Environmental and Waste Management Services

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Upton, NY 11973-5000
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goode@bnl.gov

BROOKHAVEN
NATIONAL LABORATORY

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

December 8, 2003

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 November 2003

In accordance with the requirements of the BNL Potable Water System Sampling Plan and the 2003 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 and Bacteriological Analyses for November.
Attachment II:	November 2003 Biweekly Quarter Water Quality Monitoring Data for the BNL Distribution System.
Attachment III:	2003 Fourth 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
ANSI-RAB EMS ACCREDITED
NSF's Registration Program is accredited by the American National Standards Institute-Registrar Accreditation Board

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,

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.03

ATTACHMENT I

Brookhaven National Laboratory

Potable Water Supply

Monthly Operational Data and Bacteriological Analyses for November 2003

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: NOV 2003

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	100	per 24hrs	mg/l	Hydroxide	13026204
1	0					
2	0					
3	2,757	80	20	0.53	7.3	13028961
4	1,081	70	10	0.62	7.3	13030042
5	930	60	10	1	7.5	13030972
6	937	50	10	0.5	7.8	13031909
7	865	40+40	10	** 0.83	7.7	13032774
8	0					
9	0					
10	2,296	65+135	15	0.61	7.3	13035070
11	0					
12	1,777	183	17	0.75	7.6	13036847
13	844	175	8	0.98	7.7	13037691
14	936	170	5	0.91	7.3	13038627
15	0					
16	0					
17	2,997	141+59	29	1.03	7.2	13041624
18	808	190	10	0.75	7.6	13042432
19	576	190	0	0.35	7.6	13043008
20	1,130	182	8	0.6	7.6	13044138
21	1,032	178	4	0.8	7.6	13045170
22	0					
23	0					
24	2,936	155	23	1.2	7.3	13048106
25	970	150	5	0.91	7.3	13049076
26	884	140	10	1.1	7.3	13049960
27	0					
28	1,667	130	10	0.89	7.2	13051627
29	0					
30	2,680	105	25	1.01	7.3	13054307
31	0					
TOT	28,103		229			
AVG.	936.77		7.63	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: 12-4-03

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: NOV 2003

LOCATION: **WELL NO. 4**

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	150	per 24hrs	mg/l	Hydroxide	1630302
1	0					
2	0					
3	1,221	126	24	0.26	6.2	1631523
4	462	117	9	0.23	5.9	1631985
5	369	108	9	0.018	5.9	1632354
6	327	102+36	6	0.36	5.9	1632681
7	301	135	3	0.28	5.9	1632982
8	0					
9	0					
10	971	114	21	0.24	6	1633953
11	0					
12	612	102	12	0.018	6	1634565
13	387	93	9	0.24	6	1634952
14	331	90	3	1.2	6.2	1635283
15	0					
16	0					
17	543	84+66	6	0.32	6.2	1635826
18	253	141	9	0.29	6	1636079
19	288	135	6	0.36	6	1636367
20	291	126	9	0.32	6	1636658
21	459	117+33	9	0.37	6	1637117
22	0					
23	0					
24	1,039	123	27	0.45	6.2	1638156
25	393	114	9	0.29	6.1	1638549
26	285	108	6	0.43	6.2	1638834
27	0					
28	836	90+60	18	0.23	6.2	1639670
29	0					
30	935	123	27	0.14	6.1	1640605
31	0					
TOT	10,303		222			
AVG.	343.43		7.40	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: Lo Nay

Date: 12-9-03

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: NOV 2003

LOCATION: **WELL NO. 6**

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	123	per 24hrs	mg/l	Hydroxide	408699
1	0					
2	0					
3	604	108	15	0.26	6.2	409303
4	188	105	3	0.23	5.9	409491
5	121	102	3	0.018	5.9	409612
6	40	99+39	3	0.36	5.9	409652
7	95	132	8	0.28	5.9	409747
8	0					
9	0					
10	288	126	6	0.24	6	410035
11	0					
12	242	123	3	0.018	6	410277
13	165	120	3	0.24	6	410442
14	191	114	6	1.2	6.2	410633
15	0					
16	0					
17	1,128	84	30	0.32	6.2	411761
18	104	81	3	0.29	6	411865
19	269	75	6	0.36	6	412134
20	64	72	3	0.32	6	412198
21	271	63+69	9	0.37	6	412469
22	0					
23	0					
24	505	120	12	0.45	6.2	412974
25	245	114	6	0.29	6.1	413219
26	123	111	3	0.43	6.2	413342
27	0					
28	345	105+27	6	0.23	6.2	413687
29	0					
30	486	123	5	0.14	6.1	414173
31	0					
TOT	5,474		133			
AVG.	182.47		4.43	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: 12-4-03

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: NOV 2003

LOCATION: **WELL NO. 7**

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	150	per 24hrs	mg/l	Hydroxide	1274163
1	0					
2	0					
3	3,082	102	48	0.26	6.2	1277245
4	1,260	84	18	0.23	5.9	1278505
5	995	69	15	0.018	5.9	1279500
6	1,240	47+103	18	0.36	5.9	1280740
7	1,170	129	21	0.28	5.9	1281910
8	0					
9	0					
10	2,494	90	39	0.24	6	1284404
11	0					
12	2,000	57	33	0.018	6	1286404
13	919	45+105	12	0.24	6	1287323
14	985	138	12	1.2	6.2	1288308
15	0					
16	0					
17	3,608	78+72	60	0.32	6.2	1291916
18	928	126	24	0.29	6	1292844
19	650	120	6	0.36	6	1293494
20	1,218	99	21	0.32	6	1294712
21	1,232	81+69	18	0.37	6	1295944
22	0					
23	0					
24	3,245	96	54	0.45	6.2	1299189
25	1,102	78	18	0.29	6.1	1300291
26	885	66	12	0.43	6.2	1301176
27	0					
28	1,769	36+114	30	0.23	6.2	1302945
29	0					
30	2,990	102	48	0.14	6.1	1305935
31	0					
TOT	31,772		507			
AVG.	1059.07		16.90	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: 12-4-03

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: NOV 2003

LOCATION: **WELL NO. 10**

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	38	per 24hrs	mg/l	Hydroxide	768856
1	0					
2	0					
3	0	38	0	NR	NR	768856
4	0	38	0	NR	NR	768856
5	0	38	0	NR	NR	768856
6	0	38	0	NR	NR	768856
7	0	38	0	NR	NR	768856
8	0					
9	0					
10	0	38	0	NR	NR	768856
11	0					
12	0	38	0	NR	NR	768856
13	0	38	0	NR	NR	768856
14	0	38	0	NR	NR	768856
15	0					
16	0					
17	0	38	0	NR	NR	768856
18	0	38	0	NR	NR	768856
19	0	38	0	NR	NR	768856
20	0	38	0	NR	NR	768856
21	0	38	0	NR	NR	768856
22	0					
23	0					
24	0	38	0	NR	NR	768856
25	0	38	0	NR	NR	768856
26	0	38	0	NR	NR	768856
27	0					
28	0	38	0	NR	NR	768856
29	0					
30	0	38	0	NR	NR	768856
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 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 12-04-03

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: NOV 2003

LOCATION: **WELL NO. 11**

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	82	per 24hrs	mg/l	Hydroxide	508337
1	0					
2	0					
3	0	82	0	NR	NR	508337
4	0	82	0	0.37	NR	508337
5	22	78	4	NR	NR	508359
6	0	81	0	0.35	7.5	508359
7	2	80	1	NR	NR	508361
8	0					
9	0					
10	0	80	0	NR	NR	508361
11	0					
12	1	80	0	NR	NR	508362
13	0	80	0	NR	NR	508362
14	0	80	0	NR	NR	508362
15	0					
16	0					
17	5	81	0	NR	NR	508367
18	80	80+20	1	NR	NR	508447
19	648	90	10	NR	NR	509095
20	116	87	3	NR	NR	509211
21	280	81	6	NR	NR	509491
22	0					
23	0					
24	373	81	0	NR	NR	509864
25	125	81	0	NR	NR	509989
26	141	81	0	NR	NR	510130
27	0					
28	284	81	0	NR	NR	510414
29	0					
30	485	81	0	NR	NR	510899
31	0					
TOT	2,562		25			
AVG.	85.40		0.83	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: 12-4-03

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: NOV 2003

LOCATION: **WELL NO. 12**

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	69	per 24hrs	mg/l	Hydroxide	648223
1	0					
2	0					
3	0	69	0	NR	NR	648223
4	0	69	0	NR	NR	648223
5	20	69	0	NR	NR	648243
6	0	69	0	0.66	7.4	648243
7	2	69	0	NR	NR	648245
8	0					
9	0					
10	0	69	0	NR	NR	648245
11	0					
12	0	69	0	NR	NR	648245
13	0	69	0	NR	NR	648245
14	0	69	0	NR	NR	648245
15	0					
16	0					
17	3	69	0	NR	NR	648248
18	72	66	3	NR	NR	648320
19	1	66	0	NR	NR	648321
20	53	66	0	NR	NR	648374
21	0	66	0	NR	NR	648374
22	0					
23	0					
24	0	66	0	NR	NR	648374
25	3	66	0	NR	NR	648377
26	0	66	0	NR	NR	648377
27	0					
28	0	66	0	NR	NR	648377
29	0					
30	0	66	0	NR	NR	648377
31	0					
TOT	154		3			
AVG.	5.13		0.10	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: 12-04-03

Title: **Water Systems Supervisor**

Certification No. **NY0031941**

12/1/2003
Pump Data

MONTHLY GALLONAGE REPORT
NOV 2003.xls

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	1,221	604	3,082	0	0	0	4,907
4	462	188	1,260	0	0	0	1,910
5	369	121	995	0	22	20	1,527
6	327	40	1,240	0	0	0	1,607
7	301	95	1,170	0	2	2	1,570
8	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0
10	971	288	2,494	0	0	0	3,753
11	0	0	0	0	0	0	0
12	612	242	2,000	0	1	0	2,855
13	387	165	919	0	0	0	1,471
14	331	191	985	0	0	0	1,507
15	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0
17	543	1,128	3,608	0	5	3	5,287
18	253	104	928	0	80	72	1,437
19	288	269	650	0	648	1	1,856
20	291	64	1,218	0	116	53	1,742
21	459	271	1,232	0	280	0	2,242
22	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0
24	1,039	505	3,245	0	373	0	5,162
25	393	245	1,102	0	125	3	1,868
26	285	123	885	0	141	0	1,434
27	0	0	0	0	0	0	0
28	836	345	1,769	0	284	0	3,234
29	0	0	0	0	0	0	0
30	935	486	2,990	0	485	0	4,896
31	0	0	0	0	0	0	0
Total	10,303	5,474	31,772	0	2,562	154	50,265

	Totalizer This Month	Totalizer Last Month	Total(x1,000) Gallons
Well 4	1,640,605	1,630,302	10,303
Well 6	414,173	408,699	5,474
Well 7	1,305,935	1,274,163	31,772
Well 10	768,856	768,856	0
Well 11	510,899	508,337	2,562
Well 12	648,377	648,223	154
AGS Water Supply Meter	473,366	471,054	2312.00
Medical Reactor - Well 105		0	0.00
Biology Building - Well 9	6,790,390	6,789,910	0.48

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. : 0311158-001

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

Federal ID 5111891
Collected 11/6/2003 8:46:00 AM
Received 11/6/2003 3:30:00 PM
Collected By CLIENT
Copy : Original
CC

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

Client ID. : 17804-001

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Total Coliform	Negative		Negative	M9223	11/7/2003 11:00:00 AM
E_Coliform	Absent		Absent	M9223	11/7/2003 11:00:00 AM
Total Residual Chlorine	0.9	mg/L		M4500-Cl G	11/6/2003

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 : 11/10/2003

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. : 0311158-002

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

Federal ID 5111891
Collected 11/6/2003 9:03:00 AM Point No 076-408
Received 11/6/2003 3:30:00 PM Location: B-640 Water Tower
Collected By CLIENT
Copy : Original
CC

Client ID. : 17804-002

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Total Coliform	Negative		Negative	M9223	11/7/2003 11:00:00 AM
E_Coliform	Absent		Absent	M9223	11/7/2003 11:00:00 AM
Total Residual Chlorine	0.9	mg/L		M4500-Cl G	11/6/2003

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 : 11/10/2003

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. : **0311158-003**

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

Federal ID 5111891
Collected 11/6/2003 9:16:00 AM Point No 045-12
Received 11/6/2003 3:30:00 PM Location: B-1005 RHIC
Collected By CLIENT
Copy : Original
CC

Client ID. : 17804-003

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Total Coliform	Negative		Negative	M9223	11/7/2003 11:00:00 AM
E_Coliform	Absent		Absent	M9223	11/7/2003 11:00:00 AM
Total Residual Chlorine	0.6	mg/L		M4500-Cl G	11/6/2003

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 : 11/10/2003

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. : 0311158-004

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

Federal ID 5111891
Client ID. : 17804-004
Collected 11/6/2003 8:29:00 AM Point No 109-19
Received 11/6/2003 3:30:00 PM Location: B-363 Apt.Laundry
Collected By CLIENT
Copy : Original
CC

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Total Coliform	Negative		Negative	M9223	11/7/2003 11:00:00 AM
E_Coliform	Absent		Absent	M9223	11/7/2003 11:00:00 AM
Total Residual Chlorine	0.5	mg/L		M4500-Cl G	11/6/2003

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 : 11/10/2003

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. : 0311158-005

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

Federal ID 5111891
Client ID. : 17804-005
Collected 11/6/2003 9:26:00 AM Point No 054-187
Received 11/6/2003 3:30:00 PM Location: B-930 LINAC
Collected By CLIENT
Copy : Original
CC

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Total Coliform	Negative		Negative	M9223	11/7/2003 11:00:00 AM
E_Coliform	Absent		Absent	M9223	11/7/2003 11:00:00 AM
Total Residual Chlorine	0.9	mg/L		M4500-Cl G	11/6/2003

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 : 11/10/2003

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. : 0311158-006

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

Federal ID 5111891
Client ID. : 17804-006
Collected 11/6/2003 9:36:00 AM Point No 084-70
Received 11/6/2003 3:30:00 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	11/7/2003 11:00:00 AM
E_Coliform	Absent		Absent	M9223	11/7/2003 11:00:00 AM
Total Residual Chlorine	0.6	mg/L		M4500-Cl G	11/6/2003

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

Joann M. Slavin

Date Reported : 11/10/2003

Laboratory Manager

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. : 0311158-007

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

Federal ID 5111891
Collected 11/6/2003 9:45:00 AM Point No 084-67
Received 11/6/2003 3:30:00 PM Location: B-490 Block 11
Collected By CLIENT
Copy : Original
CC

Client ID. : 17804-007

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Total Coliform	Negative		Negative	M9223	11/7/2003 11:00:00 AM
E_Coliform	Absent		Absent	M9223	11/7/2003 11:00:00 AM
Total Residual Chlorine	0.4	mg/L		M4500-Cl G	11/6/2003

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 : 11/10/2003

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. : 0311158-008

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

Federal ID 5111891
Collected 11/6/2003 Point No 1
Received 11/6/2003 3:30:00 PM Location: Duplicate
Collected By CLIENT
Copy : Original
CC

Client ID. : 17804-008

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Total Coliform	Negative		Negative	M9223	11/7/2003 11:00:00 AM
E_Coliform	Absent		Absent	M9223	11/7/2003 11:00:00 AM

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 : 11/10/2003

ATTACHMENT II

Brookhaven National Laboratory

Potable Water Supply

November 2003 Biweekly Water Quality Monitoring Data for the BNL Distribution System

Attachment II
Table 1 - Summary of Water Quality Analyses
for the BNL Potable Water System
November 2003

Sample Location	Sample Date	pH (SU)	Temperature (Degrees F)	Conductivity (µmhos)	Alkalinity (mg/L)	Calcium (mg/L)
WTP	11/4/03	7.3	58	185	ANR	ANR
WTP	11/6/03	7.8	56	143	ANR	ANR
WTP	11/11/03	Holiday			ANR	ANR
WTP	11/13/03	7.7	55	150	ANR	ANR
WTP	11/18/03	7.6	54	140	ANR	ANR
WTP	11/20/03	7.6	56	140	ANR	ANR
WTP	11/25/03	7.6	55	154	ANR	ANR
WTP	11/27/03	Holiday			ANR	ANR

ANR- Analysis Not Required
NR- Well Not Running
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

2003 Fourth Quarter Radiological Analyses for the BNL Potable Water Wells

ATTACHMENT III

Table 2
Summary of 2003 Fourth Quarter Radiological Analyses for the BNL Potable Water Wells

Well ID	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Tritium (pCi/L)	Sr-90 (pCi/L)
Well # 4	2.62	3.92	< 280	< 0.56
Well # 4 (Duplicate)	0.68	< 1.40	< 275	< 0.55
Well # 6	< 0.58	< 1.4	< 273	< 0.56
Well # 7	< 0.58	< 1.4	< 280	< 0.61
Well # 11	< 0.58	< 1.4	< 278	< 0.58
Well # 12	1.33	2.67	< 280	< 0.36

ASL Prefix No.
23102203

BROOKHAVEN NATIONAL LABORATORY

RADIOLOGICAL CONTROL DIVISION

SAMPLING CHAIN OF CUSTODY

Chain of Custody No.
17730

No. of Pages: 1

Requires EDD [X]

DQL _____

Carrier/Waybill #: _____

P.O. #: _____

Analysis Requested By			Sampling Contractor		Analytical Laboratory	
Name:	B Lee		Name:	EWMSD Field Sampling	Name:	ASL
Life No.	20222	Ext. 3148	Contact		Address:	
Acct. No.	07089	Dept. ES	Phone:		City:	St: Zip:
Email Reports to:			Email / Fax:		Contact:	
1.	B Lee		Sampler:	Carlee Ogeka	Phone:	
2				L Lettieri	Email/Fax:	
Project Name			**Project Manager**		**Field Engineer**	
	ES F Wells					

COMMENTS

*** 1 day turn around on the H3 Samples ***

Type				Sample Information						Container				Analysis Requested									
L.I.D.	U.I.D.	Smp	Col	Site I.D - Bldg. - Life #	Depth - RWP	Date	Time	Matrix	Description	Vol. / Units	Type	No.	Preservative	Alpha / Beta	Tritium	Gamma	Strontium	524.2	624	Nuclide Specific Alpha	PCB'x	Metals	
01	001	e		Well 12	92 - 137	0/22/2003	1012	W	Ground Water	4.250 L		2		X	X	X							
02	002	e		Well 11	93 -142	0/22/2003	1006	W	Ground Water	4.250 L		2		X	X	X							
03	003	e		Well 6	98 - 150	0/22/2003	0947	W	Ground Water	4.250 L		2		X	X	X							
04	004	e		Well 7	99 - 150	0/22/2003	0951	W	Ground Water	4.250 L		2		X	X	X							
05	005	e		BD-1	--------	0/22/2003	--------	W	Ground Water, Duplicate - Well #4	4.250 L		2		X	X	X							
06	006	e		Well 4	95 -147	0/22/2003	0939	W	Ground Water	4.250 L		2		X	X	X							

1. Relinquished by / Date / Time	2. Relinquished by / Date / Time	3. Relinquished by / Date / Time	Contractor Lab Sample Disposal
Signature: Carlee Ogeka	Signature:	Signature:	Return to Client: ___ Disposal by lab: ___
Date / Time: 10/22/2003 1118	Date / Time:	Date / Time:	Archive for ___ Months
1. Received by / Date / Time	**2. Received by / Date / Time**	**3. Received by / Date / Time**	**Turn Around Time Required:**
Signature: V Lettieri	Signature:	Signature:	Rush 1 Day: ___ 14 Days ___ 30 Days X
Date / Time: 10/22/2003 1121	Date / Time:	Date / Time:	7 Days: ___ Other: ___ Days

ASL Prefix No.
23102203

BROOKHAVEN NATIONAL LABORATORY
RADIOLOGICAL CONTROL DIVISION
Analytical Services Laboratory

RADIOLOGICAL REPORT

Reviewed by: Robert R. Gaschott 10/27/03

SAMPLE I.D. NUMBER	ALPHA uCi/mL	ALPHA Error	BETA uCi/mL	BETA Error	TRITIUM uCi/mL	TRITIUM Error	MDL - uCi/mL Alpha	Beta	Tritium
01	1.33E-09	4.91E-10	2.67E-09	9.59E-10	1.62E-07	1.76E-07	5.77E-10	1.40E-09	2.80E-07
02	1.39E-10	3.16E-10	1.89E-10	8.18E-10	9.73E-08	1.71E-07	5.77E-10	1.40E-09	2.78E-07
03	5.31E-10	3.83E-10	1.10E-09	8.72E-10	8.55E-08	1.68E-07	5.77E-10	1.40E-09	2.73E-07
04	1.95E-10	3.25E-10	9.11E-10	8.61E-10	2.15E-07	1.79E-07	5.77E-10	1.40E-09	2.80E-07
05	6.78E-10	4.06E-10	-1.09E-10	7.99E-10	8.84E-08	1.69E-07	5.77E-10	1.40E-09	2.75E-07
06	2.62E-09	6.37E-10	3.92E-09	1.02E-09	1.43E-07	1.75E-07	5.77E-10	1.40E-09	2.80E-07

ASL Prefix No.
23102203

Brookhaven National Laboratory
Radiological Control Division
Analytical Services Laboratory

GAMMA RESULTS

Reviewed by: Robert R. Gaschott 11/6/03

Sample I.D.	Nuclide Name	Activity uCi/mL	2-Sigma % Error
01	There are no nuclides meeting summary criteria		
02	PB-214	7.67E-09	41.65
03	There are no nuclides meeting summary criteria		
04	There are no nuclides meeting summary criteria		
05	There are no nuclides meeting summary criteria		
06	There are no nuclides meeting summary criteria		

LOT # F3J230317

STL ST. LOUIS

CWF 7905

ASL Prefix No. 23102205

Page 1 of 1

BROOKHAVEN NATIONAL LABORATORY

Carrier/Waybill # _____

P.O. # 73841

Chain of Custody No. 17731

Requires EDD ☑ DQL ____

SAMPLING CHAIN OF CUSTODY

Analysis Requested By		Sampling Contractor	Analytical Laboratory
Name: B Lee		Name: EWMSD Field Sampling	Name: STL
Life: No: 20222	Ext. 3148	Contact:	Address:
Acct. No: 07089	Dept: ES	Phone:	City: St: MO Zip:
Email Reports To:		Email/Fax:	Contact:
1 B Lee		Sampler: L Lettieri / C Ogeka	Phone:
2			Email/Fax:
Project Name:		Project Manager:	Field Engineer:
ES F-wells		B Lee	

Comments:

LID	Type UID	Smp	Coll	Site ID/Bldg/Life #	Depth/RWP	Date	Time	Matrix	Name/Description	Cont.Vol./Units	Cont.Type	# of Cont.	Preservative	Alpha/Beta	Tritium	Gamma	Strontium	524.2	624	Nuclide-specific Alpha	PCBs	Metals
	001	E	G	Well 12	92-137	10/22/03	1012	W	Ground water	2l	P	1	HNO3				Y					
	002	E	G	Well 11	93-142	10/22/03	1006	W		2l	P	1	HNO3				Y					
	003	E	G	Well 6	98-150	10/22/03	0947	W		2l	P	1	HNO3				Y					
	004	E	G	Well 7	99-150	10/22/03	0951	W		2l	P	1	HNO3				Y					
	005	E	G	BD-1	—	10/22/03	—	W	Duplicate - Well #4	2l	P	1	HNO3				Y					
	006	E	G	Well 4	95-147	10/22/03	0939	W		2l	P	1	HNO3				Y					

1 Relinquished By/Date/Time	2 Relinquished By/Date/Time	3 Relinquished By/Date/Time
Print C Ogeka 10/22/03	Print	Print
Signature Caleb Ogeka 1400	Signature	Signature
1 Received By/Date/Time	**2 Received By/Date/Time**	**3 Received By/Date/Time**
Print Sue Wilson 10.23.03	Print	Print
Signature Sue Wilson 0900	Signature	Signature

Contractor Lab Sample Disposal:
☐ Return To Client ☑ Disposal by Lab
☐ Archive For ____ Months

Data Package: ☑ Full ☐ Summary

Turn-Around Time Required:
☐ Rush (1 Day) ☐ 14 Days ☑ 30 Days
☐ 7 Days ☐ Other ( )

BNL F 3101C

Distribution WHITE (1) - Stays with Sample; PINK (2) - Lab or Other GREEN (3) - Returned to Client with Report GOLDENROD (4) - Field Copy - (Sampler)

BROOKHAVEN NATIONAL LABS

Client Sample ID: 17731-006

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3J230317-006
Work Order: F29ML
Matrix: W

Date Collected: 10/22/03 0939
Date Received: 10/23/03 0900

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
SR-90 BY GFPC EPA-905 MOD				**pCi/L**	**905 MOD**			
Strontium 90	-0.005	U	0.33	0.56	10/24/03	11/03/03	3297298	88

Potable Well #4

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: 17731-005

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3J230317-005
Work Order: F29MK
Matrix: W

Date Collected: 10/22/03 0000
Date Received: 10/23/03 0900

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
SR-90 BY GFPC EPA-905 MOD				**pCi/L**	**905 MOD**			
Strontium 90	0.1	U	0.33	0.55	10/24/03	11/03/03	3297298	97

Potable Well #4 - Duplicate

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: 17731-003

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3J230317-003
Work Order: F29MF
Matrix: W

Date Collected: 10/22/03 0947
Date Received: 10/23/03 0900

Parameter	Result	Qual	Total Uncert. (2 σ+/-)		MDC	Prep Date	Analysis Date	Batch #	Yld %
SR-90 BY GFPC EPA-905 MOD				**pCi/L**		**905 MOD**			
Strontium 90	0.17	U	0.34		0.56	10/24/03	11/03/03	3297298	94

Potable Well #6

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: 17731-004

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3J230317-004
Work Order: F29MJ
Matrix: W

Date Collected: 10/22/03 0951
Date Received: 10/23/03 0900

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
SR-90 BY GFPC EPA-905 MOD				**pCi/L**	**905 MOD**			
Strontium 90	0.37	U	0.38	0.61	10/24/03	11/03/03	3297298	87

Potable Well #7

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: 17731-002

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3J230317-002
Work Order: F29MD
Matrix: W

Date Collected: 10/22/03 1006
Date Received: 10/23/03 0900

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
SR-90 BY GFPC EPA-905 MOD				**pCi/L**	**905 MOD**			
Strontium 90	0.26	U	0.35	0.58	10/24/03	11/03/03	3297298	89

Potable Well # 11

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: 17731-001

Severn Trent Laboratories - Radiochemistry

Lab Sample ID: F3J230317-001
Work Order: F29LW
Matrix: W

Date Collected: 10/22/03 1012
Date Received: 10/23/03 0900

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	MDC	Prep Date	Analysis Date	Batch #	Yld %
SR-90 BY GFPC EPA-905 MOD				**pCi/L**	**905 MOD**			
Strontium 90	0.35	U	0.36	0.57	10/24/03	11/03/03	3297298	91

Potable Well #12

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.