/04	08/02/04	4212295	
Europium 154	-9	U	48	88	07/30/04	08/02/04	4212295	
Europium 155	-5.8	U	9.1	15	07/30/04	08/02/04	4212295	
Manganese 54	-0.3	U	5.6	10	07/30/04	08/02/04	4212295	
Sodium 22	0.7	U	6.5	12	07/30/04	08/02/04	4212295	
Zinc 65	-5	U	10	18	07/30/04	08/02/04	4212295	
SR-90 BY GFPC EPA-905 MOD				**pCi/L**	**905 MOD**			
Strontium 90	-0.03	U	0.46	0.78	08/02/04	08/10/04	4215113	65
GROSS A/B BY GFPC EPA 900.0 MOD				**pCi/L**	**900.0 MOD**			
Gross Alpha	0.1	U	0.44	0.84	08/11/04	08/15/04	4223316	
Gross Beta	0.7	U	1.0	1.7	08/11/04	08/15/04	4223316	
TRITIUM (Distill) by EPA 906.0 MOD				**pCi/L**	**906.0 MOD**			
Tritium	-50	U	160	300	08/02/04	08/02/04	4215108	

Well # 12
Sampled 7-27-04

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.
Bold results are greater than the MDC

U Result is less than the sample detection limit.

BROOKHAVEN NATIONAL LABS

Client Sample ID: 19501-005

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F4G290209-005
Work Order: GL4NR
Matrix: WATER

Date Collected: 07/27/04 0000
Date Received: 07/29/04 0830

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/L	**901.1 MOD**			
Americium 241	-2.4	U	6.8	12	07/30/04	08/02/04	4212295	
Beryllium 7	-27	U	37	61	07/30/04	08/02/04	4212295	
Cesium 134	-2.2	U	4.9	8.6	07/30/04	08/02/04	4212295	
Cesium 137	-3.4	U	6.3	12	07/30/04	08/02/04	4212295	
Cobalt 57	-1.3	U	2.2	3.6	07/30/04	08/02/04	4212295	
Cobalt 60	1.7	U	6.9	15	07/30/04	08/02/04	4212295	
Europium 152	-29	U	43	72	07/30/04	08/02/04	4212295	
Europium 154	12	U	43	85	07/30/04	08/02/04	4212295	
Europium 155	7.7	U	9.1	17	07/30/04	08/02/04	4212295	
Manganese 54	4.4	U	5.0	11	07/30/04	08/02/04	4212295	
Sodium 22	-0.9	U	4.9	9.2	07/30/04	08/02/04	4212295	
Zinc 65	-7	U	11	19	07/30/04	08/02/04	4212295	
SR-90 BY GFPC EPA-905 MOD				pCi/L	**905 MOD**			
Strontium 90	0.33	U	0.47	0.78	08/02/04	08/10/04	4215113	69
GROSS A/B BY GFPC EPA 900.0 MOD				pCi/L	**900.0 MOD**			
Gross Alpha	0.04	U	0.52	1.0	08/11/04	08/15/04	4223316	
Gross Beta	0.7	U	1.0	1.7	08/11/04	08/15/04	4223316	
TRITIUM (Distill) by EPA 906.0 MOD				pCi/L	**906.0 MOD**			
Tritium	140	U	180	300	08/02/04	08/02/04	4215108	

Well #12 - Duplicate
Sampled 7-27-04

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.
Bold results are greater than the MDC

U Result is less than the sample detection limit.