2016 BNL Groundwater Status Report

		Operable Unit 1			HFBR-T	ritium Remediati	on Project	
			Ground	water Withdrawal	l (1,000 gallons pe	er month)		
BNL Well No.	115-27	115-43	RA V	105-040	105-039	105-041	096-119	Tritium
Extraction Well	EW-1	EW-2		EW-9	EW-10	EW-11	EW-16	Remediation
Screen Int.								
elevation (ft. msl)	-90 to -130	-40 to -80		-61 to -81	-60 to -80	-60 to -80	-14 to -54	
depth (feet)	150 to 190	100 to 140	Monthly	130 to 150	130 to 150	130 to 150	80 to 120	Monthly
			Total					Total
January	stand-by	stand-by	0	stand-by	stand-by	stand-by	stand-by	0
February	stand-by	stand-by	0	stand-by	stand-by	stand-by	stand-by	0
March	stand-by	stand-by	0	stand-by	stand-by	stand-by	stand-by	0
April	stand-by	stand-by	0	stand-by	stand-by	stand-by	stand-by	0
May	stand-by	stand-by	0	stand-by	stand-by	stand-by	stand-by	0
June	stand-by	stand-by	0	stand-by	stand-by	stand-by	stand-by	0
July	stand-by	stand-by	0	stand-by	stand-by	stand-by	stand-by	0
August	stand-by	stand-by	0	stand-by	stand-by	stand-by	stand-by	0
September	stand-by	stand-by	0	stand-by	stand-by	stand-by	stand-by	0
October	stand-by	stand-by	0	stand-by	stand-by	stand-by	stand-by	0
November	stand-by	stand-by	0	stand-by	stand-by	stand-by	stand-by	0
December	stand-by	stand-by	0	stand-by	stand-by	stand-by	stand-by	0
Annual								
Average (K gal/month)	0	0	0	0	0	0	0	0

Notes:

Source: BNL Facilities and Operations Directorate.

ft. msl = Elevation in feet referenced to mean sea level.

HFBR = High Flux Beam Reactor

2016 BNL Groundwater Status Report

			Operable Unit I	II - Pump and Tr	reat			
	MIDD	LE ROAD SYST	EM - Groundwa	ter Withdrawal (1,000 gallons pe	er month)		
BNL Well No.	113-23	113-24	113-25	113-26	113-27	106-66		MIDDLE
Extraction Well	RW-1	RW-2	RW-3	RW-4	RW-5	RW-6	RW-7	ROAD
Screen Int.								
elevation (ft. msl)	-17 to -57	-99 to -129	-159 to -199	-98 to -128	-91 to -121	-124 to -154		
depth (feet)	90 to 130	170 to 200	228 to 268	150 to 180	150 to 180	188 to 218		Monthly
								Total
January	stand-by	3,768	4,188	stand-by	stand-by	stand-by	2,037	9,993
February	stand-by	3,949	2,984	stand-by	stand-by	stand-by	793	7,725
March	stand-by	4,711	5,050	stand-by	stand-by	stand-by	4,415	14,175
April	stand-by	3,963	4,013	stand-by	stand-by	stand-by	3,825	11,800
May	stand-by	3,744	3,237	stand-by	stand-by	stand-by	3,130	10,111
June	stand-by	4,635	3,827	stand-by	stand-by	stand-by	4,625	13,088
July	stand-by	4,499	3,804	stand-by	stand-by	stand-by	2,744	11,047
August	stand-by	6,167	5,329	stand-by	stand-by	stand-by	6,354	17,850
September	stand-by	2,550	1,737	stand-by	stand-by	stand-by	2,034	6,320
October	stand-by	0	0	stand-by	stand-by	stand-by	0	0
November	stand-by	0	0	stand-by	stand-by	stand-by	0	0
December	stand-by	1,939	1,255	stand-by	stand-by	stand-by	1,383	4,577
Annual Average (K gal/month)	0	3,328	2,958	0	0	0	2,626	8,912

Notes:

Source: BNL Facilities and Operations Directorate.

ft. msl = Elevation in feet referenced to mean sea level.

2016 BNL Groundwater Status Report

			Operable Un	it III - Pump and	l Treat			
	SOU	TH BOUNDARY	SYSTEM - Grou	ndwater Withdra	awal (1,000 gallo	ons per month)		
BNL Well No.	121-017	121-016	121-015	122-014	122-013	122-012	121-46	SOUTH
Extraction Well	EW-3	EW-4	EW-5	EW-6	EW-7	EW-8	EW-17	BOUNDARY
Screen Int.								
elevation	-79 to -119	-88 to -108	-91 to -131	-105 to -145	-115 to -155	-131 to -151		
(ft. msl)		-118 to -128				-171 to -191		
depth (feet)	150 to 190	160 to 180	160 to 200	160 to 200	170 to 210	190 to 210	207 to 237	Monthly
		190 to 200				230 to 250		Total
January	stand-by	7,260	stand-by	stand-by	stand-by	stand-by	2,774	10,034
February	stand-by	4,332	stand-by	stand-by	stand-by	stand-by	5,826	10,158
March	stand-by	6,446	stand-by	stand-by	stand-by	stand-by	8,265	14,710
April	stand-by	4,705	stand-by	stand-by	stand-by	stand-by	5,267	9,972
May	stand-by	3,126	stand-by	stand-by	stand-by	stand-by	5,272	8,398
June	stand-by	5,207	stand-by	stand-by	stand-by	stand-by	6,109	11,317
July	stand-by	5,357	stand-by	stand-by	stand-by	stand-by	6,350	11,707
August	stand-by	7,234	stand-by	stand-by	stand-by	stand-by	5,272	12,506
September	stand-by	3,049	stand-by	stand-by	stand-by	stand-by	688	3,738
October	stand-by	0	stand-by	stand-by	stand-by	stand-by	0	0
November	stand-by	0	stand-by	stand-by	stand-by	stand-by	0	0
December	stand-by	1,544	stand-by	stand-by	stand-by	stand-by	0	1,544
Annual	-	-	-	-	-	-		
	0.00	4,028	0	0	0	0	3,811	7,840
Average (K gal/month)								

Notes:

Source: BNL Facilities and Operations Directorate.

ft. msl = Elevation in feet referenced to mean sea level.

2016 BNL Groundwater Status Report

				Operable l	Jnit III - Pump a	nd Treat				
		OFFSITE	INDUSTRIAL P	ARK SYSTEM	- Groundwater V	Vithdrawal (1,0	00 gallons per r	nonth)		
BNL Well No.	000-231	000-233	000-235	000-237	000-239	000-241	000-243	000-532	000-533	OFFSITE
Extraction Well	UVB-1	UVB-2	UVB-3	UVB-4	UVB-5	UVB-6	UVB-7	IP-EW-8	IP-EW-9	INDUSTRIAL
Screen Int.										PARK
Influent										
elevation	-137 to -157	-115.5 to -135.5	-123 to -143	-98 to -118	-109 to -129	-110 to -130	-123 to -143	-155 to -175	-148 to -168	
(ft. msl)										
depth (feet)	220 to 240	195 to 215	194 to 214	170 to 190	180 to 200	190 to 210	205 to 225	230 to 250	220 to 240	
Effluent										
elevation										
(ft. msl)	-82 to -102	-60.5 to -80.5	-68 to -88	-53 to -73	-54 to -74	-58 to -78	-68 to -88			Monthly
depth (feet)	165 to 185	140 to 160	139 to 159	125 to 145	125 to 145	140 to 160	150 to 170			Total
January	stand-by	stand-by	557	1,783	0	2,182	stand-by	4,364	3,471	12,357
February	stand-by	stand-by	0	0	3	167	stand-by	4,359	45	4,574
March	stand-by	stand-by	503	475	601	124	stand-by	4,816	0	6,519
April	stand-by	stand-by	2,652	2,584	2,093	2,247	stand-by	4,535	4,185	18,296
May	stand-by	stand-by	1,661	1,695	2,433	2,806	stand-by	5,074	5,338	19,007
June	stand-by	stand-by	1,796	1,695	1,543	2,564	stand-by	4,970	5,150	17,718
July	stand-by	stand-by	1,951	2,589	2,262	2,999	stand-by	5,153	5,337	20,291
August	stand-by	stand-by	836	535	840	2,695	stand-by	4,836	4,977	14,719
September	stand-by	stand-by	1,780	1,244	1,205	2,317	stand-by	4,684	4,690	15,920
October	stand-by	stand-by	2,065	1,811	1,947	2,500	stand-by	4,972	5,157	18,452
November	stand-by	stand-by	1,413	165	155	1,907	stand-by	4,368	4,723	12,731
December	stand-by	stand-by	362	2,373	2,199	2,846	stand-by	4,532	4,826	17,138
Annual										
Average	stand-by	stand-by	1,502	1,695	1,528	2,535	stand-by	5,666	4,790	2,953
(K gal/month)										

Notes:

Source: BNL Facilities and Operations Directorate.

ft. msl = Elevation in feet referenced to mean sea level.

2016 BNL Groundwater Status Report

DUIL DING OF	•	rable Unit III - Pump			
		vater Withdrawal and			
BNL Well No.	095-151	095-153	095-155	095-157	BUILDING
Extraction Well	RTW-1	RTW-2	RTW-3	RTW-4	96
Screen Int.					
Influent					
elevation (ft. msl)	+34 to+24	+26 to +16	+26 to +16	+23 to +13	
depth (feet)	48 to 58	48 to 58	48 to 58	48 to 58	
Effluent					
elevation (ft. msl)	+57 to +47	+49 to +39	+49 to +39	+46 to +36	Monthly
depth (feet)	25 to 35	25 to 35	25 to 35	25 to 35	Total
January	1,128	stand-by	stand-by	stand-by	1,128
February	1,065	stand-by	stand-by	stand-by	1,065
March	1,428	stand-by	stand-by	stand-by	1,428
April	1,249	stand-by	stand-by	stand-by	1,249
May	1,556	stand-by	stand-by	stand-by	1,556
June	1,297	stand-by	stand-by	stand-by	1,297
July	1,435	stand-by	stand-by	stand-by	1,435
August	965	stand-by	stand-by	stand-by	965
September	1,064	stand-by	stand-by	stand-by	1,064
October	450	stand-by	stand-by	stand-by	450
November	0	stand-by	stand-by	stand-by	0
December	1,065	stand-by	stand-by	stand-by	1,065
Annual Average (K gal/month)	1,060	stand-by	stand-by	stand-by	1,060

Notes:

Source: EM Field Engineer

ft. msl = Elevation in feet referenced to mean sea level.

Elevations rounded to nearest foot

Annual average based on actual pumping durations

*Well RTW-4 put in stand-by mode in October 2012

2016 BNL Groundwater Status Report

	Operable Uni	t III - Pump and Treat	
V	VESTERN SOUTH BOUNDA	RY System (1,000 gallons pe	er month)
BNL Well No.	126-12	127-05	
Extraction Well	WSB-1	WSB-2	
Screen Int.			
elevation (ft. msl)	-60 to -80	-80 to -100	Monthly
depth (feet)	140 to 160	150 to 170	
			Total
January	7,376	3,764	11,140
February	7,502	0	7,502
March	8,049	0	8,049
April	7,807	8,421	16,228
May	6,047	0	6,047
June	4,048	0	4,048
July	7,349	4,181	11,530
August	11,168	0	11,168
September	5,381	0	5,381
October	8,896	stand-by	8,896
November	6,991	stand-by	6,991
December	7,787	stand-by	7,787
Annual			
Average (K gal/month)	7,380	1,367	8,731

Notes:

Source: BNL Facilities and Operations Directorate.

ft. msl = Elevation in feet referenced to mean sea level.

2016 BNL Groundwater Status Report

	Operable U	Jnit III - Pump and Treat		
	Chem Holes Strontium-90 rem	nediation System (1,000 gallons p	oer month)	
BNL Well No.	106-92			
Extraction Well	SR-90 EW-1	SR-90 EW-2	SR-90 EW-3	
Screen Int.				
elevation (ft. msl)	+40.5 to +25.5			Monthly
depth (feet)	23.5 to 38.5	35 to 45	35 to 45	
				Total
January	124	0	0	124
February	241	0	0	241
March	295	467	229	991
April	0	0	0	0
May	290	0	0	290
June	12	337	242	591
July	338	0	0	338
August	0	0	0	0
September	225	255	218	698
October	0	0	0	0
November	324	0	0	324
December	0	0	0	0
Annual				
Average (K gal/month)	245	398	248	300

Notes:

Differences in averages due to rounding

Source: Groundwater Protection Group Field Engineer

ft. msl = Elevation in feet referenced to mean sea level.

2016 BNL Groundwater Status Report

	Oper	rable Unit III - Pump	and Treat		
L	IPA SYSTEM - Grou	ndwater Withdrawal	(1,000 gallons per n	nonth)	
BNL Well No.	000-453	000-455	000-457	000-461	LIPA
Extraction Well	EW-1L	EW-2L	EW-3L	EW-4L	
Screen Int.					
elevation (ft. msl)	-111 to -131	-115 to -135	-104 to -124	-192 to -212	Monthly
depth (feet)	217 to 237	224 to 244	216 to 236	304 to 324	Total
January	stand-by	stand-by	stand-by	2216	2216
February	stand-by	stand-by	stand-by	608	608
March	stand-by	stand-by	stand-by	0	0
April	stand-by	stand-by	stand-by	6495	6495
May	stand-by	stand-by	stand-by	7448	7448
June	stand-by	stand-by	stand-by	7345	7345
July	stand-by	stand-by	stand-by	3531	3531
August	stand-by	stand-by	stand-by	2063	2063
September	stand-by	stand-by	stand-by	1218	1218
October	stand-by	stand-by	stand-by	6719	6719
November	stand-by	stand-by	stand-by	6181	6181
December	stand-by	stand-by	stand-by	3024	3024
Annual Average (K gal/month)*	0	0	0	3916	3904

Notes:

Source: BNL Facilities and Operations Directorate.

ft. msl = Elevation in feet referenced to mean sea level.

Elevations rounded to nearest foot

* Annual average is based on actual pumping timeframe

2016 BNL Groundwater Status Report

		Operab	le Unit III - Pump	and Treat			
	AIRPORT	SYSTEM - Groun	ndwater Withdraw	val (1,000 gallons	per month)		
BNL Well No.	800-109	800-110	800-111	800-112	800-113	800-132	Airport
Extraction Well	RTW-1A	RTW-2A	RTW-3A	RTW-4A	RTW-5A	RTW-6A	
Screen Int.							
Influent							
	-108 to -128	-109 to -129	-130 to -150	-184 to -204	-133 to -153		Monthly
depth (feet)	188 to 208	188 to 208	210 to 230	268 to 288	220 to 240	165 to 185	Total
Effluent							
elevation (ft. msl)	+25 to -15	+24 to -16	+25 to -15	+24 to -16	+22 to -18		Monthly
depth (feet)	55 to 95	55 to 95	55 to 95	60 to 100	65 to 105		Total
January	3,896	100	774	5,901	49	5,994	16,714
February	378	20	0	516	0	567	1,482
March	4,256	100	84	7,644	70	6,534	18,689
April	3,904	100	65	3,852	56	6,006	13,984
May	3,659	60	47	3,764	42	5,578	13,149
June	3,689	70	0	6,197	99	5,638	15,693
July	2,865	80	82	5,103	61	4,418	12,609
August	4,087	70	204	727	228	6,236	11,553
September	2,980	60	625	1,357	0	4,560	9,582
October	3,177	50	28	7,559	0	4,840	15,654
November	2,880	90	1,920	5,206	1,009	4,454	15,558
December	2,647	20	591	4,930	69	4,000	12,258
Annual Average (K gal/month)*	3,223	69	368	4,431	140	4,935	13,077

Notes:

Source: BNL Facilities and Operations Directorate.

ft. msl = Elevation in feet referenced to mean sea level.

Elevations rounded to nearest foot

RTW-1A and RTW-2A flow estimated. Both wells share a common flow meter, individial well pumpage estimated at 50% of actual flow meter reading.

* Annual average is based on actual pumping timeframe

2016 BNL Groundwater Status Report

	Operable Unit III - Pu	mp and Treat	
NORTH S	TREET - Groundwater Withdo	rawal (1,000 gallons per month	1)
BNL Well No.	000-471	000-473	NORTH STREET
Extraction Well	NS-1	NS-2	
Screen Int.			
elevation (ft. msl)	-64 to-104	-96 to -126	Monthly
depth (feet)	165 to 205	190 to 220	Total
January	8,926	stand-by	8,926
February	4,111	stand-by	4,111
March	8,377	stand-by	8,377
April	3,363	stand-by	3,363
May	4	stand-by	4
June	6,751	stand-by	6,751
July	3,724	stand-by	3,724
August	stand-by	stand-by	0
September	stand-by	stand-by	0
October	stand-by	stand-by	0
November	stand-by	stand-by	0
December	stand-by	stand-by	0
Annual Average (K gal/month)	5,049	0	5,037

Notes:

Source: BNL Facilities and Operations Directorate.

ft. msl = Elevation in feet referenced to mean sea level.

2016 BNL Groundwater Status Report

	Operable Unit III - I	Pump and Treat	
NORTH S	TREET EAST- Groundwater V	/ithdrawal (1,000 gallons per r	month)
BNL Well No.	000-487	000-488	NORTH
Extraction Well	NSE-1	NSE-2	STREET
Screen Int.			EAST
elevation (ft. msl)	-71 to -101	-71 to -101	Monthly
depth (feet)	161 to 191	152 to 182	Total
January	stand-by	stand-by	0
February	stand-by	stand-by	0
March	stand-by	stand-by	0
April	stand-by	stand-by	0
May	stand-by	stand-by	0
June	stand-by	stand-by	0
July	stand-by	stand-by	0
August	stand-by	stand-by	0
September	stand-by	stand-by	0
October	stand-by	stand-by	0
November	stand-by	stand-by	0
December	stand-by	stand-by	0
Annual Average (K gal/month)	0	0	0

Notes:

Source: BNL Facilities and Operations Directorate.

ft. msl = Elevation in feet referenced to mean sea level.

2016 BNL Groundwater Status Report

				Operable Unit	III - Pump and Ti	reat				
	BGRR/WCF Strontium-90 - Groundwater Withdrawal (1,000 gallons per month)									
BNL Well No.	065-368	065-369	075-676	075-677	075-678					BGRR
Extraction Well	SR-1	SR-2	SR-3	SR-4	SR-5	SR-6	SR-7	SR-8	SR-9	
Screen Int.										
elevation (ft. msl)	51.5-31.5	51.5-31.5	50-30	46-6	46-6					Monthly
depth (feet)	33-53	33.5-53.5	51-71	35-75	35-75	85-105	82-102	77-97	67-87	Total
January	124	126	106	114	47	169	241	214	198	1,339
February	158	175	184	11	0	0	359	359	251	1,497
March	134	174	153	208	122	103	144	261	178	1,478
April	231	274	249	0	0	0	319	436	341	1,849
May	0	251	202	336	172	322	343	404	300	2,331
June	0	228	201	0	0	0	334	434	447	1,644
July	0	210	181	219	140	275	274	343	436	2,076
August	0	232	250	0	0	0	464	435	264	1,645
September	0	85	86	0	0	64	153	163	82	633
October	0	140	123	0	0	0	234	250	156	902
November	0	120	173	0	0	341	341	341	300	1,615
December	345	249	217	0	0	0	445	446	388	2,090
Annual Average (K gal/month)	82	189	177	75	41	107	304	340	279	1,591

Notes:

ft. msl = Elevation in feet referenced to mean sea level.

2016 BNL Groundwater Status Report

Operable Unit VI - Pump and Treat				
EDB SYSTEM- Groundwater Withdrawal (1,000 gallons per month)				
BNL Well No.	000-503	000-504	OU VI EDB	
Extraction Well	EW-1E	EW-2E		
Screen Int.				
elevation (ft. msl)	-41 to -61	-45 to -65	Monthly	
depth (feet)	115 to 135	115 to 135	Total	
January	7,148	7,464	14,612	
February	6,775	7,755	14,530	
March	9,033	8,034	17,067	
April	7,062	8,062	15,124	
May	9,336	8,836	18,172	
June	1,772	7,742	9,514	
July	4,143	8,713	12,856	
August	7,726	8,014	15,740	
September	5,863	6,093	11,956	
October	6,296	8,814	15,110	
November	5,397	8,095	13,492	
December	5,514	8,272	13,786	
Annual Average (K gal/month)	6,350	7,999	14,330	

Notes:

Source: BNL Facilities and Operations Directorate.

ft. msl = Elevation in feet referenced to mean sea level.

Elevations rounded to nearest foot

Flow per well estimated, average combined flow 155 gallons per minute

2016 BNL Groundwater Status Report

Operable Unit III - Pump and Treat			
BUILDING 452 FREON SYSTEM- Groundwater Withdrawal (1,000 gallons per month)			
BNL Well No.	085-839	Building 452 Freon	
Extraction Well	EW-18		
Screen Int.			
elevation (ft. msl)		Monthly	
depth (feet)	55-65	Total	
January	3,221	3,221	
February	0	0	
March	1,145	1,145	
April	0	0	
May	0	0	
June	0	0	
July	0	0	
August	0	0	
September	0	0	
October	0	0	
November	1,169	1,169	
December	1,233	1,233	
Annual Average (K gal/month)	572	572	

Notes:

Source: BNL Facilities and Operations Directorate.

ft. msl = Elevation in feet referenced to mean sea level.