

120 E. Fifth Ave., Bldg. 860 P. O. Box 5000 Upton, NY 11973-5000 Phone 631 344-4549 Fax 631 344-7334 goode@bnl.gov

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

April 6, 2006

Ms. Kathleen Newcomer Suffolk County Department of Health Services Office of Water Resources Bureau of Drinking Water Suite 1C 360 Yaphank Avenue Yaphank, New York 11980

Dear Ms. Kathleen Newcomer:

**Subject:** Monthly Water Treatment Plant Reports

Reference: Suffolk County Minimum Monitoring Requirements for March 2006

In accordance with the requirements of the BNL Potable Water System Sampling Plan and the 2006 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 March 2006.

Attachment II: March 2006 Biweekly and Semi Annual Water Quality Monitoring

Data for the BNL Distribution System and Potable Water Wells.

Attachment III: March 2006 Stage 1 Disinfectants & Disinfection Byproduct Rule

Monitoring Data and Bacteriological Analyses for the BNL

Distribution System.

Collection and analysis of these samples is 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



Newcomer April 6, 2006

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 J. Higbie at (631) 344-5919, R. Lee at (631) 344-3148, or W. Chaloupka at (631) 344-7136.

Sincerely,

George Al Goode

Environmental & Waste Management Services

Division Manager

GAG/JB:car

Attachments: As noted

cc: L. Ambroszkiewicz, SCDHS

W. Chaloupka

J. Granzen

G. Goode

J. Higbie

R. Lee

E. Murphy

P. Ponturo, SCDHS

L. Ross

J. Tarpinian

File: EC61ER.06

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### ATTACHMENT I

**Brookhaven National Laboratory** 

**Potable Water Supply** 

**Monthly Operational Data for March 2006** 

for the BNL Potable Water System

#### WATER SYSTEMS OPERATION REPORT

PUBLIC WATER SUPPLY PROTECTION STATION 11515100 PROGRAM CODE 169 SUFFOLK COUNTY REPORTING PERIOD: March 2006 I OCATION: Water Treatment Facility Did an emergency occur in any part of the water system? Source: Ground Water Does the system have a chlorination waiver? CHLORINATION pH Treated Liquid Sodium Hypochlorite Free Cl2 Lime Totalizer Population Served 3,500 Water Gallons Residual Sodium Daily Totalizer Day of month K Gals 172 per 24hrs mg/l Hydroxide 280946 164 8 1.00 7.7 281903 4 957 Number of routine samples 2 . 955 155 5 0.97 7.5 282858 (Must collect a minimum of 5 routine samples the month following 3 993 145 10 1.10 7.8 283851 a repeat sample collection) 0 4 7 5 0 Number of actual routine samples 7.7 6 2,683 120 286534 7 908 110 10 0.52 7.5 287442 Does a M&AR violation exist? YES ио Х 8 965 0.44 7.5 288407 945 0.94 7.8 289352 9 90 10 10 1,330 75 15 0.86 7.6 290682 If yes, check reason's below. 11 0 0 12 Actual number of samples fewer than required. 4,722 7.6 295404 13 20+100 55 1.40 14 1,655 110+90 10 0.65 7.6 297059 Failure to analyze for E. Coli if there was a positive result for 7.6 15 1,528 180 20 1.10 298587 total coliform from routine, repeat of high turbidity sample. 1,612 170 10 0.96 7.6 300199 16 7.4 301743 \_Failure to analyze repeat samples. 17 1,544 160 10 0.69 0 18 ио Х Does an MCL violation exist? 19 0 4,754 0.80 6.9 306497 20 120 40 1,555 10 0.82 7 308052 If yes, check reason(s) below. 21 110 1,547 100+90 0.96 7.2 309599 22 10 1,382 180 0.63 7.1 310981 23 10 \_\_\_ Two or more positive total coliform samples for systems collecting 40 7.3 24 1,258 170 10 0.99 312239 or more samples (routine, repeat or hiturb) per month. 25 0 0 Positive E. Coli result followed by a positive total coliform repeat sample. 26 2,983 1.10 7.3 315222 27 150 20 0.57 316359 1,137 140 10 7.3 28 Positive total coliform result followed by a positive E. Coli repeat sample. 29 928 130 10 0.70 7.5 317287 318400 30 1,113 120 10 0.62 7.5 31 1,233 110 10 1.00 7.5 319633 TOT 38,687 338 AVG. 1247,97 No. Days: Date: 4-5-86 & hay Certification No. NY0031941 Title: Water Systems Supervisor

WATER SYSTEMS OPERATION REPORT PUBLIC WATER SUPPLY PROTECTION PROGRAM CODE 169 STATION 11515100 SUFFOLK COUNTY REPORTING PERIOD: March 2006 LOCATION: WELL NO. 4 Did an emergency occur in any part of the water system? NO Source: Ground Water Does the system have a chlorination waiver? CHLORINATION pH Treated Liquid Sodium Hypochlorite Free Cl2 Lime Totalizer Population Served 3,500 Day of Water Gallons CI2 use Residual Sodium Daily Totalizer K Gals per 24hrs Hydroxide 1648622 month mg/l 1648622 1 NR NR Number of routine samples 2 0 0 NR 1648622 0 NR (Must collect a minimum of 5 routine samples the month following 3 0 0 0 NR NR 1648622 a repeat sample collection) 4 0 5 0 Number of actual routine samples 0 0 NR NR 1648622 7 0 0 0 NR NR NO X 1648622 Does a M&AR violation exist? 0 8 0 0 NR NR 1648622 9 0 1648622 0 0 NR NR 0 10 0 0 NR NR 1648622 If yes, check reason's below. 11 0 0 12 \_ Actual number of samples fewer than required. 0 13 0 0 NR NR 1648622 14 0 0 NR 1648622 Failure to analyze for E. Coli if there was a positive result for 0 15 0 0 NR NR 1648622 total coliform from routine, repeat of high turbidity sample. 0 NR 1648622 16 0 0 NR 0 0 17 0 NR NR 1648622 \_\_\_\_Failure to analyze repeat samples. 0 18 19 0 Does an MCL violation exist? NO X 20 0 0 0 NR NR 1648622 21 0 0 NR NR 1648622 If yes, check reason(s) below. 0 22 0 0 NR NR 1648622 23 0 0 0 NR NR 1648622 \_\_\_ Two or more positive total coliform samples for systems collecting 40 24 0 0 0 NR NR 1648622 or more samples (routine, repeat or hiturb) per month. 25 0 0 26 Positive E. Coli result followed by a positive total coliform repeat sample. 27 0 NR 1648622 28 0 0 0 NR NR 1648622 Positive total coliform result followed by a positive E. Coli repeat sample. 29 0 0 0 NR NR 1648622 0 30 0 0 NR NR 1648622 0 0 31 0 NR 1648622 NR TOT 0 0 AVG. 0.00 0.00 No. Days: Date: 4-5.06 ca flor Reported by: Title: Water Systems Supervisor Certification No. NY0031941

			DITC				RATION REPORT
PUBLI	C WATER	SUPPLY P	ROTECTION	l			
PR	OGRAM (	CODE 169	STATION	11515100	SUFFO	LK COUNTY	REPORTING PERIOD: March 2006
LOC	ATION:	WELL NO	. 6		Did an en	nergency occur	in any part of the water system? YES NO X
Sou	rce: Grou	nd Water				Does the system	em have a chlorination waiver? YES NO X
		CHLORIN	IATION		pH		
	Treated	Liquid Sodium	Hypochlorite	Free Cl2	Lime	Totalizer	
Day of	Water	Gallons	Cl2 use	Residual	Sodium	Daily Totalizer	Population Served 3,500
month	K Gals	150	per 24hrs	mg/l	Hydroxide	612506	_
1	334	141	9	0.35	6.2	612840	Number of routine samples 4
2	368	129	12	0.00	6.1	613208	(Must collect a minimum of 5 routine samples the month following
3	250	120+30	9	0.21	6.1	613458	a repeat sample collection)
4	0	-					
5	0		-	-	-		Number of actual routine samples 7
6	1,088	108	42	0.40	6	614546	B 444 14 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
7	320	96	12	0.20	6.2	614866	Does a M&AR violation exist? YES NO X
8	321	80	16	0.30	6	615187	
9	348	65	15	0.19	6	615535	
10	501	45+98	20	0.29	6	616036	If yes, check reason's below.
11	0						
12	0		-		-		Actual number of samples fewer than required.
13	2,605	133+17	126	0.00	6.1	618641	
14	451	135	15	0.20	6.1	619092	Failure to analyze for E. Coli if there was a positive result for
15	560	126+24	9	0.30	6.1	619652	total coliform from routine, repeat of high turbidity sample.
16	235	147	13	0.13	6.1	619887	Failure to each as a section of the section
17	345	135	12	0.14	6.1	- 620232	Failure to analyze repeat samples.
18	0						Does an MCL violation exist? YE% NO X
_		447	40	0.02	61	604400	Does all mot violation exist:
20	950	117	18		6.1	621182	If yes, check reason(s) below.
21	217	111	1.	0.55	<b>—</b>	621399	ii yes, check reason(s) below.
22	444	99	9	0.59	6	621843 622292	Two or more positive total coliform samples for systems collecting 40
24	294	90	0	0.01	6	622586	or more samples (routine, repeat or hiturb) per month.
25	0	30	0	0.01	-	022300	or more samples fromme, repeat or month,
26	0		1				Positive E. Coli result followed by a positive total coliform repeat sample.
27	614	78	12	0.01	6	623200	Ositivo E. Controval ronowed by a positive total conform repeat Sample.
28	257	78	0	0.05	6	623457	Positive total coliform result followed by a positive E. Coli repeat sample.
29	205	66	8	0.03	6.1	623662	Source town source resources by a positive E. Our repeat sample.
30	317	57	11	0.02	6.1	623979	
31	291	45	12	0.03	6	624270	
тот	11,764	· · · · · · · · · · · · · · · · · · ·	398	- ····	1	027E10	
AVG.	379.48		12.84	No. Days:	31		
	eported by:	Sc.	flore	A STATE OF THE PARTY OF THE PAR		•	Date: 4-5-0 6
	Title:	Water Sys	stems Supe	rvisor			Certification No. NY0031941

**BROOKHAVEN NATIONAL LABORATORY** WATER SYSTEMS OPERATION REPORT PUBLIC WATER SUPPLY PROTECTION PROGRAM CODE 169 STATION 11515100 SUFFOLK COUNTY REPORTING PERIOD: March 2006 LOCATION: WELL NO. 7 Did an emergency occur in any part of the water system? NO Source: Ground Water Does the system have a chlorination waiver? CHLORINATION pH Treated Liquid Sodium Hypochlorite Free Cl2 Lime Totalizer Population Served 3,500 Day of Water Residual Sodium Daily Totalizer K Gals 99 per 24hrs Hydroxide 1922070 month mq/l 849 85 0.35 6.2 1922919 Number of routine samples 0.00 1923849 2 930 72 13 6.1 (Must collect a minimum of 5 routine samples the month following 3 60+90 6.1 1924657 808 0.21 a repeat sample collection) 4 0 0 7 Number of actual routine samples 2,511 114 0.40 6 1927168 NO X 7 848 100 14 0.20 6.2 1928016 Does a M&AR violation exist? 855 0.30 6 1928871 8 92 8 9 926 20 1929797 72 0.19 6 10 1,411 72+78 18 0.29 6 1931208 If ves. check reason's below. 11 0 0 12 \_ Actual number of samples fewer than required. 13 4,605 75 75 0.00 6.1 1935813 14 1,466 54 21 0.20 6.1 1937279 \_\_Failure to analyze for E. Coli if there was a positive result for 36+114 1938783 total coliform from routine, repeat of high turbidity sample. 15 1,504 18 0.30 6.1 16 1,557 132 18 1940340 0.13 6.1 1,500 6.1 1941840 \_Failure to analyze repeat samples. 17 114 18 0.14 18 0 0 Does an MCL violation exist? NO X 19 4,655 36+114 0.02 1946495 20 6.1 21 1,539 126 24 0.55 6 1948034 If yes, check reason(s) below. 22 1,539 99 27 0.59 6 1949573 \_\_\_ Two or more positive total coliform samples for systems collecting 40 1950933 23 1,360 8 0.01 6 81 1,177 66+84 6 1952110 or more samples (routine, repeat or hiturb) per month. 24 15 0.01 25 0 0 26 Positive E. Coli result followed by a positive total coliform repeat sample. 27 2,700 135 0.01 1954810 Positive total coliform result followed by a positive E. Coli repeat sample. 28 1,049 120 15 0.05 6 1955859 765 120 0 0.70 6.1 1956624 29 1,151 108 12 0.02 1957775 30 6.1 1958904 31 1,129 90 18 6 0.03 TOT 36,834 497 No. Days: 16.03 AVG. 1188,19 Date: 4-5.06

Title: Water Systems Supervisor

Certification No. NY0031941

#### WATER SYSTEMS OPERATION REPORT

PR	OGRAM C	ODE 169	STATION	11515100	SUFFO	LK COUNTY	REPORTING PERIOD: March	2006
LOC	ATION:	WELL NO.	10					
	7111011.	***************************************			Did an en	nergency occur	in any part of the water system?	s NO X
Sou	rce: Groui	nd Water				•	em have a chlorination waiver?	
T	icc. Groun				Ι	Does the system	en have a chioritation waiver:	
-	[	CHLORIN			pH			
_	ı	Liquid Sodium		Free Cl2	Lime	Totalizer	December Comment 2 500	
ay of	Water	Gallons 0	Cl2 use	Residual	Sodium	Daily Totalizer	Population Served 3,500	
onth 1	K Gals	0	per 24hrs 0	mg/l NR	Hydroxide NR	771803 771803	Number of routine samples	4
2	0	0	0	NR	NR	771803	(Must collect a minimum of 5 routine samples the	
3	0	0	0	NR	NR	771803	a repeat sample collection)	HORAT TOILGWING
4	0			IVIX	HIX	771003	a repeat sample collection)	
5	0				<del> </del>		Number of actual routine samples	7
6	69	0	0	NR	NR	771872	, and a colonial form of the c	
7	0	0	0	NR	NR	771872	Does a M&AR violation exist? YES	s no x
8	0	0	0	NR	NR	771872		
9	0	0	0	NR -	. NR	771872		
10	0	0	0	NR	NR	771872	If yes, check reason's below.	
	0			INK	INK	771072	ii yes, check reason's below.	
11	0						Actual number of complex fourse than requir	rod.
	0	0	0	NR	NR	771872	Actual number of samples fewer than requi	ied.
13	0	0	0	NR	NR	771872	Failure to analyze for E. Coli if there was a p	acitive recult for
15	0	0	0	NR	NR	771872	total coliform from routine, repeat of high turbid	
	0	0	0	NR NR	NR	771872	lotal collions from fourthe, repeat or high turbid	ny sample.
16 17	0	0	0	NR	NR	771872	Failure to analyze repeat samples.	
18	0		U	INIX	INIX	171072	r allule to allalyze repeat samples.	
19	0						Does an MCL violation exist? YES	. NO X
20	0	0	0	NR	NR	771872		
21	0	0	0	NR	NR	771872	If yes, check reason(s) below.	***
22	0	0	0	NR	NR	771872	ii yes, cheak reason(s) below.	
23	0	0	0	NR	NR	771872	Two or more positive total coliform samples	for systems collecting 40
24	0	0	0	NR	NR	771872	or more samples (routine, repeat or hiturb) per mo	_
25	0			100	, and	111012	or more sumples (rounte, repeat or mails) per me	
26	0						Positive E. Coli result followed by a positive	total coliform repeat sample
27	0	0	0	NR	NR	771872		Sama Vopod Sample
28	0	0	0	NR	NR	771872	Positive total coliform result followed by a po	ositive E. Coli repeat sample
29	0	0	0	NR	NR	771872		o El con repeat sattiple
30	0	0	0	NR	NR	771872		
31	0							
от	69		0		.,,,			
VG.	2.23		0.00	No. Days:	31			
	2.20	.1.1						3
-	eported by:	741	lien				Date: 05-0 C	

-	2		BRC	OKH	AVEN	NATIO	NAL LABORATOF	ΥY		
OLIDI	IC WATER	O STIDDI V D	ROTECTION		ATER SY	STEMS OPE	RATION REPORT			
		CODE 169		11515100	SUFFO	LK COUNTY	REPORTING PERIOD: N	March	2006	
LOC	CATION:	WELL NO	. 11							
					Did an en	nergency occur	in any part of the water system?	YES	NO :	x
Sou	ırce: Grou	ind Water				Does the syst	em have a chlorination waiver?	YES	NO :	x
		CHLORIN	IATION		рН			-	_	
	Treated	Liquid Sodium	Hypochlorite	Free Cl2	Lime	Totalizer				
ay of	Water	Gallons	Cl2 use	Residual	Sodium	Daily Totalizer	Population Served 3,500			
nonth	K Gals	57	per 24hrs	mg/l	Hydroxide	722540				
1	- 0	57	0	NR	NR	722540	Number of routine samples		4	
2	0	57	0	NR	NR	722540	(Must collect a minimum of 5 routine sam	ples the month (	following	
3	0	57	0	NR	NR	722540	a repeat sample collection)			
4	0									
5	0						Number of actual routine samples		7	
6	6	57	0	NR	NR	722546				
7	0	57	0	NR	NR	722546	Does a M&AR violation exist?	YES	NO :	X
8	0	57	0	NR	NR	722546				
9	0	57	0	NR	NR	722546				
10	0	57	0	NR	NR	722546	If yes, check reason's below.			
11	0									
12	0						Actual number of samples fewer th	an required.		
13	88	54	3	NR	NR	722634				
14	0	54	0	NR	NR	722634	Failure to analyze for E. Coli if there	was a positive	result for	
15	47	54	0	NR	NR	722681	total coliform from routine, repeat of high	gh turbidity sam	ple.	
16	0	51	3	NR	NR	722681				
17	0	51	0	NR	NR	722681	Failure to analyze repeat samples.			
18	0									
19	0						Does an MCL violation exist?	YES	NO _ 2	<u> </u>
20	0	51	0	NR	NR	722681			2 mg	
21	. 0	51	0	NR	NR	722681	If yes, check reason(s) below.	17		
22	0	51	0	NR	NR	722681				
23	0	51	0	NR	NR	722681	Two or more positive total coliform	samples for sys	stems collecting	40
24	0	51	0	NR	NR	722681	or more samples (routine, repeat or hiturb	) per month.		
25	0				-					
26	0						Positive E. Coli result followed by a	positive total co	oliform repeat sai	mpi
27	0	51	0	NR	NR	722681				
28	0	51	0	NR	NR	722681	Positive total coliform result followe	d by a positive F	E. Coli repeat sar	mpl
29	0	51	0	NR	NR	722681				
30	0	51	0	NR	NR	722681				
31	0	51	0	NR	NR	722681				
тот	141		6							
AVG.	4.55		0.19	No. Days:	31	- 1				

Reported by SC/Cory

Title: Water Systems Supervisor

Date: 45=06

Certification No. NY0031941

PF	ROGRAM (	CODE 169	STATION	11515100	SUFFO	LK COUNTY	REPORTING PERIOD: March 2006
LOC	ATION:	WELL NO.	. 12				9
					Did an en	nergency occur	in any part of the water system? YES NO _x
Sou	rce: Grou	nd Water				Does the syste	em have a chlorination waiver? YES NOx
		CHLORIN	ATION		рН		
	Treated	Liquid Sodium	Hypochlorite	Free Cl2	Lime	Totalizer	w w
ay of	Water	Gallons	Cl2 use	Residual	Sodium	Daily Totalizer	Population Served 3,500
nonth	K Gals	78	per 24hrs	mg/l	Hydroxide	803011	
1	0	78	0	NR	NR	803011	Number of routine samples 4
2	0	78	0	NR	NR	803011	(Must collect a minimum of 5 routine samples the month following
3	0	78	0	NR	NR .	803011	a repeat sample collection)
5	0						Number of actual routine samples 7
6	4	78	0	NR	NR	803015	
7	0	78	0	NR	NR	803015	Does a M&AR violation exist? YES NO X
8	0	78	0	NR	NR	803015	
9	0	78	0	NR -	NR	803015	
10	0	78	0	NR	NR	803015	If yes, check reason's below.
11	0						
12	0						Actual number of samples fewer than required.
13	112	75	3	NR	NR	803127	
14	216	75	0	NR	NR	803343	Failure to analyze for E. Coli if there was a positive result for
15	118	75	0	NR	NR	803461	total coliform from routine, repeat of high turbidity sample.
16	0	72	3	NR	NR	803461	
17	155	72	0	NR	NR	803616	Failure to analyze repeat samples.
18	0				-		Dans on MOI violation suited
19	0			116		000040	Does an MCL violation exist?
20	0	69	0	NR	NR	803616	Kura abadaafabbalan
21	0	69 69	0	NR NR	NR NR	803616 803616	If yes, check reason(s) below.
23	292	63	6	NR	NR	803908	Two or more positive total coliform samples for systems collecting 40
24	0	63	0	NR	NR	803908	or more samples (routine, repeat or hiturb) per month.
25	0						
26	0						Positive E. Coli result followed by a positive total coliform repeat sample
27	0	63	0	NR	NR	803908	
28	0	63	- 0	NR	NR	803908	Positive total coliform result followed by a positive E. Coli repeat sample
29	0	63	0	NR	NR	803908	
30	0	63	0	NR	NR	803908	
31	0	63	0	NR	NR	803908	8
тот	897		12				1
AVG.	28.94		0.39	No. Days:	31		

# MONTHLY GALLONAGE REPORT mar2006.xls

Date	Well 4	Well 6	Well 7	Well10	Well11	Well12	Daily Total	
1	0	334	849	0	0	0	1,183	
2	0	368	930	0	0	0	1,298	I
3	0	250	808	0	0	0	1,058	
4	0	0	0	0	o ·	0	0	
5	. 0	0	Ö	Ő	. 0	0	0	1
6	ő	1,088	2,511	69	6	4	3,678	
7	0	320	848	0	0	. 0	1,168	1
8	ő	321	855	. 0	0	0	1,176	
9	Ö	348	926	. 0	0	. 0	1,274	1
10	. 0	501	1,411	0	0	0	1,912	
11		0	0	0	0	0	0	1
		0	0	0	0	, U . 0	0	1
12	0		and the second s	0		•		1
13	0	2,605	4,605		88	112	7,410	-
14	0	451	1,466	0	0	216	2,133	1
15	0	560	1,504	0	47	118	2,229	1
16	0	235	1,557	0	0	0	1,792	- 1
17	0	345	1,500	. 0	0	155	2,000	1
18	, 0	0	0	0	0	0	0	1
19	0,	0.	0	0	0,	0	0	
20	0	950	4,655	0	0	0	5,605	
21	0	217	1,539	0	0	0	1,756	1
22	0	444	1,539	0	0.	0.	1,983	i
23	0	449	1,360	<b>0</b> ;	0	292	2,101	
24	0	294	1,177	0	0	0	1,471	1
25	0	0	0	0	0	0	0	1
26	0	0	. 0	0	0	0	0	İ
27	0	614	2,700	0	0	0	3,314	- 1
28	0	257	1,049	. 0	0	0	1,306	1
29	0	205	765	0	0	0	970	-
30	0	317	1,151	0	0	0	1 <b>,4</b> 68	- 1
31	0	291	1,129	0	0	0	1,420	- 1
Total	0	11,764	36,834	69	141	897	49,705	- 1
			Totalizer		otalizer		Total(x1,000)	1
			This Month		ast Month		Gallons	
		Well 4	1,648,622		1,648,622		0	
			, ,					
		Well 6	624,270		612,506		11,764	
		Well 7	1,958,904		1,922,070		36,834	
		Well 10	771,872		771,803		<b>6</b> 9	
		Well 11	722,681		722,540		141	
		Well 12	803,908		803,011		897	
AGS Water	r Supply Meter	[	576,942		571,810		5132.00	
Medical Re	eactor - Well 10	)5					0.00	
Biology Bui	ilding - Well 9	I	6,793,140	Γ	6,793,050	:	0.09	

### **ATTACHMENT II**

### **Brookhaven National Laboratory**

**Potable Water Supply** 

March 2006 Biweekly and Semi Annual Water Quality Monitoring Data for the BNL Distribution System and Potable Water Wells

Attachment II Table 1 - Summary of Water Quality Analyses for the BNL Potable Water System March 2006

Sample Location	Sample Date	pH (SU)	Temperature (Degrees F)	Conductivity (µmhos)	Alkalinity (mg/L)	Calcium (mg/L)
WTP	3/2/06	7.5	56	164	ANR	ANR
WTP	3/7/06	7.5	53	155	ANR	ANR
WTP	3/9/06	7.8	53	159	ANR	ANR
WTP	3/14/06	7.6	55	140	ANR	ANR
WTP	3/16/06	7.6	56	145	ANR	ANR
WTP	3/21/06	7	52	151	ANR	ANR
WTP	3/23/06	7.1	54	157	ANR	ANR
WTP	3/28/06	7.3	57	168	ANR	ANR
WTP	3/30/06	7.5	55	147	ANR	_ ANR
Well 6	3/3/06	6.1	55	118	8.3	5.26
Well 7	3/3/06	6.0	54	109	11.1	5.89
Well 10	3/3/06	6.6	55	150	19.5	5.92
Well 11	3/3/06	6.3	54	90	12.6	4.58
Well 12	3/3/06	6.2	55	118	16.0	6.65

ANR- Analysis Not Required NR- Not Reported

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

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

**Brookhaven National Lab.-BNLM** 

LABORATORY RESULTS

Client ID.: 21965-009

Lab No. : 0603131-009

Sample Information... Type: Potable Water

Origin: Raw Well

Upton, NY 11973 Attn To: Bob Lee

70 Bell Ave.

Federal ID : 5111891

:3/3/2006 1:20:00 PM :3/3/2006 3:35:00 PM Point No: 093-07

Location: Well #6 Raw

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Parameter(s)	Results	Qualifier	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Method Number	<u>Analyzed</u>
Specific Conductance	118		1	µmhos/cm		E120.1	03/03/2006
PH (FIELD)	6.1		1	pH Units		E150.1	03/03/2006 5:00 PM
Temperature	13		1	•C		E170.1	03/03/2006
Calcium	5260		1	µg/L		E200.7	03/21/2006 10:32 AM
Alkalinity, Total (As CaCO3)	8.3		1	mg/L		M2320 B	03/08/2006 12:35 PM

Result(s) reported meet(s) Regulatory Limit(s). Result(s) flagged with \* Exceed Regulatory Limit(s). Limit noted. D.F. = Dilution Factor

Date Reported:

3/24/2006

Joann M. Slavin



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**Brookhaven National Lab.-BNLM** 

70 Bell Ave.

Upton, NY 11973 Attn To: Bob Lee

Federal ID : 5111891

Collected :3/3/2006 1:27:00 PM Received :3/3/2006 3:35:00 PM Point No: 092-03 Location: Well #7 Raw

Copy : Original

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#### LABORATORY RESULTS

Lab No. : 0603131-010

Sample Information...
Type: Potable Water

Origin: Raw Well

Client ID. : 21965-010

Parameter(s)	Results	Qualifier	D.F.	<u>Units</u>	<u>Limit</u>	Method Number	Analyzed
Specific Conductance	109		1	µmhos/cm		E120.1	03/03/2006
PH (FIELD)	6.0		1	pH Units		E150.1	03/03/2006 5:01 PM
Temperature	12		1	•C		E170.1	03/03/2006
Calcium	5890		1.	μg/L		E200.7	03/21/2006 11:00 AM
Alkalinity, Total (As CaCO3)	11.1		1	mg/L		M2320 B	03/08/2006 9:10 AM

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

Result(s) flagged with 

Exceed Regulatory Limit(s). Limit noted.

D.F. = Dilution Factor

Date Reported:

3/24/2006

Joann M. Slavin



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LABORATORY RESULTS

Client ID.: 21965-011

Lab No. : 0603131-011

Sample Information...

Type: Potable Water

Origin: Raw Well

Attn To: Bob Lee

Federal ID : 5111891

:3/3/2006 11:22:00 AM

Point No: 055-09

Collected :3/3/2006 3:35:00 PM Received

**Brookhaven National Lab.-BNLM** 

Location: Well #10 Raw

Collected By CLIENT

70 Bell Ave.

Upton, NY 11973

Copy : Original

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Parameter(s)	Results	Qualifier	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Method Number	Analyzed
Specific Conductance	150		1	µmhos/cm		E120.1	03/03/2006
PH (FIELD)	6.6		1	pH Units		E150.1	03/03/2006 5:02 PM
Temperature	13		1	°C		E170.1	03/03/2006
Calcium	5920		1	μ <b>g/</b> L		E200.7	03/21/2006 11:07 AM
Alkalinity, Total (As CaCO3)	19.5		-1	mg/L		M2320 B	03/08/2006 9:15 AM

Result(s) reported meet(s) Regulatory Limit(s). Result(s) flagged with \* Exceed Regulatory Limit(s). Limit noted. D.F. = Dilution Factor

Date Reported:

3/24/2006

Joann M. Slavin



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**Brookhaven National Lab.-BNLM** 

70 Bell Ave.

Upton, NY 11973 Attn To: Bob Lee LABORATORY RESULTS

Lab No. : 0603131-012

Sample Information...

Type: Potable Water Origin: Raw Well

Client ID.: 21965-012

Federal ID : 5111891

Collected : 3/3/2006 1:10:00 PM Received : 3/3/2006 3:35:00 PM Point No: 056-19 Location: Well #11 Raw

Collected By CLIENT

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Parameter(s)	Results	Qualifier	D.F.	<u>Units</u>	<u>Limit</u>	Method Number	Analyzed
Specific Conductance	90.0		1	µmhos/cm		E120.1	03/03/2006
PH (FIELD)	6.3		1	pH Units		E150.1	03/03/2006 5:03 PM
Temperature	12		1	*C		E170.1	03/03/2006
Calcium	4580	В	1	µg/L		E200.7	03/21/2006 11:14 AM
Alkalinity, Total (As CaCO3)	12.6		1	mg/L		M2320 B	03/08/2006 9:20 AM

Date Reported:

3/24/2006

Joann M. Slavin

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**Brookhaven National Lab.-BNLM** 

LABORATORY RESULTS

Client ID.: 21965-013

Lab No. : 0603131-013

Sample Information... Type: Potable Water

Origin: Raw Well

Attn To: **Bob Lee** 

Upton, NY 11973

70 Bell Ave.

Federal ID : 5111891 Collected

:3/3/2006 1:00:00 PM

Point No: 056-20

Collected By CLIENT

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:3/3/2006 3:35:00 PM Location: Well #12 Raw

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Received

Parameter(s)	Results	Qualifier	<u>D.F.</u>	<u>Units</u>	<u>Limit</u>	Method Number	Analyzed
Specific Conductance	118		1	µmhos/cm		E120.1	03/03/2006
PH (FIELD)	6.2		1	pH Units		E150.1	03/03/2006 5:04 PM
Temperature	13		1	°C		E170.1	03/03/2006
Calcium	6650		. 1	μg/L		E200.7	03/21/2006 11:21 AM
Alkalinity, Total (As CaCO3)	16.0		1	mg/L		M2320 B	03/08/2006 9:25 AM

Result(s) reported meet(s) Regulatory Limit(s).
Result(s) flagged with \*\* Exceed Regulatory Limit(s). Limit noted. D.F. = Dilution Factor

Date Reported: 3/24/2006 Joann M. Slavin

### ATTACHMENT III

### **Brookhaven National Laboratory**

**Potable Water Supply** 

March 2006 Stage 1 Disinfectants & Disinfection Byproduct Rule

Monitoring Data and Bacteriological Analyses for the BNL Distribution System

**Attachment III** 

### March 2006 Stage 1 Disinfectants & Disinfection Byproduct Rule Monitoring Data Table II - Maximum Residual Disinfectant Level (MRDL) Compliance

		-V			Total	Residual (	Chlorine (1	ng/L)				
Location	Apr. 05	May 05	June 05	July 05	Aug. 05	Sept. 05	Oct. 05	Nov. 05	Dec. 05	Jan. 06	Feb. 06	Mar. 06
Bldg. 49 Water Tower	0.7	0.9	0.9	0.7	0.9	0.5	0.7	0.9	0.9	1.0	0.8	1.2
Bldg. 640 Water Tower	0.8	0.9	1.5	0.5	0.8	0.7	1.2	0.4	0.4	0.9	0.7	0.9
Bldg. 363 Apt. Laundry	0.7	0.7	0.7	0.6	0.5	0.3	0.6	1.0	0.3	0.5	0.5	0.3
Bldg. 1005 RHIC	0.7	1.0	1.2	0.5	0.8	0.7	0.5	0.6	0.7	0.8	0.7	0.6
Bldg. 930 LINAC	NS	0.8	NS	0.8	NS	0.8	NS	0.8	NS	0.9	NS	0.8
Bldg. 725 NSLS	1	NS	1.3	NS	0.8	NS	0.8	NS	0.4	NS	0.8	NS
Bldg. 490 Outpatient Clinic	NS	1.0	NS	0.5	NS	0.6	NS	0.5	NS	0.7	NS	0.9
Bldg. 490 Block 11	NS	0.3	NS	0.5	NS	0.3	NS	0.9	NS	0.5	NS	0.8
Bldg. 490 Block 1 ACF	0.3	NS	0.6	NS	0.7	NS	0.5	NS	0.8	NS	0.6	NS
Bldg. 490 Block 4 MRC	0.8	NS	1.1	NS	0.7	NS	1.0	NS	0.4	NS	0.5	NS
Monthly Average	0.7	0.8	1.0	0.6	0.7	0.6	0.8	0.7	0.6	0.8	0.7	0.8

NA - Not Applicable

NS- Not Scheduled for sampling

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

MRDL (mg/L) 4.0

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

LABORATORY RESULTS

Client ID.: 21965-001

Lab No. : 0603131-001

Sample Information...

Type: Potable Water

Origin: Distribution

**Brookhaven National Lab.-BNLM** 

70 Bell Ave.

Upton, NY 11973

Attn To:

Bob Lee

Federal ID : 5111891 Collected

Received

:3/3/2006 9:10:00 AM

Point No: 094-273

:3/3/2006 3:35:00 PM

Location: B-49 Water Tower

Collected By CLIENT Copy : Original

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						PARTITION OF THE PARTIT
Parameter(s)	Results C	Qualifier D.I	. Units	<u>Limit</u>	Method Number	Analyzed
Total Coliform	Negativ <del>e</del>	1		Negative	M9223	03/04/2006 12:00 PM
E_Coliform	Absent	1		Absent	M9223	03/04/2006 12:00 PM
Total Residual Chlorine	1.2	1	mg/L		M4500-CI G	03/03/2006

Result(s) reported meet(s) Regulatory Limit(s). \* Exceed Regulatory Limit(s). Limit noted. Result(s) flagged with D.F. = Dilution Factor

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3/24/2006

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**Brookhaven National Lab.-BNLM** 

70 Bell Ave. Upton, NY 11973

Attn To: Bob Lee

Federal ID : 5111891

Collected :3/3/2006 9:20:00 AM

Received :3/3/2006 3:35:00 PM

Collected By CLIENT Copy : Original

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LABORATORY RESULTS

Lab No.: 0603131-002

Sample Information...
Type: Potable Water

Origin: Distribution

Client ID.: 21965-002

Location: B-640 Water Tower

Point No: 076-408

Parameter(s)	Results Qu	alifier D.F.	<u>Units</u>	<u>Limit</u>	Method Number	Analyzed
Total Coliform	Negative	1		Negative	M9223	03/04/2006 12:00 PM
E_Coliform	Absent	1		Absent	M9223	03/04/2006 12:00 PM
Total Residual Chlorine	0.9	1	mg/L		M4500-Cl G	03/03/2006

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

Result(s) flagged with 

Exceed Regulatory Limit(s). Limit noted.

D.F. = Dilution Factor

Date Reported:

3/24/2006

Joann M. Slavin

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

LABORATORY RESULTS

Client ID.: 21965-004

Lab No.: 0603131-004

Sample Information...

Type: Potable Water Origin: Distribution

Upton, NY 11973 Attn To: Bob Lee

70 Bell Ave.

Federal ID : 5111891

:3/3/2006 8:57:00 AM Point No: 109-19

Received :3/3/2006 3:35:00 PM

**Brookhaven National Lab.-BNLM** 

Location: B-363 Apt.Laundry

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						And the second second second	
Parameter(s)	Results (	Qualifier	D.F.	<u>Units</u>	<u>Limit</u>	Method Number	<u>Analyzed</u>
Total Coliform	Negative		1		Negative	M9223	03/04/2006 12:00 PM
E_Coliform	Absent		1		Absent	M9223	03/04/2006 12:00 PI
Total Residual Chlorine	0.3		1	ma/L		M4500-CI G	03/03/2006

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

Result(s) flagged with 

\*\* Exceed Regulatory Limit(s). Limit noted.

D.F. = Dilution Factor

Date Reported: 3/2

3/24/2006

Joann M. Slavin

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LABORATORY RESULTS

Client ID.: 21965-003

Lab No. : 0603131-003

Sample Information...

Type: Potable Water

Origin: Distribution

**Brookhaven National Lab.-BNLM** 

70 Bell Ave.

Upton, NY 11973

Attn To:

Collected

Bob Lee

Federal ID : 5111891

:3/3/2006 12:39:00 PM

Point No: 045-12

:3/3/2006 3:35:00 PM Received

Location: B-1005 RHIC

Collected By CLIENT

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Parameter(s)	Results C	Qualifier D.F.	Units	<u>Limit</u>	Method Number	Analyzed
Total Coliform	Negative	1		Negative	M9223	03/04/2006 12:00 PM
E_Coliform	Absent	1		Absent	M9223	03/04/2006 12:00 PM
Total Residual Chlorine	0.6	1	mg/L		M4500-CI G	03/03/2006

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

Result(s) flagged with 

Exceed Regulatory Limit(s). Limit noted. D.F. = Dilution Factor

Date Reported:

3/24/2006

Joann M. Slavin

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

LABORATORY RESULTS

Client ID.: 21965-005

Lab No. : 0603131-005

Sample Information... Type: Potable Water

Origin: Distribution

Brookhaven National Lab.-BNLM

70 Bell Ave.

Upton, NY 11973 Attn To: Bob Lee

Federal ID : 5111891

:3/3/2006 10:49:00 AM

Point No: 054-187

Collected Received :3/3/2006 3:35:00 PM

Location: B-930 LINAC

Collected By CLIENT

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Parameter(s)	Results	Qualifier	D.F.	<u>Units</u>	<u>Limit</u>	Method Number	Analyzed
Total Coliform	Negative		1		Negative	M9223	03/04/2006 12:00 PM
E_Coliform	Absent		1		Absent	M9223	03/04/2006 12:00 PM
Total Residual Chlorine	0.8		1	mg/L		M4500-CI G	03/03/2006

Result(s) reported meet(s) Regulatory Limit(s). Result(s) flagged with \*\* Exceed Regulatory Limit(s). Limit noted. D.F. = Dilution Factor

Date Reported:

3/24/2006

Joann M. Slavin

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

Brookhaven National Lab.-BNLM

70 Bell Ave.

Upton, NY 11973

Attn To:

Bob Lee

Federal ID : 5111891

Collected : 3/3/2006 1:17:00 PM

Received : 3/3/2006 3:35:00 PM

Collected By CLIENT

Copy : Original

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#### LABORATORY RESULTS

Lab No. : 0603131-006

Sample Information...

Type: Potable Water

Origin: Distribution

Client ID.: 21965-006

Point No: 084-70

Location: B-490 Outpatient Clinic

Parameter(s) Results Qualifier D.F. **Units** Limit Method Number <u>Analyzed</u> **Total Coliform** 1 Negative M9223 03/04/2006 12:00 PM Negative E\_Coliform Absent 1 Absent M9223 03/04/2006 12:00 PM Total Residual Chlorine 0.9 1 M4500-CI G 03/03/2006 mg/L

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

Result(s) flagged with 

Exceed Regulatory Limit(s).

D.F. = Dilution Factor

Date Reported:

3/24/2006

Joann M. Slavin

Laboratory Manager

**BNLM173 A23** 



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

LABORATORY RESULTS

Client ID.: 21965-007

Lab No. : 0603131-007

Sample Information...

Type: Potable Water

Origin: Distribution

Upton, NY 11973

70 Bell Ave.

Attn To:

Federal ID : 5111891

Collected :3/3/2006 1:21:00 PM

**Brookhaven National Lab.-BNLM** 

**Bob Lee** 

:3/3/2006 3:35:00 PM

Point No: 084-67

Location: B-490 Block 11

Collected By CLIENT Copy : Original

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Received

Parameter(s)	Results C	Qualifier	<u>D.F.</u>	Units	<u>Limit</u>	Method Number	Analyzed
Total Coliform	Negative		1		Negative	M9223	03/04/2006 12:00 PM
E_Coliform	Absent		1		Absent	M9223	03/04/2006 12:00 PM
Total Residual Chlorine	0.8		1	mg/L		M4500-CI G	03/03/2006

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

Result(s) flagged with 

Exceed Regulatory Limit(s). Limit noted D.F. = Dilution Factor

Date Reported:

3/24/2006

Joann M. Slavin