

*Alloccs*

Environmental Services Division

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**BROOKHAVEN**  
NATIONAL LABORATORY

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

www.bnl.gov

August 7, 2001

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

Dear Ms. Newcomer:

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

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

- Attachment I: BNL Potable Water Monthly Bacteriological and Operational Reports for July 2001.
- Attachment II: July 2001 Biweekly Water Quality Monitoring Data for BNL Potable Water Wells and BNL Distribution System.
- Attachment III: 2001 Second Quarter Sr-90 Radiological Analyses for the BNL Potable Water Wells.

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

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

Sincerely,



Lori Cunniff, CEP  
Division Manager

LEC/MA:rt

Attachments: As noted

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

EC61ER.01

**ATTACHMENT I**

**Brookhaven National Laboratory  
Potable Water Supply**

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

# BROOKHAVEN NATIONAL LABORATORY

## WATER SYSTEMS OPERATION REPORT

PUBLIC WATER SUPPLY PROTECTION

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

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

Source: Ground Water

Does the system have a chlorination waiver? YES  NO

Day of month	CHLORINATION				pH		Totalizer Daily Totalizer 12338058
	Treated Water K Gals	Liquid Sodium Hypochlorite		Free Cl2 Residual mg/l	Lime Sodium Hydroxide	Totalizer	
		Gallons	Cl2 use per 24hrs				
1	0						
2	2,455	101	19	0.97	7.3	12340513	
3	69	100+100	1	0.92	7.3	12340582	
4	0						
5	2,675	180	20	0.8	8.1	12343257	
6	1,447	170	10	0.7	8	12344704	
7	0						
8	0						
9	3,923	135	35	0.8	7.8	12348627	
10	1,370	120	15	1.1	7.8	12349997	
11	1,364	110	10	0.67	7.8	12351361	
12	1,372	95	10	0.61	7.7	12352733	
13	1,365	80	15	0.53	7.9	12354098	
14	0						
15	0						
16	4,172	42+158	38	0.7	7.8	12358270	
17	1,351	189	11	0.82	7.8	12359621	
18	1,302	180	9	0.8	7.9	12360923	
19	1,303	169	11	1.1	7.8	12362226	
20	1,376	159	10	0.72	7.8	12363602	
21	0						
22	0						
23	4,105	135	24	0.95	7.8	12367707	
24	1,370	125	10	0.87	8	12369077	
25	1,401	110	15	0.63	7.8	12370478	
26	1,110	100	10	0.25	7.9	12371588	
27	1,353	90	10	0.96	8	12372941	
28	0						
29	0						
30	4,071	60	30	0.74	7.4	12377012	
31	1,361	50	10	0.7	7.1	12378373	
TOT	40,315		323				
AVG.	1300.48		10.42	No. Days:	31		

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: *Lo Ross*

Date: 8-2-01

Title: Water Systems Supervisor

Certification No. NY0031941

# BROOKHAVEN NATIONAL LABORATORY

## WATER SYSTEMS OPERATION REPORT

PUBLIC WATER SUPPLY PROTECTION

PROGRAM CODE 169

STATION 11515100

SUFFOLK COUNTY

REPORTING PERIOD: JULY

2001

LOCATION: WELL NO. 4

Did an emergency occur in any part of the water system?

YES

NO

Source: Ground Water

Does the system have a chlorination waiver?

YES

NO

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

Population Served 3,500

Number of routine samples 4

(Must collect a minimum of 5 routine samples the month following

a repeat sample collection)

Number of actual routine samples 7

Does a M&AR violation exist?

YES

NO

If yes, check reason's below.

Actual number of samples fewer than required.

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

Failure to analyze repeat samples.

Does an MCL violation exist?

YES

NO

If yes, check reason(s) below.

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

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

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

Reported by: J. P. Ross

Date: 8-2-01

Title: Water Systems Supervisor

Certification No. NY0031941

# BROOKHAVEN NATIONAL LABORATORY

## WATER SYSTEMS OPERATION REPORT

PUBLIC WATER SUPPLY PROTECTION

PROGRAM CODE 169

STATION 11515100

SUFFOLK COUNTY

REPORTING PERIOD: JULY

2001

LOCATION: WELL NO. 6

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

Source: Ground Water

Does the system have a chlorination waiver? YES  NO

Day of month	CHLORINATION				pH		Totalizer Daily Totalizer 181114
	Treated Water K Gals	Liquid Sodium Hypochlorite		Free Cl2 Residual mg/l	Lime	Sodium Hydroxide	
		Gallons	Cl2 use per 24hrs		Sodium		
1	0						
2	1,490	70	16	0.01	6.1		182604
3	655	60+140	10	0.01	6		183259
4	0						
5	1,694	175	25	0.1	6		184953
6	906	160	15	0.2	6		185859
7	0						
8	0						
9	2,501	110	50	0.06	6.3		188360
10	758	97+93	13	0.02	6		189118
11	881	178	22	0.03	6.2		189999
12	798	165	13	0.34	6.1		190797
13	883	146	9	0.04	6.3		191680
14	0						
15	0						
16	2,353	100	46	0.08	6.2		194033
17	844	100+85	15	0.02	6.2		194877
18	944	165	20	0.02	6.3		195821
19	830	150	15	0.02	6.2		196651
20	781	135	15	0.01	6.2		197432
21	0						
22	0						
23	2,763	80	55	0.17	6.3		200195
24	973	65	15	0.1	6.3		201168
25	541	57	8	0.28	6.3		201709
26	877	40+80	17	0.03	6.3		202586
27	931	105	15	0.2	6.3		203517
28	0						
29	0						
30	2,900	50+145	55	0.03	6.2		206417
31	917	185	10	0.7	5.8		207334
TOT	26,220		459				
AVG.	845.81		14.81	No. Days:	31		

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 turb) 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: *A. Casey*

Date: 8-2-01

Title: Water Systems Supervisor

Certification No. NY0031941

# BROOKHAVEN NATIONAL LABORATORY

## WATER SYSTEMS OPERATION REPORT

PUBLIC WATER SUPPLY PROTECTION

PROGRAM CODE 169

STATION 11515100

SUFFOLK COUNTY

REPORTING PERIOD: JULY

2001

LOCATION: WELL NO. 7

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

Source: Ground Water

Does the system have a chlorination waiver? YES  NO

Day of month	CHLORINATION				pH	
	Treated Water	Liquid Sodium Hypochlorite		Free Cl2 Residual	Lime	Totalizer
		Gallons	Cl2 use		Sodium Hydroxide	Daily Totalizer
	K Gals		per 24hrs	mg/l		
1	0					
2	125	80+125	39	0.01	6.1	528997
3	1435	180+20	5	0.01	6	530432
4	0					
5	2,206	168	32	0.1	6	532638
6	1,385	142	26	0.2	6	534023
7	0					
8	0					
9	3,730	75	67	0.06	6.3	537753
10	1,316	49+151	26	0.02	6	539069
11	1,300	177	23	0.03	6.2	540369
12	1,262	155	22	0.34	6.1	541631
13	1,331	130	25	0.04	6.3	542962
14	0					
15	0					
16	3,780	60+115	70	0.08	6.2	546742
17	1,299	155+50	20	0.02	6.2	548041
18	898	185	20	0.02	6.3	548939
19	1,140	159	26	0.02	6.2	550079
20	1,292	130	29	0.01	6.2	551371
21	0					
22	0					
23	3,903	45	85	0.02	6.3	555274
24	1,297	30+180	15	0.1	6.3	556571
25	1,252	185	25	0.28	6.3	557823
26	1,170	160+55	25	0.03	6.3	558993
27	1,283	190	25	0.2	6.3	560276
28	0					
29	0					
30	3,900	120	70	0.03	6.3	564176
31	1,336	100+60	20	0.7	5.8	565512
TOT	38,365		695			
AVG.	1237.58		22.42	No. Days:	31	

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: JQ Hest

Date: 8-2-01

Title: Water Systems Supervisor

Certification No. NY0031941

# BROOKHAVEN NATIONAL LABORATORY

## WATER SYSTEMS OPERATION REPORT

PUBLIC WATER SUPPLY PROTECTION

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

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

Source: Ground Water

Does the system have a chlorination waiver? YES  NO

Day of month	CHLORINATION				pH		Totalizer Daily Totalizer 764101
	Treated Water K Gals	Liquid Sodium Hypochlorite		Free Cl <sub>2</sub> Residual mg/l	Lime Sodium Hydroxide		
		Gallons	Cl <sub>2</sub> use per 24hrs				
1	0						
2	0	58	0	NR	NR	764101	
3	0	58	0	NR	NR	764101	
4	0						
5	0	58	0	NR	NR	764101	
6	0	58	0	NR	NR	764101	
7	0						
8	0						
9	0	58	0	NR	NR	764101	
10	0	58	0	NR	NR	764101	
11	0	58	0	NR	NR	764101	
12	0	58	0	NR	NR	764101	
13	95	58	0	NR	NR	764196	
14	0						
15	0						
16	0	58	0	NR	NR	764196	
17	0	58	0	NR	NR	764196	
18	0	58	0	NR	NR	764196	
19	0	58	0	NR	NR	764196	
20	0	58	0	NR	NR	764196	
21	0						
22	0						
23	47	58	0	NR	NR	764243	
24	0	58	0	NR	NR	764243	
25	0	58	0	NR	NR	764243	
26	0	58	0	NR	NR	764243	
27	0	58	0	NR	NR	764243	
28	0						
29	0						
30	0	58	0	NR	NR	764243	
31	0	58	0	NR	NR	764243	
TOT	142		0				
AVG	4.58		0.00	No. Days:	31		

Population Served 3,500

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

Number of actual routine samples 7

Does a M&AR violation exist? YES  NO

If yes, check reason's below.

Actual number of samples fewer than required.

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

Failure to analyze repeat samples.

Does an MCL violation exist? YES  NO

If yes, check reason(s) below.

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

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

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

Reported by: *J. Ross*

Date: 5-2-01

Title: Water Systems Supervisor

Certification No. NY0031941



# BROOKHAVEN NATIONAL LABORATORY

## WATER SYSTEMS OPERATION REPORT

PUBLIC WATER SUPPLY PROTECTION

PROGRAM CODE 169	STATION 11515100	SUFFOLK COUNTY	REPORTING PERIOD: JULY 2001
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LOCATION: WELL NO. 11

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

Source: Ground Water

Does the system have a chlorination waiver? YES  NO

Day of month	CHLORINATION				pH		Totalizer Daily Totalizer
	Treated Water K Gals	Liquid Sodium Hypochlorite		Free Cl <sub>2</sub> Residual mg/l	Lime	Sodium Hydroxide	
		Gallons	Cl <sub>2</sub> use per 24hrs		Residual		
1	0	168					343499
2	1502	60+140	23	0.3	7.6		345101
3	942	190	10	0.97	7.6		346043
4	0						
5	481	190	0	1.2	7.7		346524
6	349	186	4	NR	NR		346873
7	0						
8	0						
9	185	185	1	0.79	NR		347058
10	67	184	1	1	7		347125
11	84	185	0	0.25	7.2		347209
12	62	185	0	1	7		347271
13	59	180	5	1.1	7.1		347330
14	0						
15	0						
16	247	179	1	NR	NR		347577
17	93	175	4	NR	NR		347670
18	581	170	5	NR	NR		348251
19	82	169	1	NR	NR		348333
20	71	169	0	NR	NR		348404
21	0						
22	0						
23	155	168+10	1	NR	NR		348559
24	79	178	0	0.45	7		348638
25	168	177	1	1.2	7.2		348806
26	561	166	11	1.3	7.5		349367
27	428	160	6	1.2	7.6		349795
28	0						
29	0						
30	504	150	10	0.32	7.8		350299
31	232	148	2	0.4	7.5		350531
TOT	7.032		91				
AVG.	226.84		2.94	No. Days:	31		

Population Served 3,500

Number of routine samples 4

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

Number of actual routine samples 7

Does a M&AR violation exist? YES  NO

If yes, check reason's below.

Actual number of samples fewer than required.

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

Failure to analyze repeat samples.

Does an MCL violation exist? YES  NO

If yes, check reason(s) below.

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

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

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

Reported by: *J. A. Jones*

Date: 8-7-01

Title: Water Systems Supervisor

Certification No. NY0031941

# BROOKHAVEN NATIONAL LABORATORY

## WATER SYSTEMS OPERATION REPORT

PUBLIC WATER SUPPLY PROTECTION

PROGRAM CODE 169	STATION 11515100	SUFFOLK COUNTY	REPORTING PERIOD: JULY 2001
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LOCATION: WELL NO. 12

Source: Ground Water

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

Does the system have a chlorination waiver? YES  NO

Day of month	CHLORINATION				pH		Totalizer Daily Totalizer 312527
	Treated Water K Gals	Liquid Sodium Hypochlorite		Free Cl <sub>2</sub> Residual mg/l	Lime Sodium Hydroxide	Totalizer	
		Gallons	Cl <sub>2</sub> use per 24hrs				
1	0						
2	3,491	32+158	58	0.46	7.5	316018	
3	1,468	178	12	0.57	7.7	317486	
4	0						
5	565	170	8	0.4	7.8	318051	
6	509	160	10	0.5	7.8	318560	
7	0						
8	0						
9	428	152	8	0.34	7.4	318988	
10	227	151	1	0.41	7.1	319215	
11	632	141	10	0.44	7.1	319847	
12	352	138	3	0.36	7.1	320199	
13	500	130	8	0.37	7.2	320699	
14	0						
15	0						
16	502	122	8	0.25	7.4	321201	
17	260	120	2	0.3	7.5	321461	
18	274	110	10	1	7.4	321735	
19	363	101	9	0.95	7	322098	
20	397	95	6	NR	NR	322495	
21	0						
22	0						
23	693	82	13	NR	NR	323188	
24	612	82	0	0.6	7.4	323800	
25	333	82	0	0.4	7.5	324133	
26	653	80	2	1	7.8	324786	
27	161	80	0	NR	NR	324947	
28	0						
29	0						
30	7	80	0	0.45	7.5	324954	
31	0	80+120	0	0.85	7.8	324954	
TOT	12,427		168				
AVG.	400.87		5.42	No Days:	31		

Population Served 3,500

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

Number of actual routine samples 7

Does a M&AR violation exist? YES  NO

If yes, check reason's below.

Actual number of samples fewer than required.

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

Failure to analyze repeat samples.

Does an MCL violation exist? YES  NO

If yes, check reason(s) below.

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

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

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

Reported by: JC Rose

Date: 8-2-01

Title: Water Systems Supervisor

Certification No. NY0031941

8/2/01  
Pump Data

MONTHLY GALLONAGE REPORT  
2001july

Date	Well 4	Well 6	Well 7	Well10	Well11	Well12	Daily Total
1	0	0	0	0	0	0	0
2	0	1,490	1,850	0	1,602	3,491	8,433
3	0	655	1,435	0	942	1,468	4,500
4	0	0	0	0	0	0	0
5	0	1,694	2,206	0	481	565	4,946
6	0	906	1,385	0	349	509	3,149
7	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0
9	0	2,501	3,730	0	185	428	6,844
10	0	758	1,316	0	67	227	2,368
11	0	881	1,300	0	84	632	2,897
12	0	798	1,262	0	62	352	2,474
13	0	883	1,331	95	59	500	2,868
14	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
16	0	2,353	3,780	0	247	502	6,882
17	0	844	1,299	0	93	260	2,496
18	0	944	898	0	581	274	2,697
19	0	830	1,140	0	82	363	2,415
20	0	781	1,292	0	71	397	2,541
21	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0
23	0	2,763	3,903	47	155	693	7,561
24	0	973	1,297	0	79	612	2,961
25	0	541	1,252	0	168	333	2,294
26	0	877	1,170	0	561	653	3,261
27	0	931	1,283	0	428	161	2,803
28	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0
30	0	2,900	3,900	0	504	7	7,311
31	0	917	1,336	0	232	0	2,485
Total	0	26,220	38,365	142	7,032	12,427	84,186

	Totalizer This Month	Totalizer Last Month	Total(x1,000) Gallons
Well 4	1,479,844	1,479,844	0
Well 6	207,334	181,114	26,220
Well 7	565,512	527,147	38,365
Well 10	764,243	764,101	142
Well 11	350,531	343,499	7,032
Well 12	324,954	312,527	12,427
AGS Water Supply Meter	280,387	265,308	15079.00
Medical Reactor - Well 105	91,710,910	91,710,910	0.00
Biology Building - Well 9	6,129,730	6,112,470	17.26

# H2M LABS, INC.

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

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

Federal ID 5111891  
 Collected : 7/12/01 9:40:00 AM  
 Received : 7/12/01 2:45:00 PM  
 Collected By : CLIENT  
 Copies To : TONY ROSS

## LABORATORY RESULTS

Lab No. : 0107365-001A

Client ID. : 8445-001

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

Point No : 1  
 Location : B-49 WATER TOWER

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Total Coliform	Negative		Negative	M9223	7/13/01 10:45:00 AM
E_Coliform	Absent		Absent	M9223	7/13/01 10:45:00 AM
Total Residual Chlorine	0.7	mg/L		M4500-Cl G	7/12/01

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



# H2M LABS, INC.

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

**BROOKHAVEN NATIONAL LAB - ENL M**  
 70 BELL AVE.

UPTON, NY 11973

Attn To : BOB LEE

Federal ID 5111891

Collected : 7/12/01 10:20:00 AM

Received : 7/12/01 2:45:00 PM

Collected By : CLIENT

Copies To : TONY ROSS

## LABORATORY RESULTS

Lab No. : 0107365-002A

Client ID. : 8445-002

Sample Information...

Type : Potable Water

Origin : Dist.

Routine

Point No : 2

Location : B-640 WATER TOWER

<u>Parameter(s)</u>	<u>Results</u>	<u>Units</u>	<u>Limit</u>	<u>Method Number</u>	<u>Analyzed</u>
Total Coliform	Negative		Negative	M9223	7/13/01 10:45:00 AM
E_Coliform	Absent		Absent	M9223	7/13/01 10:45:00 AM
Total Residual Chlorine	1.0	mg/L		M4500-Cl G	7/12/01

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

Date Reported : 7/30/01



# H2M LABS, INC.

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

**BROOKHAVEN NATIONAL LAB - FIRM**  
 70 BELL AVE.  
 UPTON, NY 11973

Attrn To : BOB LEE

Federal ID 5111891

Collected : 7/12/01 10:30:00 AM

Received : 7/12/01 2:45:00 PM

Collected By : CLIENT

Copies To : TONY ROSS

## LABORATORY RESULTS

Lab No. : 0107365-003A

Sample Information...

Type : Potable Water

Origin : Dist.

Routine

Client ID. : 8445-003

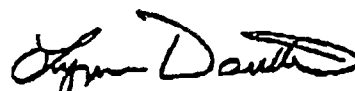
Point No : 3

Location : B-1005 RHIC

<u>Parameter(s)</u>	<u>Results</u>	<u>Units</u>	<u>Limit</u>	<u>Method Number</u>	<u>Analyzed</u>
Total Coliform	Negative		Negative	M9223	7/13/01 10:45:00 AM
E_Coliform	Absent		Absent	M9223	7/13/01 10:45:00 AM
Total Residual Chlorine	1.0	mg/L		M4500-CI G	7/12/01

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

Date Reported : 7/30/01



# H2M LABS, INC.

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

BROOKHAVEN NATIONAL LAB. EN 1M

70 BELL AVE.

UPTON, NY 11973

Attn To : BOB LEE

Federal ID 5111891

Collected : 7/12/01 9:15:00 AM

Received : 7/12/01 2:45:00 PM

Collected By : CLIENT

Copies To : TONY ROSS

## LABORATORY RESULTS

Lab No. : 0107365-004A

Sample Information...

Type : Potable Water

Origin : Dist.

Routine

Client ID. : 8445-004

Point No : 4

Location : B-363 APT. LAUNDRY

<u>Parameter(s)</u>	<u>Results</u>	<u>Units</u>	<u>Limit</u>	<u>Method Number</u>	<u>Analyzed</u>
Total Coliform	Negative		Negative	M9223	7/13/01 10:45:00 AM
E_Coliform	Absent		Absent	M9223	7/13/01 10:45:00 AM
Total Residual Chlorine	0.5	mg/L		M4500-CI G	7/12/01

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

Date Reported : 7/30/01

# H2M LABS, INC.

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

BROOKHAVEN NATIONAL LAB. - EMM

70 BELL AVE.

UPTON, NY 11973

Attn To : BOB LEE

Federal ID 5111891

Collected : 7/12/01 12:40:00 PM

Received : 7/12/01 2:45:00 PM

Collected By : CLIENT

Copies To : TONY ROSS

## LABORATORY RESULTS

Lab No. : 0107365-005A

Sample Information...

Type : Potable Water

Origin : Dist.

Routine

Client ID. : 8445-005

Point No : 5

Location : B-930 LINAC

<u>Parameter(s)</u>	<u>Results</u>	<u>Units</u>	<u>Limit</u>	<u>Method Number</u>	<u>Analyzed</u>
Total Coliform	Negative		Negative	M9223	7/13/01 10:45:00 AM
E_Coliform	Absent		Absent	M9223	7/13/01 10:45:00 AM
Total Residual Chlorine	0.6	mg/L		M4500-Cl G	7/12/01

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

Date Reported : 7/30/01



# H2M LABS, INC.

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

BROOKHAVEN NATIONAL LAB. #NLMB  
 70 BELL AVE.

UPTON, NY 11973

Attn To : BOB LEE

Federal ID 5111891

Collected : 7/12/01 12:50:00 PM

Received : 7/12/01 2:45:00 PM

Collected By : CLIENT

Copies To : TONY ROSS

## LABORATORY RESULTS

Lab No. : 0107365-006A

Client ID. : 8445-006

Point No : 6

Location : B-490 OUTPATIENT CLINIC

Sample Information...

Type : Potable Water

Origin : Dist.

Routine

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Total Coliform	Negative		Negative	M9223	7/13/01 10:45:00 AM
E_Coliform	Absent		Absent	M9223	7/13/01 10:45:00 AM
Total Residual Chlorine	0.8	mg/L		M4500-Cl G	7/12/01

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

Date Reported : 7/30/01



**H2M LABS, INC.**575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040, FAX: (631) 420-8436 NYS DOH ID# 10478**LABORATORY RESULTS**

BROOKHAVEN NATIONAL LAB - BLM

70 BELL AVE.

UPTON, NY 11973

Attn To : BOB LEE

Lab No. : 0107365-007A

Sample Information...

Type : Potable Water

Origin : Dist.

Routine

Federal ID : 5111891  
Collected : 7/12/01 1:10:00 PM  
Received : 7/12/01 2:45:00 PM  
Collected By : CLIENT  
Copies To : TONY ROSS

Client ID. : 8445-007

Point No : 7  
Location : B-490 BLOCK 11

<u>Parameter(s)</u>	<u>Results</u>	<u>Units</u>	<u>Limit</u>	<u>Method Number</u>	<u>Analyzed</u>
Total Coliform	Negative		Negative	M9223	7/13/01 10:45:00 AM
E_Coliform	Absent		Absent	M9223	7/13/01 10:45:00 AM
Total Residual Chlorine	0.6	mg/L		M4500-Cl G	7/12/01

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

Date Reported : 7/30/01



**ATTACHMENT II**

**Brookhaven National Laboratory  
Potable Water Supply**

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

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

Sample Location	Sample Date	pH (SU)	Temperature (Degrees F)	Conductivity (µmhos)	Alkalinity (mg/L)	Calcium (mg/L)
WTP	7/3/01	7.3	64	153	NR	NR
WTP	7/5/01	8.1	55	138	NR	NR
WTP	7/10/01	7.9	56	135	NR	NR
WTP	7/12/01	7.7	56	131	NR	NR
WTP	7/17/01	7.8	56	124	NR	NR
WTP	7/19/01	7.8	56	129	NR	NR
WTP	7/24/01	8.0	56	123	NR	NR
WTP	7/26/01	7.9	58	133	NR	NR
WTP	7/31/01	7.1	56	122	NR	NR
Well 11	7/3/01	7.6	55	173	NR	NR
Well 11	7/5/01	7.7	55	180	NR	NR
Well 11	7/10/01	7.0	55	229	NR	NR
Well 11	7/12/01	7.0	55	189	NR	NR
Well 11	7/17/01	7.0	56	233	NR	NR
Well 11	7/19/01	7.1	55	218	NR	NR
Well 11	7/24/01	7.0	55	211	NR	NR
Well 11	7/26/01	7.5	55	221	NR	NR
Well 11	7/31/01	7.5	55	198	NR	NR
Well 12	7/3/01	7.7	55	181	NR	NR
Well 12	7/5/01	7.8	55	191	NR	NR
Well 12	7/10/01	7.1	56	164	NR	NR
Well 12	7/12/01	7.1	56	158	NR	NR
Well 12	7/17/01	7.5	56	157	NR	NR
Well 12	7/19/01	7.0	56	156	NR	NR
Well 12	7/24/01	7.4	56	155	NR	NR
Well 12	7/26/01	7.8	56	156	NR	NR
Well 12	7/31/01	7.8	56	212	NR	NR

**NR** - Analysis Not Required or Not Reported

**WTP** – Water Treatment Plant

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

**ATTACHMENT III**

**Brookhaven National Laboratory  
Potable Water Supply**

**2001 Second Quarter Sr-90 Radiological Analyses for  
the BNL Potable Water Wells**

**ATTACHMENT III**  
**Table 2**  
**Brookhaven National Laboratory**  
**Potable Water Supply**

**2001 Second Quarter Sr-90 Radiological Analyses for  
the BNL Potable Water Wells**

<b>Summary of Sr-90 Radiological Results for the BNL Potable Water Wells 2001 Second Quarter</b>	
<b>Well ID</b>	<b>Sr-90 pCi/L</b>
Well # 6	< 0.366
Well # 7	< 0.497
Well #7 (Duplicate)	< 0.407
Well # 11	< 0.394
Well # 12	< 0.418

Note: Potable Well #4 was out of service at the time of sampling. Potable Well #10 was shutdown at the time of sampling. This well will not be used very often in the future to help control the g-2 and HFBR tritium plume migration pathways.

445631

ASL Prefix No. 21062109

DQL

BROOKHAVEN NATIONAL LABORATORY

Page 1 of 1

Chain of Custody No.

10504

Carrier/Waybill #

P.O. #

Requires EDD

SAMPLING CHAIN OF CUSTODY

Analysis Requested By		Sampling Contractor		Analytical Laboratory	
Name: D Paquette	Name: ESD Field Sampling	Name: Gel			
Life: No: 14314 Ext: 7046	Contact:	Address:			
Acct No: 07089 Dept: ES	Phone:	City: St: Zip:			
Email Reports To:	Email/Fax:	Contact:			
1 D Paquette	Sampler: C Lettieri / B Metz	Phone:			
2		Email/Fax:			
Project Name: F Wells (Potable)	Project Manager: D Paquette	Field Engineer:			

Comments:

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

Sample Information							Additional Sample Information				
UID	TYP	Site ID/Bldg/Life #	Depth/RVP	Date	Time	Matrix	Name/Description	Conc/Vol/Units	Conc. Type	N of Cont	Preservative
001	e	092-400	99-150	6/21/01	0929	w	well #7	4L	P	1	HNO3
002	e	BD-1	-	6/21/01	-	w	BD-1	4L	P	1	HNO3
003	e	056-401	92-137	6/21/01	1330	w	well #12	4L	P	1	HNO3
004	e	056400	93-142	6/21/01	1337	w	well #11	4L	P	1	HNO3
005	e	093-400	99-150	6/21/01	1351	w	well #6	4L	P	1	HNO3

1 Relinquished By/Date/Time Print: C Lettieri 6/21/01 Signature: [Signature] 1400	2 Relinquished By/Date/Time Print: _____ Signature: _____	3 Relinquished By/Date/Time Print: _____ Signature: _____
1 Received By/Date/Time Print: Patricia Damer 6/22/01 Signature: Patricia Damer 0930	2 Received By/Date/Time Print: _____ Signature: _____	3 Received By/Date/Time Print: _____ Signature: _____

Contractor Lab Sample Disposal:  
 Return To Client  
 Disposal by Lab  
 Archive For \_\_\_\_\_ Months

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

00861401002



# GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

## Certificate of Analysis

Company : Brookhaven National Laboratory  
 Address : OER  
 Building 51M  
 Upton, New York 11973--5000  
 Contact: Anna Bou  
 Project: Brookhaven ERD Contract

Report Date: July 17, 2001

Page 1 of 1

Client Sample ID: 10504-005  
 Sample ID: 44563005  
 Matrix: Water  
 Collect Date: 21-JUN-01 13:51  
 Receive Date: 22-JUN-01 09:30  
 Collector: Client

Project: BRKLO2000  
 Client ID: BRKL003  
 COC: 10504  
 Samp Recv.: 10504  
 Client Desc.: 093-400

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
<b>Rad Gas Flow</b>										
GFPC, Sr-90, liquid										
Strontium-90	U	0.286 +/-0.220	0.366	0.800	pCi/L		LOM107/07/01	0748	88996	1

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 905.0	

### Notes:

The Qualifiers in this report are defined as follows :

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

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

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

*Potable Well #6*

*M. Name*

Reviewed by





# GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

## Certificate of Analysis

Company : Brookhaven National Laboratory  
 Address : OER  
 Building 51M  
 Upton, New York 11973--5000  
 Contact: Anna Bou  
 Project: Brookhaven ERD Contract

Report Date: July 17, 2001

Page 1 of 1

Client Sample ID:	10504-001	Project:	BRKL02000
Sample ID:	44563001	Client ID:	BRKL003
Matrix:	Water	COC:	10504
Collect Date:	21-JUN-01 09:29	Sample Recv.:	10504
Receive Date:	22-JUN-01 09:30	Client Desc.:	092-400
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Rad Gas Flow</b>											
<i>GFPC, Sr90, liquid</i>											
Strontium-90	U	-0.188	+/-0.282	0.497	0.800	pCi/L	LOM1	07/07/01	0748	88996	1

**The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	EPA 905.0	

**Notes:**

The Qualifiers in this report are defined as follows :

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

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

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

*M. Howe*

Reviewed by

*Portable Well #7*



# GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

## Certificate of Analysis

Company : Brookhaven National Laboratory  
 Address : OER  
 Building 51M  
 Upton, New York 11973-5000  
 Contact: Anna Bou  
 Project: Brookhaven ERD Contract

Report Date: July 17, 2001

Page 1 of 1

Client Sample ID:	10504-002	Project:	BRKL02000
Sample ID:	44563002	Client ID:	BRKL003
Matrix:	Water	COC:	10504
Collect Date:	21-JUN-01 00:00	Sample Recv.:	10504
Receive Date:	22-JUN-01 09:30	Client Desc.:	BD-1
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
<b>Rad Gas Flow</b>										
GFPC, Sr90, liquid										
Strontium-90	U	-0.0557 +/-0.232	0.407	0.800	pCi/L		LOM107/07/01	0748	88996	1

**The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	EPA 905.0	

**Notes:**

The Qualifiers in this report are defined as follows :

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

*Potable Well  
#7-  
Duplicate*

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

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

*M. Mone*

Reviewed by \_\_\_\_\_



# GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

## Certificate of Analysis

Company : Brookhaven National Laboratory  
Address : OER  
Building 51M  
Upton, New York 11973--5000  
Contact: Anna Bou  
Project: Brookhaven ERD Contract

Report Date: July 17, 2001

Page 1 of 1

Client Sample ID: 10504-004  
Sample ID: 44563004  
Matrix: Water  
Collect Date: 21-JUN-01 13:37  
Receive Date: 22-JUN-01 09:30  
Collector: Client

Project: BRKL02000  
Client ID: BRKL003  
COC: 10504  
Samp Recv.: 10504  
Client Desc.: 056-400

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
<b>Rad Gas Flow</b>										
GFPC, Sr90, liquid Strontium-90	U	-0.0321 +/-0.226	0.394	0.800	pCi/L		LOM107/07/01	0748	88996	1

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 905.0	

#### Notes:

The Qualifiers in this report are defined as follows :

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

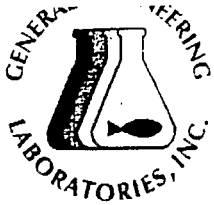
The above sample is reported on an "as received" basis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

*M. N. N. N.*

Reviewed by \_\_\_\_\_

*Stable Well #11*



# GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

## Certificate of Analysis

Company : Brookhaven National Laboratory  
 Address : OER  
 Building 51M  
 Upton, New York 11973-5000  
 Contact: Anna Bou  
 Project: Brookhaven ERD Contract

Report Date: July 17, 2001

Page 1 of 1

Client Sample ID: 10504-003  
 Sample ID: 44563003  
 Matrix: Water  
 Collect Date: 21-JUN-01 13:30  
 Receive Date: 22-JUN-01 09:30  
 Collector: Client

Project: BRKL02000  
 Client ID: BRKL003  
 COC: 10504  
 Samp Recv.: 10504  
 Client Desc.: 056-401

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
<b>Rad Gas Flow</b>										
<i>GFPC, Sr90, liquid</i>										
Strontium-90	U	-0.218	+-0.234	0.418	0.800	pCi/L	LOM107/07/01	0748	88996	1

**The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	EPA 905.0	

**Notes:**

The Qualifiers in this report are defined as follows :

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

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

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

*Potable Water #12*

*M. Nune*

Reviewed by