

Table F-1
Extraction Wells Radiological and VOC Data
OU I South Boundary System

2019 BNL Groundwater Status Report

Site ID : 115-27 (EW-1)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
Perfluorobutanesulfonate (PFBS)	1/11/2019	0.806	1.64	NG/L	J
Perfluorobutyric acid (PFBA)	1/11/2019	50.8	1.85	NG/L	
Perfluoroheptanoic acid (PFHpA)	1/11/2019	0.796	1.85	NG/L	J
Perfluorohexanesulfonate (PFHxS)	1/11/2019	4.47	1.68	NG/L	
Perfluorohexanoic acid (PFHxA)	1/11/2019	3.12	1.85	NG/L	
Perfluorooctanesulfonate (PFOS)	1/11/2019	5.59	1.85	NG/L	
Perfluorooctanoic acid (PFOA)	1/11/2019	5.09	1.85	NG/L	
Perfluoropentanesulfonate (PFPeS)	1/11/2019	0.627	1.74	NG/L	J
Perfluoropentanoic acid (PFPeA)	1/11/2019	0.843	1.85	NG/L	J
1,1-Dichloroethane	1/11/2019	2.54	0.5	UG/L	
524.2 TVOC	1/11/2019	4.64	0	UG/L	
Chloroethane	1/11/2019	1.92	0.5	UG/L	
Trichloroethylene	1/11/2019	0.18	0.5	UG/L	J
1,1-Dichloroethane	4/3/2019	2.3	0.5	UG/L	
524.2 TVOC	4/3/2019	4.3	0	UG/L	
Chloroethane	4/3/2019	2	0.5	UG/L	
1,1-Dichloroethane	7/9/2019	2.46	0.5	UG/L	
524.2 TVOC	7/9/2019	5.54	0	UG/L	
Benzene	7/9/2019	0.17	0.5	UG/L	J
Chloroethane	7/9/2019	2.67	0.5	UG/L	
cis-1,2-Dichloroethylene	7/9/2019	0.24	0.5	UG/L	J

Site ID : 115-43 (EW-2)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
Perfluorobutanesulfonate (PFBS)	1/11/2019	0.9	1.64	NG/L	J
Perfluorobutyric acid (PFBA)	1/11/2019	26.5	1.84	NG/L	
Perfluoroheptanoic acid (PFHpA)	1/11/2019	0.614	1.84	NG/L	J
Perfluorohexanesulfonate (PFHxS)	1/11/2019	5.22	1.68	NG/L	
Perfluorohexanoic acid (PFHxA)	1/11/2019	2.14	1.84	NG/L	
Perfluorooctanesulfonate (PFOS)	1/11/2019	7.28	1.84	NG/L	
Perfluorooctanoic acid (PFOA)	1/11/2019	3.28	1.84	NG/L	
Perfluoropentanesulfonate (PFPeS)	1/11/2019	0.868	1.73	NG/L	J
Perfluoropentanoic acid (PFPeA)	1/11/2019	0.735	1.84	NG/L	J
524.2 TVOC	1/11/2019	0.89	0	UG/L	
Chloroform	1/11/2019	0.89	0.5	UG/L	
524.2 TVOC	4/3/2019	0.64	0	UG/L	
Chloroform	4/3/2019	0.64	0.5	UG/L	
524.2 TVOC	7/9/2019	0.57	0	UG/L	
Chloroform	7/9/2019	0.57	0.5	UG/L	

Table F-2
Air Stripper Influent Radiological and VOC Data
OU I South Boundary System

2019 BNL Groundwater Status Report

OU I South Boundary Treatment System was in standby mode during 2019.

Table F-3
Air Stripper Effluent Radiological and VOC Data
OU I South Boundary System

2019 BNL Groundwater Status Report

OU I South Boundary Treatment System was in standby mode during 2019.

Table F-4
Cumulative Mass Removal
OU I South Boundary System

2019 BNL Groundwater Status Report

Date Sampled	Cumulative VOC's (lbs)
06/03/13	Final mass removal 368.97

**Table F-5
Influent and Effluent VOC Data
OU III Building 96 System**

2019 BNL Groundwater Status Report

Site ID : 095-151 (RTW-1 Influent)

Chemical Name	Sample Date	Value	Detlim	Units	Depth	Qual
524.2 TVOC	01/10/19	2.15	0	UG/L	0	
Tetrachloroethylene	01/10/19	2.15	0.5	UG/L	0	
524.2 TVOC	01/23/19	2.09	0	UG/L	0	
Tetrachloroethylene	01/23/19	2.09	0.5	UG/L	0	
524.2 TVOC	02/05/19	2.24	0	UG/L	0	
Tetrachloroethylene	02/05/19	2.24	0.5	UG/L	0	
524.2 TVOC	02/20/19	2.35	0	UG/L	0	
Tetrachloroethylene	02/20/19	2.35	0.5	UG/L	0	
524.2 TVOC	03/12/19	2.29	0	UG/L	0	
Chloroform	03/12/19	0.29	0.5	UG/L	0	J
Tetrachloroethylene	03/12/19	2	0.5	UG/L	0	
524.2 TVOC	03/28/19	3.3	0	UG/L	0	
Tetrachloroethylene	03/28/19	3.3	0.5	UG/L	0	
524.2 TVOC	04/02/19	2.9	0	UG/L	0	
Tetrachloroethylene	04/02/19	2.9	0.5	UG/L	0	
524.2 TVOC	04/16/19	2.8	0	UG/L	0	
Tetrachloroethylene	04/16/19	2.8	0.5	UG/L	0	
524.2 TVOC	05/01/19	10.61	0	UG/L	0	
Chloroform	05/01/19	0.71	0.5	UG/L	0	
Tetrachloroethylene	05/01/19	9.9	0.5	UG/L	0	
524.2 TVOC	05/14/19	11.45	0	UG/L	0	
Chloroform	05/14/19	0.76	0.5	UG/L	0	
Tetrachloroethylene	05/14/19	10	0.5	UG/L	0	
Trichlorofluoromethane	05/14/19	0.69	0.5	UG/L	0	
524.2 TVOC	06/25/19	3.71	0	UG/L	0	
Chloroform	06/25/19	0.51	0.5	UG/L	0	
Tetrachloroethylene	06/25/19	3.2	0.5	UG/L	0	
524.2 TVOC	07/02/19	14.6	0	UG/L	0	
Chloroform	07/02/19	1.1	0.5	UG/L	0	
Tetrachloroethylene	07/02/19	12	0.5	UG/L	0	
Trichlorofluoromethane	07/02/19	1.5	0.5	UG/L	0	
524.2 TVOC	07/17/19	14.27	0	UG/L	0	
Chloroform	07/17/19	1	0.5	UG/L	0	
Methylene chloride	07/17/19	0.3	0.5	UG/L	0	J
Tetrachloroethylene	07/17/19	12	0.5	UG/L	0	
Trichlorofluoromethane	07/17/19	0.97	0.5	UG/L	0	
524.2 TVOC	08/06/19	12.59	0	UG/L	0	
Chloroform	08/06/19	0.88	0.5	UG/L	0	
Tetrachloroethylene	08/06/19	11	0.5	UG/L	0	
Trichlorofluoromethane	08/06/19	0.71	0.5	UG/L	0	
524.2 TVOC	08/20/19	10.87	0	UG/L	0	
Chloroform	08/20/19	0.82	0.5	UG/L	0	
Methyl chloride	08/20/19	0.22	0.5	UG/L	0	J
Tetrachloroethylene	08/20/19	9	0.5	UG/L	0	
Trichlorofluoromethane	08/20/19	0.83	0.5	UG/L	0	
524.2 TVOC	09/04/19	9.92	0	UG/L	0	
Chloroform	09/04/19	0.86	0.5	UG/L	0	
Tetrachloroethylene	09/04/19	8.3	0.5	UG/L	0	
Trichlorofluoromethane	09/04/19	0.76	0.5	UG/L	0	
524.2 TVOC	09/17/19	9.94	0	UG/L	0	
Chloroform	09/17/19	0.9	0.5	UG/L	0	
Tetrachloroethylene	09/17/19	8.4	0.5	UG/L	0	
Trichlorofluoromethane	09/17/19	0.64	0.5	UG/L	0	
524.2 TVOC	10/01/19	8.8	0	UG/L	0	
Chloroform	10/01/19	0.92	0.5	UG/L	0	
Tetrachloroethylene	10/01/19	7.3	0.5	UG/L	0	
Trichlorofluoromethane	10/01/19	0.58	0.5	UG/L	0	
524.2 TVOC	10/24/19	8.46	0	UG/L	0	
Chloroform	10/24/19	0.96	0.5	UG/L	0	
Tetrachloroethylene	10/24/19	6.9	0.5	UG/L	0	
Trichlorofluoromethane	10/24/19	0.6	0.5	UG/L	0	
524.2 TVOC	11/05/19	9.43	0	UG/L	0	
Chloroform	11/05/19	0.85	0.5	UG/L	0	
Tetrachloroethylene	11/05/19	7.9	0.5	UG/L	0	
Trichlorofluoromethane	11/05/19	0.68	0.5	UG/L	0	
524.2 TVOC	11/19/19	7.43	0	UG/L	0	

**Table F-5
Influent and Effluent VOC Data
OU III Building 96 System**

2019 BNL Groundwater Status Report

Site ID : 095-151 (RTW-1 Influent)

Chloroform	11/19/19	0.83	0.5	UG/L	0	
Tetrachloroethylene	11/19/19	6.6	0.5	UG/L	0	
524.2 TVOC	12/03/19	7.49	0	UG/L	0	
Chloroform	12/03/19	0.84	0.5	UG/L	0	
Tetrachloroethylene	12/03/19	6.1	0.5	UG/L	0	
Trichlorofluoromethane	12/03/19	0.55	0.5	UG/L	0	
524.2 TVOC	12/17/19	7.89	0	UG/L	0	
Chloroform	12/17/19	0.93	0.5	UG/L	0	
Tetrachloroethylene	12/17/19	6.3	0.5	UG/L	0	
Trichlorofluoromethane	12/17/19	0.66	0.5	UG/L	0	

Site ID : 095-153 (RTW-2 Influent)

Chemical Name	Sample Date	Value	Detlim	Units	Depth	Qual
524.2 TVOC	01/10/19	1.5	0	UG/L	0	
Tetrachloroethylene	01/10/19	1.5	0.5	UG/L	0	
524.2 TVOC	02/05/19	2.54	0	UG/L	0	
Chloroform	02/05/19	0.45	0.5	UG/L	0	J
Tetrachloroethylene	02/05/19	2.09	0.5	UG/L	0	
524.2 TVOC	03/12/19	3	0	UG/L	0	
Tetrachloroethylene	03/12/19	3	0.5	UG/L	0	
524.2 TVOC	04/02/19	2.1	0	UG/L	0	
Tetrachloroethylene	04/02/19	2.1	0.5	UG/L	0	
524.2 TVOC	06/19/19	2.9	0	UG/L	0	
Tetrachloroethylene	06/19/19	2.9	0.5	UG/L	0	
524.2 TVOC	07/02/19	2.9	0	UG/L	0	
Tetrachloroethylene	07/02/19	2.9	0.5	UG/L	0	
524.2 TVOC	08/06/19	2.69	0	UG/L	0	
Chloroform	08/06/19	0.29	0.5	UG/L	0	J
Tetrachloroethylene	08/06/19	2.4	0.5	UG/L	0	
524.2 TVOC	09/04/19	2.46	0	UG/L	0	
Chloroform	09/04/19	0.33	0.5	UG/L	0	J
Tetrachloroethylene	09/04/19	1.8	0.5	UG/L	0	
Trichlorofluoromethane	09/04/19	0.33	0.5	UG/L	0	J
524.2 TVOC	10/01/19	2.74	0	UG/L	0	
Chloroform	10/01/19	0.41	0.5	UG/L	0	J
Tetrachloroethylene	10/01/19	1.8	0.5	UG/L	0	
Trichlorofluoromethane	10/01/19	0.53	0.5	UG/L	0	
524.2 TVOC	11/05/19	1.84	0	UG/L	0	
Chloroform	11/05/19	0.4	0.5	UG/L	0	J
Tetrachloroethylene	11/05/19	0.62	0.5	UG/L	0	
Trichlorofluoromethane	11/05/19	0.82	0.5	UG/L	0	
524.2 TVOC	12/03/19	1.28	0	UG/L	0	
Chloroform	12/03/19	0.37	0.5	UG/L	0	J
Tetrachloroethylene	12/03/19	0.5	0.5	UG/L	0	
Trichlorofluoromethane	12/03/19	0.41	0.5	UG/L	0	J

Site ID : 095-155 (RTW-3 Influent)

Chemical Name	Sample Date	Value	Detlim	Units	Depth	Qual
524.2 TVOC	01/10/19	2.68	0	UG/L	0	
Chloroform	01/10/19	1.19	0.5	UG/L	0	
Tetrachloroethylene	01/10/19	1.49	0.5	UG/L	0	
524.2 TVOC	04/02/19	1.8	0	UG/L	0	
Tetrachloroethylene	04/02/19	1.8	0.5	UG/L	0	
524.2 TVOC	07/02/19	2.4	0	UG/L	0	
Tetrachloroethylene	07/02/19	2.4	0.5	UG/L	0	
524.2 TVOC	10/01/19	2.35	0	UG/L	0	
Chloroform	10/01/19	1.8	0.5	UG/L	0	
Tetrachloroethylene	10/01/19	0.55	0.5	UG/L	0	

**Table F-5
Influent and Effluent VOC Data
OU III Building 96 System**

2019 BNL Groundwater Status Report

Site ID : 095-157 (RTW-4 Influent)

Chemical Name	Sample Date	Value	Detlim	Units	Depth	Qual
524.2 TVOC	01/10/19	0.92	0	UG/L	0	
Chloroform	01/10/19	0.68	0.5	UG/L	0	
Tetrachloroethylene	01/10/19	0.24	0.5	UG/L	0	J
524.2 TVOC	04/02/19	0	0	UG/L	0	
524.2 TVOC	07/02/19	1.5	0	UG/L	0	
Chloroform	07/02/19	1.5	0.5	UG/L	0	
524.2 TVOC	10/01/19	0.58	0	UG/L	0	
Chloroform	10/01/19	0.58	0.5	UG/L	0	

J = Estimated Value below the method detection limit of 0.50 UG/L

B = Compound was found in both the sample and associated laboratory blank.

Table F-6
Source Control Air Sampling Results (Hits Only)
OU III Building 96 System

2019 BNL Groundwater Status Report

Location: 095-246 (GAC Influent)

Chemical Name	Sample Date	Value	Detlim	Units	Depth	Qual
Benzene	01/10/19	0.71	0.64	UG/M3	0	
Methyl chloride	01/10/19	1.1	1	UG/M3	0	
Tetrachloroethylene	01/10/19	8.8	1.4	UG/M3	0	
Toluene	01/10/19	2.4	0.75	UG/M3	0	
Trichlorofluoromethane	01/10/19	1.4	1.1	UG/M3	0	
Chloroform	04/02/19	1.8	0.98	UG/M3	0	
Tetrachloroethylene	04/02/19	21	1.4	UG/M3	0	
Trichlorofluoromethane	04/02/19	1.3	1.1	UG/M3	0	
Benzene	10/01/19	1.1	0.64	UG/M3	0	
Chloroform	10/01/19	1.6	0.98	UG/M3	0	
Tetrachloroethylene	10/01/19	120	1.4	UG/M3	0	
Trichlorofluoromethane	10/01/19	3.4	1.1	UG/M3	0	

Location: 095-247 (GAC Midpoint)

Chemical Name	Sample Date	Value	Detlim	Units	Depth	Qual
Chloroform	01/10/19	1.6	0.98	UG/M3	0	
Tetrachloroethylene	01/10/19	130	1.4	UG/M3	0	
Trichlorofluoromethane	01/10/19	1.3	1.1	UG/M3	0	
Chloroform	04/02/19	1.7	0.98	UG/M3	0	
Tetrachloroethylene	04/02/19	190	1.4	UG/M3	0	
Trichlorofluoromethane	04/02/19	1.3	1.1	UG/M3	0	
Tetrachloroethylene	10/01/19	490	6.8	UG/M3	0	
Trichlorofluoromethane	10/01/19	7.5	5.6	UG/M3	0	

Location: 095-253 (GAC Effluent)

Chemical Name	Sample Date	Value	Detlim	Units	Depth	Qual
Tetrachloroethylene	01/10/19	19	1.4	UG/M3	0	
Trichlorofluoromethane	01/10/19	1.1	1.1	UG/M3	0	
Chloroform	04/02/19	1	0.98	UG/M3	0	
Tetrachloroethylene	04/02/19	57	1.4	UG/M3	0	
Trichlorofluoromethane	04/02/19	1.2	1.1	UG/M3	0	
Benzene	07/02/19	0.63	0.64	UG/M3	0	
Chloroform	07/02/19	2	0.98	UG/M3	0	
Dichlorodifluoromethane	07/02/19	3.4	2.5	UG/M3	0	
Tetrachloroethylene	07/02/19	100	1.4	UG/M3	0	
Trichlorofluoromethane	07/02/19	1.2	1.1	UG/M3	0	
Chloroform	10/01/19	6	0.98	UG/M3	0	
Tetrachloroethylene	10/01/19	31	1.4	UG/M3	0	
Trichlorofluoromethane	10/01/19	10	1.1	UG/M3	0	

**Table F-7
Pumpage and Mass Removal
OU III Building 96 System**

2019 BNL Groundwater Status Report

Date	RTW-1		RTW-2		RTW-3		RTW-4	
	Total Pumped* (Gallons)	Mass Recovered (lbs)	Total Pumped* (Gallons)	Mass Recovered (lbs)	Total Pumped* (Gallons)	Mass Recovered (lbs)	Total Pumped* (Gallons)	Mass Recovered (lbs)
01/18/01	0	0.00	0	0.00	0	0.00	1,320	0.00
02/06/01	39,960	0.05	22,680	0.00	25,920	0.21	25,080	0.00
02/07/01	91,020	0.09	50,400	0.00	59,040	0.29	54,120	0.00
02/08/01	142,080	0.26	80,640	0.00	92,160	0.22	85,800	0.01
02/09/01	199,800	0.34	113,400	0.00	129,600	0.26	120,120	0.01
02/10/01	304,140	0.66	172,620	0.01	197,280	0.37	180,840	0.02
02/12/01	357,420	0.32	176,400	0.00	231,840	0.18	213,840	0.01
03/09/01	768,120	2.65	322,560	0.01	498,240	1.33	458,040	0.10
03/28/01	1,582,860	5.20	728,280	0.03	1,026,720	2.71	941,160	0.07
04/04/01	1,762,680	0.61	830,340	0.08	1,143,360	0.20	1,048,080	0.09
05/07/01	1,973,580	0.68	956,340	0.08	1,280,160	0.21	1,176,120	0.08
06/12/01	3,053,580	1.86	1,676,340	0.26	2,000,160	1.07	1,896,120	0.54
07/16/01	3,698,700	0.91	2,482,740	0.39	2,806,560	0.79	2,702,520	1.18
08/13/01	4,343,820	0.98	3,208,500	0.53	3,612,960	0.57	3,468,600	0.88
09/05/01	4,873,740	0.52	3,804,660	0.45	4,275,360	0.50	4,097,880	0.62
10/02/01	5,397,345	0.67	4,405,393	0.51	4,945,772	0.36	4,749,934	0.38
11/01/01	6,033,079	1.05	5,133,686	0.68	5,759,659	0.40	5,547,867	0.24
12/07/01	6,281,676	0.39	5,605,726	0.37	6,283,103	0.20	6,067,911	0.09
01/02/02	6,953,724	1.00	6,337,777	0.23	7,088,353	0.14	6,873,161	0.04
02/01/02	8,138,324	1.36	7,097,468	0.17	7,852,723	0.00	7,630,802	0.03
03/01/02	9,438,485	1.07	7,933,881	0.18	8,682,452	0.08	8,464,356	0.04
04/01/02	10,738,646	0.96	8,770,294	0.08	9,512,181	0.06	9,297,910	0.03
05/01/02	11,994,906	0.70	9,590,008	0.07	10,321,344	0.06	10,114,663	0.02
06/03/02	13,418,012	0.85	10,544,112	0.07	11,253,969	0.06	11,081,608	0.03
07/01/02	14,637,525	0.53	11,361,779	0.05	12,049,136	0.05	11,908,916	0.03
08/01/02	15,838,038	0.58	12,145,419	0.04	12,835,173	0.05	12,713,560	0.03
09/03/02	17,244,306	0.67	13,101,051	0.04	13,752,178	0.06	13,664,127	0.03
10/01/02	18,421,996	0.43	13,907,894	0.03	14,519,888	0.03	14,430,693	0.02
11/01/02	19,824,678	0.54	14,802,436	0.03	15,437,805	0.03	15,287,459	0.03
12/02/02	21,150,755	0.45	15,685,023	0.02	16,209,167	0.02	16,137,219	0.02
01/03/03	22,296,027	0.41	16,448,088	0.02	16,964,154	0.04	16,880,317	0.01
02/04/03	23,723,049	0.52	17,399,860	0.03	17,920,702	0.07	17,825,363	0.01
03/03/03	24,881,283	0.51	18,171,948	0.02	18,696,672	0.06	18,588,383	0.02
04/01/03	25,982,363	0.37	18,895,607	0.01	19,427,732	0.03	19,278,997	0.02
05/01/03	27,252,775	0.53	19,719,678	0.06	20,264,804	0.03	20,056,403	0.02
05/18/03	27,905,079	NA	20,135,774	NA	20,681,555	NA	20,446,633	NA
07/01/03	27,905,079	0.31	20,135,774	0.00	20,681,555	0.002	20,446,633	0.01
07/15/03	28,284,425	NA	20,534,396	NA	21,080,269	NA	20,762,535	NA
09/15/03	28,284,425	2.15	20,534,396	0.01	21,080,269	0.02	20,762,535	0.005
10/01/03	28,853,917	1.60	20,890,592	0.01	21,498,423	0.02	21,091,161	0.004
11/03/03	30,118,477	0.68	21,733,662	0.02	22,425,833	0.03	21,805,409	0.005
12/01/03	31,256,257	1.57	21,949,542	0.00	23,260,139	0.02	22,430,473	0.004

**Table F-7
Pumpage and Mass Removal
OU III Building 96 System**

2019 BNL Groundwater Status Report

Date	RTW-1		RTW-2		RTW-3		RTW-4	
	Total Pumped* (Gallons)	Mass Recovered (lbs)	Total Pumped* (Gallons)	Mass Recovered (lbs)	Total Pumped* (Gallons)	Mass Recovered (lbs)	Total Pumped* (Gallons)	Mass Recovered (lbs)
01/06/04	32,446,597	1.53	21,949,542	0.00	24,132,989	0.03	23,086,025	0.003
02/02/04	33,267,247	1.01	21,949,542	0.00	24,734,997	0.06	23,220,645	0.000
03/01/04	34,384,807	1.30	21,949,542	0.00	25,553,353	0.09	23,220,645	0.000
04/02/04	35,460,667	0.85	21,949,542	0.00	26,342,251	0.36	23,220,645	0.000
05/04/04	36,837,217	0.91	22,161,956	0.02	27,351,809	0.36	23,436,889	0.007
06/02/04	38,082,937	0.72	23,056,442	0.08	28,265,337	0.27	24,348,877	0.024
07/01/04	39,276,293	0.80	23,953,258	0.12	29,088,351	0.15	25,261,235	0.016
7/13/04*	39,740,085	NA	24,151,174	NA	29,419,431	NA	25,625,291	NA
08/03/04	40,583,081	0.83	24,151,174	0.00	29,419,431	0.00	25,625,291	0.000
09/01/04	41,748,693	0.70	24,151,174	0.00	29,419,431	0.00	25,625,291	0.000
10/04/04	43,144,141	0.70	24,151,174	0.00	29,419,431	0.00	25,625,291	0.000
11/03/04	44,528,109	0.60	24,151,174	0.00	29,419,431	0.00	25,625,291	0.000
12/02/04	45,556,469	0.52	24,151,174	0.00	29,419,431	0.00	25,625,291	0.000
01/04/05	47,065,453	0.91	24,151,174	0.00	29,419,431	0.00	25,625,291	0.000
02/02/05	48,275,053	0.55	24,151,174	0.00	29,419,431	0.00	25,625,291	0.000
03/04/05	49,614,253	0.37	24,151,174	0.00	29,419,431	0.00	25,625,291	0.000
04/21/05	51,687,853	0.48	24,151,174	0.00	29,419,431	0.00	25,625,291	0.000
05/19/05	52,897,853	0.24	24,151,174	0.00	29,419,431	0.00	25,625,291	0.000
06/01/05	53,373,053	0.13	24,151,174	0.00	29,419,431	0.00	25,625,291	0.000
07/01/05	53,373,053	0.00	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
08/30/05	53,373,053	0.00	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
09/30/05	53,373,053	0.00	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
10/31/05	53,621,149	0.11	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
11/30/05	54,435,113	0.16	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
12/30/05	55,249,077	0.03	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
01/31/06	55,766,745	0.15	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
02/28/06	55,766,745	0.00	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
03/31/06	55,947,421	0.05	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
04/30/06	55,956,057	0.23	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
05/31/06	58,190,277	0.20	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
06/30/06	58,190,277	0.00	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
07/31/06	58,190,277	0.00	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
08/31/06	58,190,277	0.00	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
09/30/06	58,190,277	0.00	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
10/31/06	58,190,277	0.00	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
11/30/06	58,190,277	0.00	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
12/31/06	58,190,277	0.00	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
01/31/07	58,190,277	0.00	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
02/28/07	58,190,277	0.00	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
03/31/07	58,190,277	0.00	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
04/30/07	58,190,277	0.00	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00

**Table F-7
Pumpage and Mass Removal
OU III Building 96 System**

2019 BNL Groundwater Status Report

Date	RTW-1		RTW-2		RTW-3		RTW-4	
	Total Pumped* (Gallons)	Mass Recovered (lbs)	Total Pumped* (Gallons)	Mass Recovered (lbs)	Total Pumped* (Gallons)	Mass Recovered (lbs)	Total Pumped* (Gallons)	Mass Recovered (lbs)
05/31/07	58,190,277	0.00	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
06/30/07	58,190,277	0.00	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
07/31/07	58,190,277	0.00	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
08/31/07	58,190,277	0.00	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
09/30/07	58,190,277	0.00	24,151,174	0.00	29,419,431	0.00	25,625,291	0.00
10/31/07	58,190,277	0.00	24,419,826	0.01	29,419,431	0.00	25,625,291	0.00
11/30/07	58,190,277	0.00	25,888,822	0.06	29,419,431	0.00	25,625,291	0.00
12/31/07	58,190,277	0.00	26,967,734	0.07	29,419,431	0.00	25,625,291	0.00
01/31/08	58,190,277	0.00	27,948,548	0.03	29,419,431	0.00	25,625,291	0.00
02/28/08	58,190,277	0.00	28,572,246	0.02	29,419,431	0.00	25,642,079	0.00
03/31/08	58,190,277	0.00	29,682,602	0.04	30,480,807	0.22	26,742,201	1.11
04/30/08	58,190,277	0.00	30,187,210	0.01	31,062,687	0.35	27,095,357	0.05
05/31/08	59,195,217	1.42	31,279,392	0.05	32,315,577	0.58	27,771,579	0.14
06/30/08	60,003,465	0.74	31,863,560	0.04	32,989,197	0.61	28,131,035	0.05
07/31/08	61,598,386	1.29	32,013,086	0.00	34,462,977	0.73	28,761,501	0.11
08/31/08	62,356,297	0.52	32,846,646	0.04	35,424,747	0.61	28,761,501	0.00
09/30/08	62,994,481	0.47	33,771,648	0.06	36,492,117	0.70	28,761,501	0.00
10/31/08	64,281,093	0.90	34,865,260	0.03	37,750,335	0.45	29,216,663	0.00
11/30/08	65,599,609	0.66	35,486,892	0.01	38,953,743	0.23	30,204,617	0.00
12/31/08	66,795,541	0.62	36,353,662	0.02	40,058,415	0.18	31,110,945	0.00
01/31/09	67,805,949	0.66	37,113,184	0.01	41,068,903	0.19	32,029,877	0.03
02/28/09	68,903,125	0.68	38,016,552	0.02	42,072,383	0.11	32,946,601	0.01
03/31/09	70,176,037	0.66	39,066,128	0.02	43,233,715	0.08	34,026,172	0.03
04/30/09	71,058,925	0.42	39,914,876	0.01	44,173,991	0.04	34,884,771	0.00
05/31/09	72,379,037	0.70	41,022,336	0.01	45,415,887	0.03	35,939,465	0.00
06/30/09	73,380,029	0.53	41,859,828	0.01	46,408,673	0.02	36,753,597	0.00
07/31/09	74,696,413	0.78	43,011,636	0.01	47,363,555	0.03	37,901,937	0.01
08/31/09	76,098,205	0.82	44,238,176	0.01	48,545,471	0.03	39,128,397	0.00
09/30/09	77,253,341	0.73	45,248,920	0.00	49,590,855	0.01	40,136,693	0.00
10/31/09	78,357,981	0.66	46,297,236	0.01	50,658,495	0.02	41,118,557	0.03
11/30/09	79,590,733	0.78	47,500,172	0.00	51,861,291	0.01	42,306,641	0.00
12/31/09	80,512,829	0.61	48,305,216	0.00	52,666,347	0.01	43,111,557	0.00
01/31/10	81,417,989	0.74	49,047,020	0.00	53,363,759	0.01	43,808,529	0.00
02/28/10	82,405,421	0.59	49,911,184	0.01	53,506,123	0.00	44,549,253	0.00
03/31/10	83,045,517	0.56	50,233,268	0.00	53,589,955	0.00	45,058,681	0.00
04/30/10	83,269,101	0.12	50,233,268	0.00	53,740,191	0.00	46,653,141	0.00
05/31/10	84,914,765	0.62	50,234,192	0.00	54,072,647	0.01	47,316,405	0.00
06/30/10	85,987,149	0.57	51,299,164	0.02	54,229,587	0.01	48,077,501	0.00
07/31/10	87,269,625	1.10	51,299,164	0.00	54,229,587	0.00	48,838,597	0.00
08/31/10	87,269,625	0.00	51,299,164	0.00	54,229,587	0.00	48,838,597	0.00
09/30/10	87,269,625	0.00	51,299,164	0.00	54,398,735	0.00	48,838,597	0.00
10/31/10	87,638,109	0.09	51,646,060	0.01	55,537,327	0.02	48,975,037	0.00

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Pumpage and Mass Removal
OU III Building 96 System**

2019 BNL Groundwater Status Report

Date	RTW-1		RTW-2		RTW-3		RTW-4	
	Total Pumped* (Gallons)	Mass Recovered (lbs)	Total Pumped* (Gallons)	Mass Recovered (lbs)	Total Pumped* (Gallons)	Mass Recovered (lbs)	Total Pumped* (Gallons)	Mass Recovered (lbs)
11/30/10	89,074,525	1.27	52,985,744	0.01	56,565,347	0.01	49,978,593	0.01
12/31/10	90,249,629	0.83	54,060,748	0.01	57,149,287	0.02	51,006,753	0.00
01/31/11	90,917,021	0.46	54,602,976	0.01	58,152,191	0.02	51,590,665	0.00
02/28/11	92,063,129	0.80	55,610,572	0.01	59,388,979	0.02	52,593,513	0.01
03/31/11	93,476,701	0.73	56,853,412	0.01	60,338,347	0.01	53,826,065	0.01
04/30/11	94,561,725	0.56	57,806,852	0.01	61,303,423	0.01	54,779,401	0.00
05/31/11	95,664,701	0.60	58,778,244	0.01	62,168,651	0.01	55,665,453	0.00
06/30/11	96,614,429	0.56	59,643,639	0.01	63,289,153	0.01	56,394,713	0.00
07/31/11	97,048,997	0.23	60,769,676	0.01	64,182,579	0.02	57,328,665	0.00
08/31/11	98,084,613	0.67	61,676,660	0.01	64,974,447	0.03	58,011,349	0.00
09/30/11	99,163,061	0.82	62,468,808	0.02	66,234,337	0.03	58,609,481	0.00
10/31/11	100,647,805	1.20	63,728,448	0.04	67,330,395	0.02	59,528,921	0.00
11/30/11	101,898,173	0.96	64,778,552	0.01	68,516,783	0.03	60,016,017	0.00
12/30/11	102,962,109	0.34	65,520,040	0.01	69,543,007	0.02	61,371,953	0.00
01/31/12	103,570,227	0.21	66,295,796	0.02	70,507,639	0.03	62,316,145	0.00
02/28/12	104,901,373	0.51	67,244,756	0.03	71,575,283	0.03	63,645,481	0.00
03/31/12	106,004,285	0.51	68,210,312	0.03	72,888,403	0.00	64,739,109	0.00
04/30/12	107,306,941	0.59	69,342,556	0.03	73,748,275	0.02	65,951,313	0.00
05/31/12	108,180,093	0.49	70,031,860	0.00	74,946,995	0.02	66,748,825	0.00
06/30/12	108,528,605	0.27	71,178,836	0.02	75,961,715	0.02	67,802,341	0.00
07/31/12	109,543,325	1.08	72,192,436	0.01	77,038,803	0.02	68,690,221	0.00
08/31/12	110,620,381	1.41	73,269,492	0.01	78,008,467	0.01	69,632,589	0.00
09/30/12	111,590,077	0.95	74,233,300	0.02	78,731,827	0.02	70,478,833	0.00
10/31/12	112,405,597	0.65	74,742,292	0.01	79,738,323	0.02	70,478,889	0.00
11/30/12	113,411,773	0.85	75,446,644	0.02	81,060,307	0.02	70,479,029	0.00
12/31/12	114,313,405	1.35	76,810,292	0.08	82,399,955	0.02	70,479,113	0.00
01/31/13	114,794,781	0.18	77,501,492	0.00	83,117,463	0.02	70,479,113	0.00
02/28/13	114,882,205	0.08	77,718,676	0.00	84,489,875	0.02	70,479,113	0.00
03/31/13	115,973,437	0.24	78,834,836	0.17	85,808,883	0.03	70,479,113	0.00
04/30/13	117,052,821	0.44	79,748,404	0.08	87,230,003	0.05	70,479,113	0.00
05/31/13	118,223,661	0.33	80,341,972	0.04	88,631,347	0.10	70,479,113	0.00
06/30/13	119,657,389	1.12	81,603,860	0.04	89,971,763	0.32	70,479,113	0.00
07/31/13	120,997,773	1.25	82,944,276	0.07	91,406,291	0.26	70,479,113	0.00
08/31/13	122,440,557	1.22	84,499,476	0.07	92,704,147	0.17	70,479,113	0.00
09/30/13	123,595,981	0.95	85,857,332	0.07	94,126,131	0.19	70,479,113	0.00
10/31/13	125,017,965	0.85	87,219,316	0.07	95,609,779	0.21	70,479,113	0.00
11/30/13	126,330,797	0.75	88,661,876	0.05	96,795,539	0.18	70,479,113	0.00
12/31/13	127,090,829	0.27	89,342,420	0.02	96,895,539	0.10	70,479,113	0.00
01/31/14	127,870,797	0.50	89,342,612	0.00	98,184,723	0.08	70,725,709	0.00
02/28/14	128,415,533	0.39	90,303,356	0.01	99,380,723	0.06	70,725,793	0.00
03/31/14	129,580,653	0.49	91,362,500	0.00	100,792,819	0.07	70,725,793	0.00
04/30/14	130,475,725	0.32	92,376,780	0.00	102,131,827	0.08	70,726,521	0.00

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Date	RTW-1		RTW-2		RTW-3		RTW-4	
	Total Pumped* (Gallons)	Mass Recovered (lbs)	Total Pumped* (Gallons)	Mass Recovered (lbs)	Total Pumped* (Gallons)	Mass Recovered (lbs)	Total Pumped* (Gallons)	Mass Recovered (lbs)
05/31/14	130,932,941	0.36	93,395,924	0.00	103,504,019	0.05	70,726,717	0.00
06/30/14	131,913,357	0.91	94,503,428	0.00	104,980,627	0.04	70,727,053	0.00
07/31/14	133,025,325	0.65	95,450,404	0.00	106,243,187	0.02	70,727,053	0.00
08/31/14	134,083,213	0.62	96,563,876	0.00	107,751,603	0.02	70,727,249	0.00
09/30/14	135,308,589	0.70	97,590,212	0.00	109,095,955	0.02	70,727,445	0.00
10/31/14	136,232,237	0.53	98,625,844	0.00	110,476,659	0.01	70,727,725	0.00
11/30/14	137,631,117	0.41	99,735,076	0.00	111,955,507	0.01	70,727,809	0.00
12/31/14	138,436,557	0.23	100,762,732	0.00	113,325,683	0.00	70,728,005	0.00
01/31/15	139,342,221	0.22	101,656,324	0.00	114,517,139	0.00	70,728,201	0.00
02/28/15	140,318,565	0.31	102,554,508	0.00	115,632,371	0.01	70,728,313	0.00
03/31/15	140,574,253	0.08	103,374,428	0.00	116,725,587	0.00	70,728,705	0.00
04/30/15	140,689,069	0.09	104,167,500	0.00	117,782,803	0.01	70,728,817	0.00
05/31/15	141,216,365	0.32	105,028,804	0.00	118,524,467	0.01	70,728,873	0.00
06/30/15	142,150,925	0.67	105,849,612	0.00	119,718,259	0.02	70,728,985	0.00
07/31/15	142,694,861	0.78	106,670,954	0.00	121,036,531	0.01	70,729,377	0.00
08/31/15	143,608,397	0.88	107,595,484	0.00	122,556,083	0.02	70,729,573	0.00
09/30/15	144,518,029	0.19	108,287,572	0.00	123,670,867	0.01	70,729,825	0.00
10/31/15	145,671,885	0.24	109,216,044	0.00	124,977,715	0.01	70,730,137	0.00
11/30/15	146,367,629	0.33	109,870,612	0.00	126,132,659	0.01	70,730,189	0.00
12/31/15	146,958,797	0.27	110,419,852	0.00	127,512,819	0.01	70,730,357	0.00
01/31/16	148,087,757	0.29	110,419,852	0.00	127,512,819	0.00	70,730,357	0.00
02/29/16	149,153,261	0.26	110,419,852	0.00	127,512,851	0.00	70,730,357	0.00
03/31/16	150,581,901	0.28	110,419,852	0.00	127,513,011	0.00	70,730,357	0.00
04/30/16	151,831,501	0.26	110,419,852	0.00	127,513,043	0.00	70,730,357	0.00
05/31/16	153,388,461	0.34	110,419,852	0.00	127,513,331	0.00	70,730,357	0.00
06/30/16	154,686,381	0.27	110,419,852	0.00	127,513,491	0.00	70,730,357	0.00
07/31/16	156,121,421	0.04	110,419,852	0.00	127,513,523	0.00	70,730,357	0.00
08/31/16	157,087,277	0.06	110,419,852	0.00	127,513,587	0.00	70,730,357	0.00
09/30/16	158,151,421	0.06	110,419,852	0.00	127,513,651	0.00	70,730,357	0.00
10/31/16	158,615,677	0.02	110,419,852	0.00	127,513,683	0.00	70,730,357	0.00
11/30/16	158,615,677	0.00	110,419,852	0.00	127,513,683	0.00	70,730,357	0.00
12/31/16	159,731,677	0.17	110,419,948	0.00	127,513,683	0.00	70,730,501	0.00
01/31/17	160,613,405	0.23	110,419,948	0.00	127,513,683	0.00	70,730,501	0.00
02/28/17	161,391,005	0.04	110,419,948	0.00	127,513,683	0.00	70,730,501	0.00
03/31/17	161,784,541	0.01	110,419,948	0.00	127,513,683	0.00	70,730,501	0.00
04/30/17	163,203,037	0.06	110,419,948	0.00	127,513,683	0.00	70,730,501	0.00
05/31/17	164,586,013	0.05	110,419,948	0.00	127,513,683	0.00	70,730,501	0.00
06/30/17	165,913,501	0.05	110,419,948	0.00	127,513,683	0.00	70,730,501	0.00
07/31/17	167,351,549	0.08	110,419,948	0.00	127,513,683	0.00	70,730,501	0.00
08/31/17	168,820,957	0.07	110,419,948	0.00	127,513,683	0.00	70,730,501	0.00
09/30/17	170,252,765	0.12	110,419,948	0.00	127,513,683	0.00	70,730,501	0.00

Table F- 8
System Influent VOC Data
Building 452 Freon Extraction System

2019 BNL Groundwater Status Report

Site ID : 095-316 (Influent)

Chemical Name	Sample Date	Value	Detlim	Units	Depth	Qual
524.2 TVOC	01/10/19	2.75	0	UG/L	0	
Chloroform	01/10/19	1.16	0.5	UG/L	0	
Tetrachloroethylene	01/10/19	0.21	0.5	UG/L	0	J
Trichlorofluoromethane	01/10/19	1.38	0.5	UG/L	0	
524.2 TVOC	04/09/19	4.45	0	UG/L	0	
Chloroform	04/09/19	1.15	0.5	UG/L	0	
Tetrachloroethylene	04/09/19	0.25	0.5	UG/L	0	J
Trichlorofluoromethane	04/09/19	3.05	0.5	UG/L	0	
524.2 TVOC	07/03/19	1.25	0	UG/L	0	
Chloroform	07/03/19	1.25	0.5	UG/L	0	
524.2 TVOC	10/11/19	2.33	0	UG/L	0	
Chloroform	10/11/19	0.54	0.5	UG/L	0	
Tetrachloroethylene	10/11/19	0.26	0.5	UG/L	0	J
Trichlorofluoromethane	10/11/19	1.53	0.5	UG/L	0	

J - Estimated value.

B = Compound was found in both the sample and associated laboratory blank.

Table F-9
System Effluent VOC Data
Building 452 Freon Extraction System

2019 BNL Groundwater Status Report

Freon system in stand-by mode all of 2019. No effluent samples taken.

Table F-10
Cumulative Mass Removal
Building 452 Freon Extraction System

2019 BNL Groundwater Status Report

DATE	FLOW (GPM)	TVOC's (PPB)	LBS/DAY	CUM. LBS
03/15/12	--	--	--	0.00
03/16/12	75	482	0.01	0.11
03/26/12	74	266	0.24	0.21
03/28/12	74	267	0.24	0.68
03/29/12	74	266	0.24	0.92
03/30/12	74	468	0.42	1.16
04/04/12	53	780	0.50	3.24
04/10/12	53	1300	0.83	6.22
04/17/12	53	1100	0.70	12.01
04/24/12	53	732	0.47	16.91
05/02/12	75	623	0.56	20.64
05/07/12	75	499	0.45	23.44
05/15/12	75	570	0.51	27.04
05/21/12	75	447	0.40	30.12
05/30/12	75	480	0.43	33.75
06/07/12	69	402	0.33	37.21
06/11/12	69	464	0.38	38.54
06/19/12	69	413	0.34	41.62
06/27/12	69	390	0.32	44.36
07/05/12	66	317	0.25	46.94
07/11/12	66	312	0.25	48.45
07/17/12	66	246	0.19	49.93
07/24/12	66	293	0.23	51.30
08/01/12	75	278	0.25	53.15
08/07/12	75	268	0.24	54.66
08/13/12	75	234	0.21	56.10
08/20/12	75	218	0.20	57.58
08/29/12	75	232	0.21	59.35
09/05/12	76	164	0.15	60.81
10/02/12	64	165	0.13	64.85
11/06/12	75	62	0.06	69.29
12/04/12	65	112	0.09	70.85
01/02/13	76	82	0.07	73.19
02/04/13	39	25	0.01	75.65
03/05/13	73	96	0.08	75.98
04/08/13	74	58	0.05	78.85
05/02/13	9	74	0.01	80.09
06/06/13	26	97	0.03	80.37
07/02/13	73	67.1	0.06	81.15
08/05/13	77	45.5	0.04	83.15
09/04/13	70	41.4	0.03	84.42
10/02/13	80	38.61	0.04	85.39
11/06/13	76	33.71	0.03	86.69
12/04/13	60	31.32	0.02	87.55
01/14/14	76	24.02	0.02	88.48
02/04/14	73	21.34	0.02	88.94
03/03/14	75	18.9	0.02	89.44

Table F-10
Cumulative Mass Removal
Building 452 Freon Extraction System

2019 BNL Groundwater Status Report

DATE	FLOW (GPM)	TVOC's (PPB)	LBS/DAY	CUM. LBS
04/03/14	73	15.03	0.01	89.97
05/01/14	75	15.34	0.01	90.34
06/02/14	75	15.61	0.01	90.78
07/07/14	70	13.4	0.01	91.27
08/04/14	75	16.15	0.01	91.59
09/03/14	67	15.07	0.01	92.02
10/02/14	76	15.90	0.01	92.38
11/04/14	76	15.24	0.01	92.85
12/03/14	75	15.40	0.01	93.26
01/07/15	70	13.8	0.012	93.74
03/23/15	34	21.5	0.009	94.61
05/04/15	79	34.96	0.03	94.98
07/08/15	39	28.32	0.01	97.14
09/02/15	66	29.02	0.02	97.88
11/04/15	77	41.97	0.04	99.33
01/08/16	76	21.76	0.02	101.85
03/03/16	27	34.82	0.01	102.95
06/02/16	0	2.7	0	103.97
10/27/16	0	91.7	0	103.97
11/21/16	28	83.8	0.028	103.97
12/06/16	29	41.5	0.014	104.40
01/10/17	54	27.28	0.014	104.90
02/06/17	55	16.16	0.014	105.28
03/02/17	45	8.04	0.014	105.62
03/24/17	45	8.04	0.004	105.92
04/30/17	0	13.9	0	106.15
05/31/17	0		0	106.15
06/30/17	0		0	106.15
07/31/17	0	1.56	0	106.15
08/31/17	0		0	106.15
09/30/17	0		0	106.15
10/06/17	0	0	0	106.15

*System placend in stand-by mode March 2017

Table F-11
Extraction well VOC Data
OUIII Middle Road system

2019 BNL Groundwater Status Report

Site ID : 106-66 (RW-6)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
524.2 TVOC	01/22/19	0.85	0	UG/L	
Chloroform	01/22/19	0.23	0.5	UG/L	J
Tetrachloroethylene	01/22/19	0.62	0.5	UG/L	
524.2 TVOC	04/11/19	1.4	0	UG/L	
Dichlorodifluoromethane	04/11/19	0.62	0.5	UG/L	
Tetrachloroethylene	04/11/19	0.78	0.5	UG/L	
1,1,1-Trichloroethane	07/17/19	0.19	0.5	UG/L	J
524.2 TVOC	07/17/19	1.83	0	UG/L	
Chloroform	07/17/19	0.23	0.5	UG/L	J
Tetrachloroethylene	07/17/19	1.41	0.5	UG/L	
524.2 TVOC	10/16/19	1.3	0	UG/L	
Tetrachloroethylene	10/16/19	1.3	0.5	UG/L	

Site ID : 113-23 (RW-1)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	01/22/19	0.28	0.5	UG/L	J
1,1-Dichloroethylene	01/22/19	0.22	0.5	UG/L	J
524.2 TVOC	01/22/19	14.64	0	UG/L	
Carbon tetrachloride	01/22/19	0.98	0.5	UG/L	
Chloroform	01/22/19	0.47	0.5	UG/L	J
Tetrachloroethylene	01/22/19	12.1	0.5	UG/L	
Trichloroethylene	01/22/19	0.59	0.5	UG/L	
524.2 TVOC	04/11/19	13.43	0	UG/L	
Carbon tetrachloride	04/11/19	0.86	0.5	UG/L	
Tetrachloroethylene	04/11/19	12	0.5	UG/L	
Trichloroethylene	04/11/19	0.57	0.5	UG/L	

Site ID : 113-24 (RW-2)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	01/22/19	0.21	0.5	UG/L	J
524.2 TVOC	01/22/19	14.54	0	UG/L	
Carbon tetrachloride	01/22/19	0.95	0.5	UG/L	
Chloroform	01/22/19	0.45	0.5	UG/L	J
Tetrachloroethylene	01/22/19	12.4	0.5	UG/L	
Trichloroethylene	01/22/19	0.53	0.5	UG/L	
524.2 TVOC	04/11/19	13.41	0	UG/L	
Carbon tetrachloride	04/11/19	0.84	0.5	UG/L	
Tetrachloroethylene	04/11/19	12	0.5	UG/L	
Trichloroethylene	04/11/19	0.57	0.5	UG/L	
524.2 TVOC	07/17/19	8.71	0	UG/L	
Carbon tetrachloride	07/17/19	0.66	0.5	UG/L	
Chloroform	07/17/19	0.5	0.5	UG/L	
Tetrachloroethylene	07/17/19	7.1	0.5	UG/L	
Trichloroethylene	07/17/19	0.45	0.5	UG/L	J
524.2 TVOC	10/16/19	7	0	UG/L	
Carbon tetrachloride	10/16/19	0.59	0.5	UG/L	
Chloroform	10/16/19	0.42	0.5	UG/L	J
Tetrachloroethylene	10/16/19	5.6	0.5	UG/L	
Trichloroethylene	10/16/19	0.39	0.5	UG/L	J

Table F-11
Extraction well VOC Data
OUIII Middle Road system

2019 BNL Groundwater Status Report

Site ID : 113-25 (RW-3)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	01/22/19	2.05	0.5	UG/L	
1,1-Dichloroethane	01/22/19	0.49	0.5	UG/L	J
1,1-Dichloroethylene	01/22/19	0.72	0.5	UG/L	
524.2 TVOC	01/22/19	4.65	0	UG/L	
Carbon tetrachloride	01/22/19	0.26	0.5	UG/L	J
Tetrachloroethylene	01/22/19	0.28	0.5	UG/L	J
Trichloroethylene	01/22/19	0.85	0.5	UG/L	
1,1,1-Trichloroethane	04/11/19	2	0.5	UG/L	
1,1-Dichloroethylene	04/11/19	0.72	0.5	UG/L	
524.2 TVOC	04/11/19	3.72	0	UG/L	
Trichloroethylene	04/11/19	1	0.5	UG/L	
1,1,1-Trichloroethane	07/17/19	1.98	0.5	UG/L	
1,1-Dichloroethane	07/17/19	0.41	0.5		J
1,1-Dichloroethylene	07/17/19	0.78	0.5	UG/L	
524.2 TVOC	07/17/19	4.32	0	UG/L	
Tetrachloroethylene	07/17/19	0.22	0.5	UG/L	J
Trichloroethylene	07/17/19	0.93	0.5	UG/L	
1,1,1-Trichloroethane	10/16/19	1.7	0.5	UG/L	
1,1-Dichloroethane	10/16/19	0.38	0.5	UG/L	J
1,1-Dichloroethylene	10/16/19	0.52	0.5	UG/L	
524.2 TVOC	10/16/19	3.39	0	UG/L	
Trichloroethylene	10/16/19	0.79	0.5	UG/L	

Site ID : 113-26 (RW-4)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1-Dichloroethane	01/22/19	0.17	0.5	UG/L	J
524.2 TVOC	01/22/19	4.24	0	UG/L	
Carbon tetrachloride	01/22/19	0.98	0.5	UG/L	
Chloroform	01/22/19	0.88	0.5	UG/L	
Tetrachloroethylene	01/22/19	0.97	0.5	UG/L	
Trichloroethylene	01/22/19	1.02	0.5	UG/L	
524.2 TVOC	04/11/19	3.4	0	UG/L	
Carbon tetrachloride	04/11/19	1	0.5	UG/L	
Chloroform	04/11/19	1	0.5	UG/L	
Trichloroethylene	04/11/19	1.4	0.5	UG/L	
524.2 TVOC	07/17/19	3.45	0	UG/L	
Carbon tetrachloride	07/17/19	0.91	0.5	UG/L	
Chloroform	07/17/19	0.92	0.5	UG/L	
Tetrachloroethylene	07/17/19	0.2	0.5	UG/L	J
Trichloroethylene	07/17/19	1.42	0.5	UG/L	
524.2 TVOC	10/16/19	2.94	0	UG/L	
Carbon tetrachloride	10/16/19	0.87	0.5	UG/L	
Chloroform	10/16/19	0.87	0.5	UG/L	
Trichloroethylene	10/16/19	1.2	0.5	UG/L	

Table F-11
Extraction well VOC Data
OUIII Middle Road system

2019 BNL Groundwater Status Report

Site ID : 113-27 (RW-5)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
524.2 TVOC	01/22/19	0.32	0	UG/L	
Chloroform	01/22/19	0.32	0.5	UG/L	J
524.2 TVOC	04/11/19	0	0	UG/L	
524.2 TVOC	07/17/19	0.64	0	UG/L	
Chloroform	07/17/19	0.64	0.5	UG/L	
524.2 TVOC	10/16/19	0.5	0	UG/L	
Chloroform	10/16/19	0.5	0.5	UG/L	

Site ID : 113-33 (RW-7)

1,1,1-Trichloroethane	01/22/19	1.5	0.5	UG/L	
1,1,2,2-Tetrachloroethane	01/22/19	0.32	0.5	UG/L	J
1,1-Dichloroethane	01/22/19	0.24	0.5	UG/L	J
1,1-Dichloroethylene	01/22/19	0.7	0.5	UG/L	
524.2 TVOC	01/22/19	39.2	0	UG/L	
Carbon tetrachloride	01/22/19	2.7	0.5	UG/L	
Chloroform	01/22/19	0.51	0.5	UG/L	
Methyl tert-butyl ether	01/22/19	0.25	0.5	UG/L	J
Tetrachloroethylene	01/22/19	32.2	0.5	UG/L	
Trichloroethylene	01/22/19	0.78	0.5	UG/L	
1,1,1-Trichloroethane	04/11/19	1.4	0.5	UG/L	
1,1-Dichloroethylene	04/11/19	0.82	0.5	UG/L	
524.2 TVOC	04/11/19	44.61	0	UG/L	
Carbon tetrachloride	04/11/19	2.7	0.5	UG/L	
Chloroform	04/11/19	0.59	0.5	UG/L	
Tetrachloroethylene	04/11/19	38	0.5	UG/L	
Trichloroethylene	04/11/19	1.1	0.5	UG/L	
1,1,1-Trichloroethane	07/17/19	1.26	0.5	UG/L	
1,1,2,2-Tetrachloroethane	07/17/19	0.31	0.5	UG/L	J
1,1-Dichloroethane	07/17/19	0.17	0.5	UG/L	J
1,1-Dichloroethylene	07/17/19	0.8	0.5	UG/L	
524.2 TVOC	07/17/19	43.25	0	UG/L	
Carbon tetrachloride	07/17/19	2.64	0.5	UG/L	
Chloroform	07/17/19	0.62	0.5	UG/L	
Methyl tert-butyl ether	07/17/19	0.21	0.5	UG/L	J
Tetrachloroethylene	07/17/19	36.2	0.5	UG/L	
Trichloroethylene	07/17/19	1.04	0.5	UG/L	
1,1,1-Trichloroethane	10/16/19	1.1	0.5	UG/L	
1,1,2,2-Tetrachloroethane	10/16/19	0.3	0.5	UG/L	J
1,1-Dichloroethane	10/16/19	0.16	0.5	UG/L	J
1,1-Dichloroethylene	10/16/19	0.55	0.5	UG/L	
524.2 TVOC	10/16/19	42.03	0	UG/L	
Carbon tetrachloride	10/16/19	2.4	0.5	UG/L	
Chloroform	10/16/19	0.57	0.5	UG/L	
Tetrachloroethylene	10/16/19	36	0.5	UG/L	
Trichloroethylene	10/16/19	0.95	0.5	UG/L	

Table F-12
Air Stripper Influent VOC Data
OU III Middle Road System

2019 BNL Groundwater Status Report

Site ID : 113-34 (Influent)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	01/22/19	0.57	0.5	UG/L	
524.2 TVOC	01/22/19	11.98	0	UG/L	
Carbon tetrachloride	01/22/19	1.07	0.5	UG/L	
Chloroform	01/22/19	0.46	0.5	UG/L	J
Tetrachloroethylene	01/22/19	9.34	0.5	UG/L	
Trichloroethylene	01/22/19	0.54	0.5	UG/L	
1,1,1-Trichloroethane	02/06/19	1.19	0.5	UG/L	
1,1-Dichloroethane	02/06/19	0.25	0.5	UG/L	J
1,1-Dichloroethylene	02/06/19	0.61	0.5	UG/L	
524.2 TVOC	02/06/19	23.71	0	UG/L	
Carbon tetrachloride	02/06/19	1.48	0.5	UG/L	
Chloroform	02/06/19	0.46	0.5	UG/L	J
Tetrachloroethylene	02/06/19	19	0.5	UG/L	
Trichloroethylene	02/06/19	0.72	0.5	UG/L	
1,1,1-Trichloroethane	03/13/19	0.98	0.5	UG/L	
1,1-Dichloroethylene	03/13/19	0.33	0.5	UG/L	J
524.2 TVOC	03/13/19	26.63	0	UG/L	
Carbon tetrachloride	03/13/19	1.2	0.5	UG/L	
Chloroform	03/13/19	0.38	0.5	UG/L	J
Tetrachloroethylene	03/13/19	23	0.5	UG/L	
Trichloroethylene	03/13/19	0.74	0.5	UG/L	
1,1,1-Trichloroethane	04/11/19	1	0.5	UG/L	
1,1-Dichloroethylene	04/11/19	0.54	0.5	UG/L	
524.2 TVOC	04/11/19	23.74	0	UG/L	
Carbon tetrachloride	04/11/19	1.3	0.5	UG/L	
Tetrachloroethylene	04/11/19	20	0.5	UG/L	
Trichloroethylene	04/11/19	0.9	0.5	UG/L	
1,1,1-Trichloroethane	05/03/19	0.92	0.5	UG/L	
524.2 TVOC	05/03/19	20.91	0	UG/L	
Carbon tetrachloride	05/03/19	1.2	0.5	UG/L	
Tetrachloroethylene	05/03/19	18	0.5	UG/L	
Trichloroethylene	05/03/19	0.79	0.5	UG/L	
1,1,1-Trichloroethane	06/11/19	1.1	0.5	UG/L	
1,1-Dichloroethylene	06/11/19	0.52	0.5	UG/L	
524.2 TVOC	06/11/19	20.66	0	UG/L	
Carbon tetrachloride	06/11/19	1.3	0.5	UG/L	
Tetrachloroethylene	06/11/19	17	0.5	UG/L	
Trichloroethylene	06/11/19	0.74	0.5	UG/L	
1,1,1-Trichloroethane	07/17/19	0.65	0.5	UG/L	
1,1-Dichloroethylene	07/17/19	0.37	0.5	UG/L	J
524.2 TVOC	07/17/19	14.04	0	UG/L	
Carbon tetrachloride	07/17/19	0.91	0.5	UG/L	
Chloroform	07/17/19	0.59	0.5	UG/L	
Tetrachloroethylene	07/17/19	10.7	0.5	UG/L	
Trichloroethylene	07/17/19	0.82	0.5	UG/L	
1,1,1-Trichloroethane	08/20/19	1	0.5	UG/L	
1,1-Dichloroethylene	08/20/19	0.37	0.5	UG/L	J
524.2 TVOC	08/20/19	20.46	0	UG/L	
Carbon tetrachloride	08/20/19	1.9	0.5	UG/L	
Chloroform	08/20/19	0.41	0.5	UG/L	J
Tetrachloroethylene	08/20/19	16	0.5	UG/L	
Trichloroethylene	08/20/19	0.78	0.5	UG/L	
1,1,1-Trichloroethane	09/04/19	1.1	0.5	UG/L	
1,1-Dichloroethylene	09/04/19	0.44	0.5	UG/L	J
524.2 TVOC	09/04/19	21.73	0	UG/L	
Carbon tetrachloride	09/04/19	2	0.5	UG/L	
Chloroform	09/04/19	0.41	0.5	UG/L	J
Tetrachloroethylene	09/04/19	17	0.5	UG/L	
Trichloroethylene	09/04/19	0.78	0.5	UG/L	

Table F-12
Air Stripper Influent VOC Data
OU III Middle Road System

2019 BNL Groundwater Status Report

Site ID : 113-34 (Influent)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	10/16/19	0.56	0.5	UG/L	
1,1-Dichloroethylene	10/16/19	0.24	0.5	UG/L	J
524.2 TVOC	10/16/19	17.61	0	UG/L	
Carbon tetrachloride	10/16/19	1.3	0.5	UG/L	
Chloroform	10/16/19	0.68	0.5	UG/L	
Tetrachloroethylene	10/16/19	14	0.5	UG/L	
Trichloroethylene	10/16/19	0.83	0.5	UG/L	
1,1,1-Trichloroethane	11/06/19	0.64	0.5	UG/L	
1,1-Dichloroethylene	11/06/19	0.4	0.5	UG/L	J
524.2 TVOC	11/06/19	24.71	0	UG/L	
Carbon tetrachloride	11/06/19	1.5	0.5	UG/L	
Chloroform	11/06/19	0.5	0.5	UG/L	
Tetrachloroethylene	11/06/19	21	0.5	UG/L	
Trichloroethylene	11/06/19	0.67	0.5	UG/L	
1,1,1-Trichloroethane	12/04/19	0.59	0.5	UG/L	
1,1-Dichloroethylene	12/04/19	0.31	0.5	UG/L	J
524.2 TVOC	12/04/19	22.72	0	UG/L	
Carbon tetrachloride	12/04/19	1.6	0.5	UG/L	
Chloroform	12/04/19	0.53	0.5	UG/L	
Tetrachloroethylene	12/04/19	19	0.5	UG/L	
Trichloroethylene	12/04/19	0.69	0.5	UG/L	

Table F-13
Air Stripper Effluent VOC Data
OU III Middle Road System

2019 BNL Groundwater Status Report

Site ID : 095-270 (Effluent)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
524.2 TVOC	05/01/19	0	0	UG/L	
524.2 TVOC	05/14/19	0	0	UG/L	
524.2 TVOC	07/17/19	0	0	UG/L	
524.2 TVOC	07/18/19	0	0	UG/L	
524.2 TVOC	08/20/19	0.21	0	UG/L	
Methyl chloride	08/20/19	0.21	0.5	UG/L	J
524.2 TVOC	09/04/19	0	0	UG/L	

Table F-14
Cumulative Mass Removal
OU III Middle Road System

2019 BNL Groundwater Status Report

Date Sampled	Total VOC's (ug/L)	Flow Rates (gpm)	Cumulative VOC's (lbs)
01/22/19	11.98	415	1264.29
02/06/19	23.17	348	1265.77
03/13/19	26.63	299	1269.12
04/11/19	23.74	360	1272.09
05/03/19	20.91	351	1274.03
06/11/19	20.66	381	1277.71
07/17/19	14.04	288	1279.46
08/20/19	20.46	314	1282.08
09/04/19	21.73	220	1282.94
10/16/19	17.61	299	1285.59
11/06/19	24.71	222	1286.98
12/04/19	22.72	298	1289.25

ug/L Micrograms per liter
gpm Gallons per minute
lbs Pounds

Table F-15
Extraction Well VOC Data
OU III South Boundary System

2019 BNL Groundwater Status Report

Site ID : 121-15 (EW-5)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
524.2 TVOC	01/22/19	0.61	0	UG/L	
Chloroform	01/22/19	0.3	0.5	UG/L	J
Tetrachloroethylene	01/22/19	0.31	0.5	UG/L	J
524.2 TVOC	04/11/19	0	0	UG/L	
524.2 TVOC	07/17/19	1.31	0	UG/L	
Chloroform	07/17/19	0.29	0.5	UG/L	J
Tetrachloroethylene	07/17/19	0.41	0.5	UG/L	J
Toluene	07/17/19	0.61	0.5	UG/L	
524.2 TVOC	10/16/19	1.04	0	UG/L	
Benzene	10/16/19	0.15	0.5	UG/L	J
Chloroform	10/16/19	0.24	0.5	UG/L	J
Tetrachloroethylene	10/16/19	0.23	0.5	UG/L	J
Toluene	10/16/19	0.42	0.5	UG/L	J

Site ID : 121-16 (EW-4)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
524.2 TVOC	01/22/19	2.42	0	UG/L	
Chloroform	01/22/19	0.39	0.5	UG/L	J
Methyl tert-butyl ether	01/22/19	0.23	0.5	UG/L	J
Tetrachloroethylene	01/22/19	1.8	0.5	UG/L	
524.2 TVOC	04/11/19	1.8	0	UG/L	
Tetrachloroethylene	04/11/19	1.8	0.5	UG/L	
1,1,1-Trichloroethane	07/17/19	0.2	0.5	UG/L	J
524.2 TVOC	07/17/19	8.43	0	UG/L	
Carbon tetrachloride	07/17/19	0.63	0.5	UG/L	
Chloroform	07/17/19	0.43	0.5	UG/L	J
Tetrachloroethylene	07/17/19	6.88	0.5	UG/L	
Trichloroethylene	07/17/19	0.29	0.5	UG/L	J
524.2 TVOC	10/16/19	1.22	0	UG/L	
Chloroform	10/16/19	0.37	0.5	UG/L	J
Tetrachloroethylene	10/16/19	0.85	0.5	UG/L	

Site ID : 121-17 (EW-3)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
524.2 TVOC	01/22/19	0.54	0	UG/L	
Chloroform	01/22/19	0.25	0.5	UG/L	J
Tetrachloroethylene	01/22/19	0.29	0.5	UG/L	J
524.2 TVOC	04/11/19	1.3	0	UG/L	
Tetrachloroethylene	04/11/19	1.3	0.5	UG/L	
1,1,1-Trichloroethane	07/17/19	0.21	0.5	UG/L	J
524.2 TVOC	07/17/19	7.48	0	UG/L	
Carbon tetrachloride	07/17/19	0.49	0.5	UG/L	J
Chloroform	07/17/19	0.42	0.5	UG/L	J
Tetrachloroethylene	07/17/19	6.11	0.5	UG/L	
Trichloroethylene	07/17/19	0.25	0.5	UG/L	J
1,1,1-Trichloroethane	10/16/19	0.28	0.5	UG/L	J
524.2 TVOC	10/16/19	8.09	0	UG/L	
Carbon tetrachloride	10/16/19	0.52	0.5	UG/L	
Chloroform	10/16/19	0.42	0.5	UG/L	J
Tetrachloroethylene	10/16/19	6.6	0.5	UG/L	
Trichloroethylene	10/16/19	0.27	0.5	UG/L	J

**Table F-15
Extraction Well VOC Data
OU III South Boundary System**

2019 BNL Groundwater Status Report

Site ID : 121-46 (EW-17)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	01/22/19	0.57	0.5	UG/L	
1,1-Dichloroethane	01/22/19	0.22	0.5	UG/L	J
1,1-Dichloroethylene	01/22/19	0.32	0.5	UG/L	J
524.2 TVOC	01/22/19	15.27	0	UG/L	
Carbon tetrachloride	01/22/19	2.28	0.5	UG/L	
Chloroform	01/22/19	0.68	0.5	UG/L	
Tetrachloroethylene	01/22/19	10.8	0.5	UG/L	
Trichloroethylene	01/22/19	0.4	0.5	UG/L	J
1,1,1-Trichloroethane	04/11/19	0.5	0.5	UG/L	
524.2 TVOC	04/11/19	14.48	0	UG/L	
Carbon tetrachloride	04/11/19	1.8	0.5	UG/L	
Chloroform	04/11/19	0.68	0.5	UG/L	
Tetrachloroethylene	04/11/19	11	0.5	UG/L	
Trichloroethylene	04/11/19	0.5	0.5	UG/L	
524.2 TVOC	07/17/19	3.54	0	UG/L	
Tetrachloroethylene	07/17/19	2.97	0.5	UG/L	
Trichloroethylene	07/17/19	0.31	0.5	UG/L	J
1,1,1-Trichloroethane	10/16/19	0.51	0.5	UG/L	
1,1-Dichloroethylene	10/16/19	0.43	0.5	UG/L	J
524.2 TVOC	10/16/19	17.49	0	UG/L	
Carbon tetrachloride	10/16/19	2.4	0.5	UG/L	
Chloroform	10/16/19	0.64	0.5	UG/L	
Tetrachloroethylene	10/16/19	13	0.5	UG/L	
Trichloroethylene	10/16/19	0.51	0.5	UG/L	

Site ID : 122-12 (EW-8)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
524.2 TVOC	01/22/19	4.5	0	UG/L	
Chloroform	01/22/19	0.24	0.5	UG/L	J
cis-1,2-Dichloroethylene	01/22/19	0.46	0.5	UG/L	J
Tetrachloroethylene	01/22/19	3.27	0.5	UG/L	
Trichloroethylene	01/22/19	0.53	0.5	UG/L	
524.2 TVOC	04/11/19	3.3	0	UG/L	
Tetrachloroethylene	04/11/19	3.3	0.5	UG/L	
524.2 TVOC	07/17/19	3.85	0	UG/L	
Chloroform	07/17/19	0.2	0.5	UG/L	J
cis-1,2-Dichloroethylene	07/17/19	0.3	0.5	UG/L	J
Tetrachloroethylene	07/17/19	2.99	0.5	UG/L	
Trichloroethylene	07/17/19	0.36	0.5	UG/L	J
524.2 TVOC	10/16/19	2.89	0	UG/L	
Tetrachloroethylene	10/16/19	2.6	0.5	UG/L	
Trichloroethylene	10/16/19	0.29	0.5	UG/L	J

**Table F-15
Extraction Well VOC Data
OU III South Boundary System**

2019 BNL Groundwater Status Report

Site ID : 122-14 (EW-6)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	01/22/19	0.17	0.5	UG/L	J
524.2 TVOC	01/22/19	2.03	0	UG/L	
Chloroform	01/22/19	0.61	0.5	UG/L	
cis-1,2-Dichloroethylene	01/22/19	0.47	0.5	UG/L	J
Tetrachloroethylene	01/22/19	0.56	0.5	UG/L	
Trichloroethylene	01/22/19	0.22	0.5	UG/L	J
524.2 TVOC	04/11/19	1.25	0	UG/L	
Chloroform	04/11/19	0.53	0.5	UG/L	
Tetrachloroethylene	04/11/19	0.72	0.5	UG/L	
1,1,1-Trichloroethane	07/17/19	0.2	0.5	UG/L	J
524.2 TVOC	07/17/19	1.82	0	UG/L	
Chloroform	07/17/19	0.52	0.5	UG/L	
Tetrachloroethylene	07/17/19	0.88	0.5	UG/L	
Trichloroethylene	07/17/19	0.22	0.5	UG/L	J
524.2 TVOC	10/16/19	0.41	0	UG/L	
Tetrachloroethylene	10/16/19	0.41	0.5	UG/L	J

Site ID : 122-13 (EW-7)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	01/22/19	0.29	0.5	UG/L	J
524.2 TVOC	01/22/19	1.38	0	UG/L	
Chloroform	01/22/19	0.2	0.5	UG/L	J
cis-1,2-Dichloroethylene	01/22/19	0.18	0.5	UG/L	J
Tetrachloroethylene	01/22/19	0.5	0.5	UG/L	
Trichloroethylene	01/22/19	0.21	0.5	UG/L	J
524.2 TVOC	04/11/19	0.7	0	UG/L	
Tetrachloroethylene	04/11/19	0.7	0.5	UG/L	
1,1,1-Trichloroethane	07/17/19	0.19	0.5	UG/L	J
524.2 TVOC	07/17/19	1.32	0	UG/L	
Chloroform	07/17/19	0.19	0.5	UG/L	J
cis-1,2-Dichloroethylene	07/17/19	0.23	0.5	UG/L	J
Naphthalene	07/17/19	0.17	0.5	UG/L	BJ
Tetrachloroethylene	07/17/19	0.54	0.5	UG/L	
524.2 TVOC	10/16/19	1	0	UG/L	
cis-1,2-Dichloroethylene	10/16/19	0.23	0.5	UG/L	J
Tetrachloroethylene	10/16/19	0.77	0.5	UG/L	

Table F-16
Air Stripper Influent VOC Data
OU III South Boundary System

2019 BNL Groundwater Status Report

121-41 (Influent)

Chemical Name	Sample	Value	Detlim	Units	Qual
	Date				
1,1,1-Trichloroethane	01/22/19	0.26	0.5	UG/L	J
524.2 TVOC	01/22/19	4.13	0	UG/L	
Carbon tetrachloride	01/22/19	0.4	0.5	UG/L	J
Chloroform	01/22/19	0.36	0.5	UG/L	J
cis-1,2-Dichloroethylene	01/22/19	0.25	0.5	UG/L	J
Tetrachloroethylene	01/22/19	2.59	0.5	UG/L	
Trichloroethylene	01/22/19	0.27	0.5	UG/L	J
1,1,1-Trichloroethane	02/06/19	0.56	0.5	UG/L	
1,1-Dichloroethylene	02/06/19	0.6	0.5	UG/L	
524.2 TVOC	02/06/19	15.16	0	UG/L	
Carbon tetrachloride	02/06/19	2.22	0.5	UG/L	
Chloroform	02/06/19	0.72	0.5	UG/L	
Tetrachloroethylene	02/06/19	10.6	0.5	UG/L	
Trichloroethylene	02/06/19	0.46	0.5	UG/L	J
1,1,1-Trichloroethane	03/13/19	0.31	0.5	UG/L	J
1,1-Dichloroethylene	03/13/19	0.28	0.5	UG/L	J
524.2 TVOC	03/13/19	10.76	0	UG/L	
Carbon tetrachloride	03/13/19	0.99	0.5	UG/L	
Chloroform	03/13/19	0.49	0.5	UG/L	J
Tetrachloroethylene	03/13/19	8.4	0.5	UG/L	
Trichloroethylene	03/13/19	0.29	0.5	UG/L	J
524.2 TVOC	04/11/19	3.3	0	UG/L	
Tetrachloroethylene	04/11/19	3.3	0.5	UG/L	
524.2 TVOC	05/03/19	8.9	0	UG/L	
Carbon tetrachloride	05/03/19	1.1	0.5	UG/L	
Tetrachloroethylene	05/03/19	7.8	0.5	UG/L	
1,1,1-Trichloroethane	06/11/19	0.53	0.5	UG/L	
524.2 TVOC	06/11/19	12.8	0	UG/L	
Carbon tetrachloride	06/11/19	2	0.5	UG/L	
Chloroform	06/11/19	0.67	0.5	UG/L	
Tetrachloroethylene	06/11/19	9.6	0.5	UG/L	
1,1,1-Trichloroethane	07/17/19	0.17	0.5	UG/L	J
524.2 TVOC	07/17/19	8.55	0	UG/L	
Carbon tetrachloride	07/17/19	0.6	0.5	UG/L	
Chloroform	07/17/19	0.4	0.5	UG/L	J
Tetrachloroethylene	07/17/19	7.14	0.5	UG/L	
Trichloroethylene	07/17/19	0.24	0.5	UG/L	J
1,1,1-Trichloroethane	08/20/19	0.57	0.5	UG/L	
1,1-Dichloroethylene	08/20/19	0.38	0.5	UG/L	J
524.2 TVOC	08/20/19	16.84	0	UG/L	
Carbon tetrachloride	08/20/19	3.3	0.5	UG/L	
Chloroform	08/20/19	0.58	0.5	UG/L	
cis-1,2-Dichloroethylene	08/20/19	0.11	0.5	UG/L	J
Methyl chloride	08/20/19	0.38	0.5	UG/L	J
Tetrachloroethylene	08/20/19	11	0.5	UG/L	
Trichloroethylene	08/20/19	0.52	0.5	UG/L	
1,1,1-Trichloroethane	09/04/19	0.37	0.5	UG/L	J
1,1-Dichloroethylene	09/04/19	0.23	0.5	UG/L	J
524.2 TVOC	09/04/19	9.45	0	UG/L	
Carbon tetrachloride	09/04/19	1.9	0.5	UG/L	
Chloroform	09/04/19	0.5	0.5	UG/L	
Tetrachloroethylene	09/04/19	6.1	0.5	UG/L	
Trichloroethylene	09/04/19	0.35	0.5	UG/L	J

Table F-16
Air Stripper Influent VOC Data
OU III South Boundary System

2019 BNL Groundwater Status Report

121-41 (Influent)

Chemical Name	Sample	Value	Detlim	Units	Qual
	Date				
1,1,1-Trichloroethane	10/16/19	0.31	0.5	UG/L	J
1,1-Dichloroethane	10/16/19	0.12	0.5	UG/L	J
1,1-Dichloroethylene	10/16/19	0.24	0.5	UG/L	J
524.2 TVOC	10/16/19	10.22	0	UG/L	
Carbon tetrachloride	10/16/19	1.3	0.5	UG/L	
Chloroform	10/16/19	0.49	0.5	UG/L	J
Tetrachloroethylene	10/16/19	7.4	0.5	UG/L	
Trichloroethylene	10/16/19	0.36	0.5	UG/L	J
1,1,1-Trichloroethane	11/06/19	0.3	0.5	UG/L	J
1,1-Dichloroethane	11/06/19	0.12	0.5	UG/L	J
1,1-Dichloroethylene	11/06/19	0.26	0.5	UG/L	J
524.2 TVOC	11/06/19	10.18	0	UG/L	
Carbon tetrachloride	11/06/19	1.1	0.5	UG/L	
Chloroform	11/06/19	0.49	0.5	UG/L	J
Methyl chloride	11/06/19	0.29	0.5	UG/L	J
Tetrachloroethylene	11/06/19	7.3	0.5	UG/L	
Trichloroethylene	11/06/19	0.32	0.5	UG/L	J
1,1,1-Trichloroethane	12/04/19	0.46	0.5	UG/L	J
1,1-Dichloroethylene	12/04/19	0.42	0.5	UG/L	J
524.2 TVOC	12/04/19	13.95	0	UG/L	
Carbon tetrachloride	12/04/19	2.1	0.5	UG/L	
Chloroform	12/04/19	0.58	0.5	UG/L	
Tetrachloroethylene	12/04/19	9.9	0.5	UG/L	
Trichloroethylene	12/04/19	0.49	0.5	UG/L	J

Table F-17
Air Stripper Effluent VOC Data
OUIII South Boundary System

2019 BNL Groundwater Status Report

Site ID : 095-126 (Effluent)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
524.2 TVOC	01/22/19	0	0	UG/L	
524.2 TVOC	02/06/19	0	0	UG/L	
524.2 TVOC	03/13/19	0	0	UG/L	
524.2 TVOC	03/25/19	0	0	UG/L	
524.2 TVOC	03/26/19	0.26	0	UG/L	
Chloroform	03/26/19	0.26	0.5	UG/L	J
524.2 TVOC	03/27/19	0	0	UG/L	
524.2 TVOC	03/28/19	0	0	UG/L	
524.2 TVOC	03/29/19	0	0	UG/L	
Perfluorobutanesulfonate (PFBS)	04/01/19	1.49	1.54	NG/L	J
Perfluorobutyric acid (PFBA)	04/01/19	6.95	1.73	NG/L	
Perfluoroheptanoic acid (PFHpA)	04/01/19	0.745	1.73	NG/L	J
Perfluorohexanesulfonate (PFHxS)	04/01/19	16.8	1.58	NG/L	
Perfluorohexanoic acid (PFHxA)	04/01/19	3.34	1.73	NG/L	
Perfluorooctanesulfonate (PFOS)	04/01/19	7.57	1.73	NG/L	
Perfluorooctanoic acid (PFOA)	04/01/19	4.11	1.73	NG/L	
Perfluoropentanesulfonate (PFPeS)	04/01/19	1.5	1.63	NG/L	J
Perfluoropentanoic acid (PFPeA)	04/01/19	0.968	1.73	NG/L	J
524.2 TVOC	04/01/19	0	0	UG/L	
524.2 TVOC	04/09/19	0	0	UG/L	
524.2 TVOC	04/16/19	0	0	UG/L	
524.2 TVOC	04/23/19	0	0	UG/L	
524.2 TVOC	05/01/19	0	0	UG/L	
524.2 TVOC	05/14/19	0	0	UG/L	
524.2 TVOC	06/06/19	0	0	UG/L	
524.2 TVOC	06/19/19	0	0	UG/L	
524.2 TVOC	07/03/19	0	0	UG/L	
524.2 TVOC	09/18/19	0	0	UG/L	
1,4-Dioxane	09/18/19	4.33	0.2	UG/L	
524.2 TVOC	10/01/19	0	0	UG/L	
524.2 TVOC	10/16/19	0	0	UG/L	
524.2 TVOC	11/06/19	0	0	UG/L	
524.2 TVOC	12/04/19	0	0	UG/L	

Table F-18
Cumulative Mass Removal
OU III South Boundary System

2019 BNL Groundwater Status Report

Date Sampled	Total VOC's (ug/L)	Flow Rates (gpm)	Cumulative VOC's (lbs)
01/22/19	4.13	296	3049.25
02/06/19	15.16	148	3049.66
03/13/19	10.76	234	3050.72
04/11/19	3.3	184	3050.93
05/03/19	8.9	249	3051.51
06/11/19	12.8	35	3051.72
07/17/19	8.55	94	3052.07
08/20/19	16.84	120	3052. 89
09/04/19	9.45	151	3053.15
10/16/19	10.22	160	3053.97
11/06/19	10.18	175	3054.42
12/04/19	13.95	164	3055.19

ug/L Micrograms per liter
gpm Gallons per minute
lbs Pounds

Table F-19
Extraction Wells VOC Data
OU III Western South Boundary System

2019 BNL Groundwater Status Report

Site ID : 126-12 (WSB-1)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
Perfluorobutanesulfonate (PFBS)	02/20/19	1.52	1.56	NG/L	J
Perfluorobutyric acid (PFBA)	02/20/19	6.4	1.75	NG/L	
Perfluorohexanesulfonate (PFHxS)	02/20/19	11.7	1.59	NG/L	
Perfluorohexanoic acid (PFHxA)	02/20/19	0.903	1.75	NG/L	J
Perfluorooctanesulfonate (PFOS)	02/20/19	5.66	1.75	NG/L	
Perfluorooctanoic acid (PFOA)	02/20/19	3.17	1.75	NG/L	
Perfluoropentanesulfonate (PFPeS)	02/20/19	1.68	1.64	NG/L	
1,1,1-Trichloroethane	02/20/19	0.58	0.5	UG/L	
1,1-Dichloroethylene	02/20/19	1.14	0.5	UG/L	
524.2 TVOC	02/20/19	2.18	0	UG/L	
Chloroform	02/20/19	0.17	0.5	UG/L	J
Trichloroethylene	02/20/19	0.29	0.5	UG/L	J
1,1,1-Trichloroethane	03/25/19	0.9	0.5	UG/L	
1,1-Dichloroethylene	03/25/19	1.7	0.5	UG/L	
524.2 TVOC	03/25/19	2.89	0	UG/L	
Trichloroethylene	03/25/19	0.29	0.5	UG/L	J
1,1,1-Trichloroethane	04/01/19	3	0.5	UG/L	
1,1-Dichloroethylene	04/01/19	4.3	0.5	UG/L	
524.2 TVOC	04/01/19	8.46	0	UG/L	
Chloroform	04/01/19	0.5	0.5	UG/L	
Trichloroethylene	04/01/19	0.66	0.5	UG/L	
1,1,1-Trichloroethane	04/09/19	3	0.5	UG/L	
1,1-Dichloroethylene	04/09/19	4.2	0.5	UG/L	
524.2 TVOC	04/09/19	8.49	0	UG/L	
Chloroform	04/09/19	0.59	0.5	UG/L	
Trichloroethylene	04/09/19	0.7	0.5	UG/L	
1,1,1-Trichloroethane	04/16/19	2.7	0.5	UG/L	
1,1-Dichloroethylene	04/16/19	4	0.5	UG/L	
524.2 TVOC	04/16/19	8.07	0	UG/L	
Chloroform	04/16/19	0.63	0.5	UG/L	
Trichloroethylene	04/16/19	0.74	0.5	UG/L	
1,1,1-Trichloroethane	04/23/19	2.2	0.5	UG/L	
1,1-Dichloroethylene	04/23/19	3.1	0.5	UG/L	
524.2 TVOC	04/23/19	6.62	0	UG/L	
Chloroform	04/23/19	0.62	0.5	UG/L	
Trichloroethylene	04/23/19	0.7	0.5	UG/L	
1,1,1-Trichloroethane	05/01/19	2.2	0.5	UG/L	
1,1-Dichloroethane	05/01/19	0.17	0.5	UG/L	J
1,1-Dichloroethylene	05/01/19	3	0.5	UG/L	
524.2 TVOC	05/01/19	6.78	0	UG/L	
Chloroform	05/01/19	0.69	0.5	UG/L	
Trichloroethylene	05/01/19	0.72	0.5	UG/L	
1,1,1-Trichloroethane	07/03/19	2.4	0.5	UG/L	
1,1-Dichloroethylene	07/03/19	2.5	0.5	UG/L	
524.2 TVOC	07/03/19	6.53	0	UG/L	
Chloroform	07/03/19	0.97	0.5	UG/L	
Trichloroethylene	07/03/19	0.66	0.5	UG/L	
1,4-Dioxane	09/18/19	2.99	0.2	UG/L	
1,1,1-Trichloroethane	10/01/19	3.2	0.5	UG/L	

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1,1-Dichloroethane	10/01/19	0.15	0.5	UG/L	J
1,1-Dichloroethylene	10/01/19	4.2	0.5	UG/L	
524.2 TVOC	10/01/19	8.88	0	UG/L	
Chloroform	10/01/19	0.65	0.5	UG/L	
Trichloroethylene	10/01/19	0.68	0.5	UG/L	

Site ID : 127-05 (WSB-2)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
Perfluorobutyric acid (PFBA)	02/20/19	6.43	1.76	NG/L	
Perfluorohexanesulfonate (PFHxS)	02/20/19	2.36	1.6	NG/L	
Perfluorooctanesulfonate (PFOS)	02/20/19	1.53	1.76	NG/L	J
1,1,1-Trichloroethane	02/20/19	1.2	0.5	UG/L	
1,1-Dichloroethane	02/20/19	0.4	0.5	UG/L	J
1,1-Dichloroethylene	02/20/19	1.51	0.5	UG/L	
524.2 TVOC	02/20/19	7.46	0	UG/L	
Chloroform	02/20/19	1.15	0.5	UG/L	
Dichlorodifluoromethane	02/20/19	1.05	0.5	UG/L	
Trichloroethylene	02/20/19	2.15	0.5	UG/L	
1,1,1-Trichloroethane	04/09/19	1	0.5	UG/L	
1,1-Dichloroethylene	04/09/19	1.2	0.5	UG/L	
524.2 TVOC	04/09/19	6.57	0	UG/L	
Chloroform	04/09/19	1.1	0.5	UG/L	
Dichlorodifluoromethane	04/09/19	0.87	0.5	UG/L	
Trichloroethylene	04/09/19	2.4	0.5	UG/L	
1,1,1-Trichloroethane	08/20/19	1.1	0.5	UG/L	
1,1-Dichloroethane	08/20/19	0.39	0.5	UG/L	J
1,1-Dichloroethylene	08/20/19	0.83	0.5	UG/L	
524.2 TVOC	08/20/19	5.99	0	UG/L	
Carbon tetrachloride	08/20/19	0.37	0.5	UG/L	J
Chloroform	08/20/19	1.1	0.5	UG/L	
Trichloroethylene	08/20/19	2.2	0.5	UG/L	
1,4-Dioxane	09/18/19	5.38	0.2	UG/L	
1,1,1-Trichloroethane	10/01/19	0.95	0.5	UG/L	
1,1-Dichloroethane	10/01/19	0.38	0.5	UG/L	J
1,1-Dichloroethylene	10/01/19	1.1	0.5	UG/L	
524.2 TVOC	10/01/19	6.24	0	UG/L	
Chloroform	10/01/19	1.2	0.5	UG/L	
Dichlorodifluoromethane	10/01/19	0.41	0.5	UG/L	J
Trichloroethylene	10/01/19	2.2	0.5	UG/L	

Site ID : 111-17 (WSB-3)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
Perfluorobutanesulfonate (PFBS)	02/20/19	1.71	1.66	NG/L	
Perfluorobutyric acid (PFBA)	02/20/19	3.78	1.87	NG/L	
Perfluorohexanesulfonate (PFHxS)	02/20/19	5.17	1.7	NG/L	
Perfluorohexanoic acid (PFHxA)	02/20/19	3	1.87	NG/L	
Perfluorooctanesulfonate (PFOS)	02/20/19	1.07	1.87	NG/L	J
Perfluorooctanoic acid (PFOA)	02/20/19	1.48	1.87	NG/L	J
Perfluoropentanesulfonate (PFPeS)	02/20/19	1.71	1.75	NG/L	J
1,1,1-Trichloroethane	02/20/19	19.7	0.5	UG/L	
1,1-Dichloroethane	02/20/19	3.27	0.5	UG/L	
1,1-Dichloroethylene	02/20/19	47.7	0.5	UG/L	
524.2 TVOC	02/20/19	73.52	0	UG/L	

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Chloroform	02/20/19	1.18	0.5	UG/L	
Trichloroethylene	02/20/19	1.67	0.5	UG/L	
1,1,1-Trichloroethane	03/25/19	14	0.5	UG/L	
1,1-Dichloroethane	03/25/19	2.8	0.5	UG/L	
1,1-Dichloroethylene	03/25/19	38	0.5	UG/L	
1,2-Dichloroethane	03/25/19	0.25	0.5	UG/L	J
524.2 TVOC	03/25/19	57.61	0	UG/L	
Chloroform	03/25/19	0.86	0.5	UG/L	
Trichloroethylene	03/25/19	1.7	0.5	UG/L	
1,1,1-Trichloroethane	04/01/19	8.9	0.5	UG/L	
1,1-Dichloroethane	04/01/19	2.9	0.5	UG/L	
1,1-Dichloroethylene	04/01/19	22	0.5	UG/L	
524.2 TVOC	04/01/19	36.17	0	UG/L	
Chloroform	04/01/19	0.67	0.5	UG/L	
Trichloroethylene	04/01/19	1.7	0.5	UG/L	
1,1,1-Trichloroethane	04/09/19	7.1	0.5	UG/L	
1,1-Dichloroethane	04/09/19	2.3	0.5	UG/L	
1,1-Dichloroethylene	04/09/19	17	0.5	UG/L	
524.2 TVOC	04/09/19	28.78	0	UG/L	
Chloroform	04/09/19	0.78	0.5	UG/L	
Trichloroethylene	04/09/19	1.6	0.5	UG/L	
1,1,1-Trichloroethane	04/16/19	6.6	0.5	UG/L	
1,1-Dichloroethane	04/16/19	2	0.5	UG/L	
1,1-Dichloroethylene	04/16/19	13	0.5	UG/L	
524.2 TVOC	04/16/19	23.95	0	UG/L	
Chloroform	04/16/19	0.85	0.5	UG/L	
Trichloroethylene	04/16/19	1.5	0.5	UG/L	
1,1,1-Trichloroethane	04/23/19	5.6	0.5	UG/L	
1,1-Dichloroethane	04/23/19	1.8	0.5	UG/L	
1,1-Dichloroethylene	04/23/19	10	0.5	UG/L	
524.2 TVOC	04/23/19	19.63	0	UG/L	
Chloroform	04/23/19	0.83	0.5	UG/L	
Trichloroethylene	04/23/19	1.4	0.5	UG/L	
1,1,1-Trichloroethane	05/01/19	4.8	0.5	UG/L	
1,1-Dichloroethane	05/01/19	1.6	0.5	UG/L	
1,1-Dichloroethylene	05/01/19	9.3	0.5	UG/L	
524.2 TVOC	05/01/19	17.66	0	UG/L	
Chloroform	05/01/19	0.76	0.5	UG/L	
Trichloroethylene	05/01/19	1.2	0.5	UG/L	
1,1,1-Trichloroethane	06/06/19	4	0.5	UG/L	
1,1-Dichloroethane	06/06/19	1.4	0.5	UG/L	
1,1-Dichloroethylene	06/06/19	8	0.5	UG/L	
524.2 TVOC	06/06/19	15.19	0	UG/L	
Chloroform	06/06/19	0.69	0.5	UG/L	
Trichloroethylene	06/06/19	1.1	0.5	UG/L	
1,1,1-Trichloroethane	07/03/19	3.6	0.5	UG/L	
1,1-Dichloroethane	07/03/19	1.3	0.5	UG/L	
1,1-Dichloroethylene	07/03/19	7.3	0.5	UG/L	
524.2 TVOC	07/03/19	13.99	0	UG/L	
Chloroform	07/03/19	0.69	0.5	UG/L	
Trichloroethylene	07/03/19	1.1	0.5	UG/L	
1,1,1-Trichloroethane	08/20/19	2.6	0.5	UG/L	
1,1-Dichloroethane	08/20/19	1.8	0.5	UG/L	
1,1-Dichloroethylene	08/20/19	9.1	0.5	UG/L	
524.2 TVOC	08/20/19	14.9	0	UG/L	
Chloroform	08/20/19	0.48	0.5	UG/L	J
Trichloroethylene	08/20/19	0.92	0.5	UG/L	
1,1,1-Trichloroethane	09/04/19	2.9	0.5	UG/L	
1,1-Dichloroethane	09/04/19	1	0.5	UG/L	
1,1-Dichloroethylene	09/04/19	5.5	0.5	UG/L	
524.2 TVOC	09/04/19	10.92	0	UG/L	

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Chloroform	09/04/19	0.56	0.5	UG/L	
Trichloroethylene	09/04/19	0.96	0.5	UG/L	
1,4-Dioxane	09/18/19	3.81	0.2	UG/L	
1,1,1-Trichloroethane	10/01/19	2.3	0.5	UG/L	
1,1-Dichloroethane	10/01/19	1.2	0.5	UG/L	
1,1-Dichloroethylene	10/01/19	6.6	0.5	UG/L	
524.2 TVOC	10/01/19	11.55	0	UG/L	
Chloroform	10/01/19	0.56	0.5	UG/L	
Trichloroethylene	10/01/19	0.89	0.5	UG/L	
1,1,1-Trichloroethane	11/06/19	2.2	0.5	UG/L	
1,1-Dichloroethane	11/06/19	0.92	0.5	UG/L	
1,1-Dichloroethylene	11/06/19	5.6	0.5	UG/L	
524.2 TVOC	11/06/19	10.2	0	UG/L	
Chloroform	11/06/19	0.58	0.5	UG/L	
Trichloroethylene	11/06/19	0.9	0.5	UG/L	
1,1,1-Trichloroethane	12/04/19	2.1	0.5	UG/L	
1,1-Dichloroethane	12/04/19	0.94	0.5	UG/L	
1,1-Dichloroethylene	12/04/19	5.2	0.5	UG/L	
524.2 TVOC	12/04/19	9.62	0	UG/L	
Chloroform	12/04/19	0.55	0.5	UG/L	
Trichloroethylene	12/04/19	0.83	0.5	UG/L	

Site ID : 119-13 (WSB-4)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
Perfluorobutanesulfonate (PFBS)	02/20/19	2.14	1.6	NG/L	
Perfluorobutyric acid (PFBA)	02/20/19	8.66	1.8	NG/L	
Perfluorohexanesulfonate (PFHxS)	02/20/19	1.6	1.63	NG/L	J
Perfluoropentanesulfonate (PFPeS)	02/20/19	0.68	1.69	NG/L	J
1,1,1-Trichloroethane	02/20/19	3.32	0.5	UG/L	
1,1-Dichloroethane	02/20/19	2.29	0.5	UG/L	
1,1-Dichloroethylene	02/20/19	13.3	0.5	UG/L	
524.2 TVOC	02/20/19	27.15	0	UG/L	
Chloroform	02/20/19	2.67	0.5	UG/L	
Dichlorodifluoromethane	02/20/19	1.93	0.5	UG/L	
Toluene	02/20/19	0.23	0.5	UG/L	J
Trichloroethylene	02/20/19	3.41	0.5	UG/L	
1,1,1-Trichloroethane	03/25/19	6.7	0.5	UG/L	
1,1-Dichloroethane	03/25/19	1.8	0.5	UG/L	
1,1-Dichloroethylene	03/25/19	19	0.5	UG/L	
524.2 TVOC	03/25/19	34.6	0	UG/L	
Chloroform	03/25/19	2	0.5	UG/L	
Dichlorodifluoromethane	03/25/19	1.5	0.5	UG/L	
Trichloroethylene	03/25/19	3.6	0.5	UG/L	
1,1,1-Trichloroethane	04/01/19	12	0.5	UG/L	
1,1-Dichloroethane	04/01/19	1.5	0.5	UG/L	
1,1-Dichloroethylene	04/01/19	21	0.5	UG/L	
524.2 TVOC	04/01/19	40.3	0	UG/L	
Chloroform	04/01/19	1.5	0.5	UG/L	
Dichlorodifluoromethane	04/01/19	1.3	0.5	UG/L	
Trichloroethylene	04/01/19	3	0.5	UG/L	
1,1,1-Trichloroethane	04/09/19	9.8	0.5	UG/L	
1,1-Dichloroethane	04/09/19	1.3	0.5	UG/L	
1,1-Dichloroethylene	04/09/19	17	0.5	UG/L	
524.2 TVOC	04/09/19	33.2	0	UG/L	
Chloroform	04/09/19	1.4	0.5	UG/L	
Dichlorodifluoromethane	04/09/19	1.1	0.5	UG/L	
Trichloroethylene	04/09/19	2.6	0.5	UG/L	
1,1,1-Trichloroethane	04/16/19	8.8	0.5	UG/L	
1,1-Dichloroethane	04/16/19	1.2	0.5	UG/L	
1,1-Dichloroethylene	04/16/19	15	0.5	UG/L	

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524.2 TVOC	04/16/19	29.7	0	UG/L	
Chloroform	04/16/19	1.3	0.5	UG/L	
Dichlorodifluoromethane	04/16/19	1	0.5	UG/L	
Trichloroethylene	04/16/19	2.4	0.5	UG/L	
1,1,1-Trichloroethane	04/23/19	7.7	0.5	UG/L	
1,1-Dichloroethane	04/23/19	1.1	0.5	UG/L	
1,1-Dichloroethylene	04/23/19	13	0.5	UG/L	
524.2 TVOC	04/23/19	25.98	0	UG/L	
Chloroform	04/23/19	1.2	0.5	UG/L	
Dichlorodifluoromethane	04/23/19	0.88	0.5	UG/L	
Trichloroethylene	04/23/19	2.1	0.5	UG/L	
1,1,1-Trichloroethane	05/01/19	7.5	0.5	UG/L	
1,1-Dichloroethane	05/01/19	0.97	0.5	UG/L	
1,1-Dichloroethylene	05/01/19	12	0.5	UG/L	
524.2 TVOC	05/01/19	24.49	0	UG/L	
Chloroform	05/01/19	1.1	0.5	UG/L	
Dichlorodifluoromethane	05/01/19	0.82	0.5	UG/L	
Trichloroethylene	05/01/19	2.1	0.5	UG/L	
1,1,1-Trichloroethane	06/06/19	6.8	0.5	UG/L	
1,1-Dichloroethane	06/06/19	0.87	0.5	UG/L	
1,1-Dichloroethylene	06/06/19	9.9	0.5	UG/L	
524.2 TVOC	06/06/19	19.94	0	UG/L	
Chloroform	06/06/19	0.87	0.5	UG/L	
Trichloroethylene	06/06/19	1.5	0.5	UG/L	
1,1,1-Trichloroethane	07/03/19	7.1	0.5	UG/L	
1,1-Dichloroethane	07/03/19	0.89	0.5	UG/L	
1,1-Dichloroethylene	07/03/19	10	0.5	UG/L	
524.2 TVOC	07/03/19	20.42	0	UG/L	
Chloroform	07/03/19	0.83	0.5	UG/L	
Trichloroethylene	07/03/19	1.6	0.5	UG/L	
1,1,1-Trichloroethane	08/20/19	5.5	0.5	UG/L	
1,1-Dichloroethane	08/20/19	1.1	0.5	UG/L	
1,1-Dichloroethylene	08/20/19	6.5	0.5	UG/L	
524.2 TVOC	08/20/19	15.83	0	UG/L	
Chloroform	08/20/19	0.61	0.5	UG/L	
Dichlorodifluoromethane	08/20/19	0.52	0.5	UG/L	
Trichloroethylene	08/20/19	1.6	0.5	UG/L	
1,1,1-Trichloroethane	09/04/19	6	0.5	UG/L	
1,1-Dichloroethane	09/04/19	0.71	0.5	UG/L	
1,1-Dichloroethylene	09/04/19	7.1	0.5	UG/L	
524.2 TVOC	09/04/19	16.13	0	UG/L	
Chloroform	09/04/19	0.61	0.5	UG/L	
Dichlorodifluoromethane	09/04/19	0.41	0.5	UG/L	J
Trichloroethylene	09/04/19	1.3	0.5	UG/L	
1,4-Dioxane	09/18/19	7.64	0.2	UG/L	
1,1,1-Trichloroethane	10/01/19	5.7	0.5	UG/L	
1,1-Dichloroethane	10/01/19	0.86	0.5	UG/L	
1,1-Dichloroethylene	10/01/19	8.5	0.5	UG/L	
524.2 TVOC	10/01/19	17.6	0	UG/L	
Chloroform	10/01/19	0.61	0.5	UG/L	
Dichlorodifluoromethane	10/01/19	0.53	0.5	UG/L	
Trichloroethylene	10/01/19	1.4	0.5	UG/L	
1,1,1-Trichloroethane	11/06/19	4.8	0.5	UG/L	
1,1-Dichloroethane	11/06/19	0.65	0.5	UG/L	
1,1-Dichloroethylene	11/06/19	7.1	0.5	UG/L	
524.2 TVOC	11/06/19	15.2	0	UG/L	
Chloroform	11/06/19	0.48	0.5	UG/L	J
Dichlorodifluoromethane	11/06/19	0.54	0.5	UG/L	
Methyl chloride	11/06/19	0.53	0.5	UG/L	
Trichloroethylene	11/06/19	1.1	0.5	UG/L	
1,1,1-Trichloroethane	12/04/19	4.7	0.5	UG/L	

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1,1-Dichloroethane	12/04/19	0.61	0.5	UG/L	
1,1-Dichloroethylene	12/04/19	6.9	0.5	UG/L	
524.2 TVOC	12/04/19	14.11	0	UG/L	
Chloroform	12/04/19	0.49	0.5	UG/L	J
Dichlorodifluoromethane	12/04/19	0.41	0.5	UG/L	J
Trichloroethylene	12/04/19	1	0.5	UG/L	

Site ID : 130-12 (WSB-5)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
Perfluorobutyric acid (PFBA)	02/20/19	6.21	1.77	NG/L	
1,1,1-Trichloroethane	02/20/19	3.04	0.5	UG/L	
1,1-Dichloroethane	02/20/19	1.49	0.5	UG/L	
1,1-Dichloroethylene	02/20/19	3.72	0.5	UG/L	
524.2 TVOC	02/20/19	49.22	0	UG/L	
Carbon tetrachloride	02/20/19	0.17	0.5	UG/L	J
Chloroform	02/20/19	5.79	0.5	UG/L	
Dichlorodifluoromethane	02/20/19	31.7	0.5	UG/L	
Tetrachloroethylene	02/20/19	0.18	0.5	UG/L	J
Trichloroethylene	02/20/19	3.13	0.5	UG/L	
1,1,1-Trichloroethane	03/25/19	2.1	0.5	UG/L	
1,1-Dichloroethane	03/25/19	1.2	0.5	UG/L	
1,1-Dichloroethylene	03/25/19	3.7	0.5	UG/L	
524.2 TVOC	03/25/19	39.5	0	UG/L	
Chloroform	03/25/19	4.5	0.5	UG/L	
Dichlorodifluoromethane	03/25/19	25	0.5	UG/L	
Trichloroethylene	03/25/19	3	0.5	UG/L	
1,1,1-Trichloroethane	04/01/19	3	0.5	UG/L	
1,1-Dichloroethane	04/01/19	1.2	0.5	UG/L	
1,1-Dichloroethylene	04/01/19	3.7	0.5	UG/L	
524.2 TVOC	04/01/19	33.8	0	UG/L	
Chloroform	04/01/19	5.7	0.5	UG/L	
Dichlorodifluoromethane	04/01/19	17	0.5	UG/L	
Trichloroethylene	04/01/19	3.2	0.5	UG/L	
1,1,1-Trichloroethane	04/09/19	3.4	0.5	UG/L	
1,1-Dichloroethane	04/09/19	1.2	0.5	UG/L	
1,1-Dichloroethylene	04/09/19	4.3	0.5	UG/L	
524.2 TVOC	04/09/19	31.6	0	UG/L	
Chloroform	04/09/19	5.5	0.5	UG/L	
Dichlorodifluoromethane	04/09/19	14	0.5	UG/L	
Trichloroethylene	04/09/19	3.2	0.5	UG/L	
1,1,1-Trichloroethane	04/16/19	3.5	0.5	UG/L	
1,1-Dichloroethane	04/16/19	1.1	0.5	UG/L	
1,1-Dichloroethylene	04/16/19	4.3	0.5	UG/L	
524.2 TVOC	04/16/19	30.4	0	UG/L	
Chloroform	04/16/19	5.3	0.5	UG/L	
Dichlorodifluoromethane	04/16/19	13	0.5	UG/L	
Trichloroethylene	04/16/19	3.2	0.5	UG/L	
1,1,1-Trichloroethane	04/23/19	3.2	0.5	UG/L	
1,1-Dichloroethane	04/23/19	0.98	0.5	UG/L	
1,1-Dichloroethylene	04/23/19	4.1	0.5	UG/L	
524.2 TVOC	04/23/19	26.88	0	UG/L	
Chloroform	04/23/19	4.8	0.5	UG/L	
Dichlorodifluoromethane	04/23/19	11	0.5	UG/L	
Trichloroethylene	04/23/19	2.8	0.5	UG/L	
1,1,1-Trichloroethane	05/01/19	3.1	0.5	UG/L	
1,1-Dichloroethane	05/01/19	0.93	0.5	UG/L	
1,1-Dichloroethylene	05/01/19	3.6	0.5	UG/L	
524.2 TVOC	05/01/19	23.03	0	UG/L	
Chloroform	05/01/19	4.6	0.5	UG/L	
Dichlorodifluoromethane	05/01/19	8.2	0.5	UG/L	

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Trichloroethylene	05/01/19	2.6	0.5	UG/L	
1,1,1-Trichloroethane	06/06/19	4.7	0.5	UG/L	
1,1-Dichloroethane	06/06/19	0.83	0.5	UG/L	
1,1-Dichloroethylene	06/06/19	2.7	0.5	UG/L	
524.2 TVOC	06/06/19	19.23	0	UG/L	
Chloroform	06/06/19	4.1	0.5	UG/L	
Dichlorodifluoromethane	06/06/19	4.5	0.5	UG/L	
Trichloroethylene	06/06/19	2.4	0.5	UG/L	
1,1,1-Trichloroethane	07/03/19	7.3	0.5	UG/L	
1,1-Dichloroethane	07/03/19	0.78	0.5	UG/L	
1,1-Dichloroethylene	07/03/19	4.7	0.5	UG/L	
524.2 TVOC	07/03/19	22.98	0	UG/L	
Chloroform	07/03/19	3.9	0.5	UG/L	
Dichlorodifluoromethane	07/03/19	4	0.5	UG/L	
Trichloroethylene	07/03/19	2.3	0.5	UG/L	
1,1,1-Trichloroethane	08/20/19	5	0.5	UG/L	
1,1-Dichloroethane	08/20/19	0.78	0.5	UG/L	
1,1-Dichloroethylene	08/20/19	5.3	0.5	UG/L	
524.2 TVOC	08/20/19	21.77	0	UG/L	
Carbon tetrachloride	08/20/19	0.39	0.5	UG/L	J
Chloroform	08/20/19	3.1	0.5	UG/L	
Dichlorodifluoromethane	08/20/19	5.1	0.5	UG/L	
Trichloroethylene	08/20/19	2.1	0.5	UG/L	
1,1,1-Trichloroethane	09/04/19	8.9	0.5	UG/L	
1,1-Dichloroethane	09/04/19	0.52	0.5	UG/L	
1,1-Dichloroethylene	09/04/19	6.9	0.5	UG/L	
524.2 TVOC	09/04/19	24.5	0	UG/L	
Carbon tetrachloride	09/04/19	0.38	0.5	UG/L	J
Chloroform	09/04/19	2.7	0.5	UG/L	
Dichlorodifluoromethane	09/04/19	3.2	0.5	UG/L	
Trichloroethylene	09/04/19	1.9	0.5	UG/L	
1,4-Dioxane	09/18/19	6.04	0.2	UG/L	
1,1,1-Trichloroethane	10/01/19	9.3	0.5	UG/L	
1,1-Dichloroethane	10/01/19	0.66	0.5	UG/L	
1,1-Dichloroethylene	10/01/19	10	0.5	UG/L	
524.2 TVOC	10/01/19	29.46	0	UG/L	
Chloroform	10/01/19	2.9	0.5	UG/L	
Dichlorodifluoromethane	10/01/19	4.6	0.5	UG/L	
Trichloroethylene	10/01/19	2	0.5	UG/L	
1,1,1-Trichloroethane	11/06/19	6.7	0.5	UG/L	
1,1-Dichloroethane	11/06/19	0.48	0.5	UG/L	J
1,1-Dichloroethylene	11/06/19	4.2	0.5	UG/L	
524.2 TVOC	11/06/19	18.28	0	UG/L	
Chloroform	11/06/19	2.4	0.5	UG/L	
Dichlorodifluoromethane	11/06/19	2.6	0.5	UG/L	
Methyl chloride	11/06/19	0.2	0.5	UG/L	J
Trichloroethylene	11/06/19	1.7	0.5	UG/L	
1,1,1-Trichloroethane	12/04/19	6.4	0.5	UG/L	
1,1-Dichloroethane	12/04/19	0.45	0.5	UG/L	J
1,1-Dichloroethylene	12/04/19	5	0.5	UG/L	
524.2 TVOC	12/04/19	17.95	0	UG/L	
Chloroform	12/04/19	2.3	0.5	UG/L	
Dichlorodifluoromethane	12/04/19	2.1	0.5	UG/L	
Trichloroethylene	12/04/19	1.7	0.5	UG/L	

Site ID : 130-13 (WSB-6)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
Perfluorobutyric acid (PFBA)	02/20/19	1.29	1.8	NG/L	J
1,1-Dichloroethane	02/20/19	0.37	0.5	UG/L	J
524.2 TVOC	02/20/19	9.9	0	UG/L	

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Dichlorodifluoromethane	02/20/19	9.35	0.5	UG/L	
Toluene	02/20/19	0.18	0.5	UG/L	J
1,1-Dichloroethane	03/25/19	0.22	0.5	UG/L	J
524.2 TVOC	03/25/19	6.82	0	UG/L	
Dichlorodifluoromethane	03/25/19	6.6	0.5	UG/L	
524.2 TVOC	04/01/19	6.3	0	UG/L	
Dichlorodifluoromethane	04/01/19	6.3	0.5	UG/L	
524.2 TVOC	04/09/19	5.5	0	UG/L	
Dichlorodifluoromethane	04/09/19	5.5	0.5	UG/L	
524.2 TVOC	04/16/19	5.4	0	UG/L	
Dichlorodifluoromethane	04/16/19	5.4	0.5	UG/L	
524.2 TVOC	04/23/19	4.5	0	UG/L	
Dichlorodifluoromethane	04/23/19	4.5	0.5	UG/L	
1,1-Dichloroethane	05/01/19	0.23	0.5	UG/L	J
1,1-Dichloroethylene	05/01/19	0.16	0.5	UG/L	J
524.2 TVOC	05/01/19	4.39	0	UG/L	
Dichlorodifluoromethane	05/01/19	4	0.5	UG/L	
524.2 TVOC	06/06/19	2.1	0	UG/L	
Dichlorodifluoromethane	06/06/19	2.1	0.5	UG/L	
524.2 TVOC	07/03/19	2.3	0	UG/L	
Dichlorodifluoromethane	07/03/19	2.3	0.5	UG/L	
1,1-Dichloroethane	08/20/19	0.33	0.5	UG/L	J
1,1-Dichloroethylene	08/20/19	0.24	0.5	UG/L	J
524.2 TVOC	08/20/19	4.37	0	UG/L	
Dichlorodifluoromethane	08/20/19	3.6	0.5	UG/L	
Methyl chloride	08/20/19	0.2	0.5	UG/L	J
1,1-Dichloroethane	09/04/19	0.28	0.5	UG/L	J
1,1-Dichloroethylene	09/04/19	0.19	0.5	UG/L	J
524.2 TVOC	09/04/19	2.67	0	UG/L	
Dichlorodifluoromethane	09/04/19	2.2	0.5	UG/L	
1,4-Dioxane	09/18/19	4.05	0.2	UG/L	
1,1-Dichloroethane	10/01/19	0.28	0.5	UG/L	J
1,1-Dichloroethylene	10/01/19	0.24	0.5	UG/L	J
524.2 TVOC	10/01/19	2.92	0	UG/L	
Dichlorodifluoromethane	10/01/19	2.4	0.5	UG/L	
1,1-Dichloroethane	11/06/19	0.3	0.5	UG/L	J
1,1-Dichloroethylene	11/06/19	0.27	0.5	UG/L	J
524.2 TVOC	11/06/19	3.37	0	UG/L	
Dichlorodifluoromethane	11/06/19	2.5	0.5	UG/L	
Methyl chloride	11/06/19	0.3	0.5	UG/L	J
1,1-Dichloroethane	12/04/19	0.33	0.5	UG/L	J
1,1-Dichloroethylene	12/04/19	0.32	0.5	UG/L	J
524.2 TVOC	12/04/19	3.05	0	UG/L	
Dichlorodifluoromethane	12/04/19	2.4	0.5	UG/L	

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Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	03/25/19	4.1	0.5	UG/L	
1,1-Dichloroethane	03/25/19	1.1	0.5	UG/L	
1,1-Dichloroethylene	03/25/19	11	0.5	UG/L	
524.2 TVOC	03/25/19	24.1	0	UG/L	
Chloroform	03/25/19	1.3	0.5	UG/L	
Dichlorodifluoromethane	03/25/19	5	0.5	UG/L	
Trichloroethylene	03/25/19	1.6	0.5	UG/L	
1,1,1-Trichloroethane	03/26/19	5.2	0.5	UG/L	
1,1-Dichloroethane	03/26/19	1.1	0.5	UG/L	
1,1-Dichloroethylene	03/26/19	12	0.5	UG/L	
524.2 TVOC	03/26/19	26.7	0	UG/L	
Chloroform	03/26/19	1.4	0.5	UG/L	
Dichlorodifluoromethane	03/26/19	5.4	0.5	UG/L	
Trichloroethylene	03/26/19	1.6	0.5	UG/L	
1,1,1-Trichloroethane	03/27/19	3.9	0.5	UG/L	
1,1-Dichloroethane	03/27/19	0.92	0.5	UG/L	
1,1-Dichloroethylene	03/27/19	8.4	0.5	UG/L	
524.2 TVOC	03/27/19	21.02	0	UG/L	
Chloroform	03/27/19	1.4	0.5	UG/L	
Dichlorodifluoromethane	03/27/19	5.1	0.5	UG/L	
Trichloroethylene	03/27/19	1.3	0.5	UG/L	
1,1,1-Trichloroethane	03/28/19	5.1	0.5	UG/L	
1,1-Dichloroethane	03/28/19	1.1	0.5	UG/L	
1,1-Dichloroethylene	03/28/19	12	0.5	UG/L	
524.2 TVOC	03/28/19	25.7	0	UG/L	
Chloroform	03/28/19	1.4	0.5	UG/L	
Dichlorodifluoromethane	03/28/19	4.5	0.5	UG/L	
Trichloroethylene	03/28/19	1.6	0.5	UG/L	
1,1,1-Trichloroethane	03/29/19	5.1	0.5	UG/L	
1,1-Dichloroethane	03/29/19	1.1	0.5	UG/L	
1,1-Dichloroethylene	03/29/19	11	0.5	UG/L	
524.2 TVOC	03/29/19	24.2	0	UG/L	
Chloroform	03/29/19	1.4	0.5	UG/L	
Dichlorodifluoromethane	03/29/19	4.1	0.5	UG/L	
Trichloroethylene	03/29/19	1.5	0.5	UG/L	
Perfluorobutanesulfonate (PFBS)	04/01/19	1.03	1.57	NG/L	J
Perfluorobutyric acid (PFBA)	04/01/19	5.47	1.76	NG/L	
Perfluorohexanesulfonate (PFHxS)	04/01/19	3.75	1.6	NG/L	
Perfluorohexanoic acid (PFHxA)	04/01/19	0.701	1.76	NG/L	J
Perfluorooctanesulfonate (PFOS)	04/01/19	2.16	1.76	NG/L	
Perfluorooctanoic acid (PFOA)	04/01/19	1.26	1.76	NG/L	J
Perfluoropentanesulfonate (PFPeS)	04/01/19	0.633	1.65	NG/L	J
1,1,1-Trichloroethane	04/01/19	5.3	0.5	UG/L	
1,1-Dichloroethane	04/01/19	1.1	0.5	UG/L	
1,1-Dichloroethylene	04/01/19	10	0.5	UG/L	
524.2 TVOC	04/01/19	23.9	0	UG/L	
Chloroform	04/01/19	1.5	0.5	UG/L	
Dichlorodifluoromethane	04/01/19	4.4	0.5	UG/L	
Trichloroethylene	04/01/19	1.6	0.5	UG/L	
1,1,1-Trichloroethane	04/09/19	4.6	0.5	UG/L	
1,1-Dichloroethane	04/09/19	0.98	0.5	UG/L	
1,1-Dichloroethylene	04/09/19	8.9	0.5	UG/L	

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Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	03/25/19	4.1	0.5	UG/L	
524.2 TVOC	04/09/19	21.78	0	UG/L	
Chloroform	04/09/19	1.5	0.5	UG/L	
Dichlorodifluoromethane	04/09/19	4.3	0.5	UG/L	
Trichloroethylene	04/09/19	1.5	0.5	UG/L	
1,1,1-Trichloroethane	04/16/19	4.2	0.5	UG/L	
1,1-Dichloroethane	04/16/19	0.9	0.5	UG/L	
1,1-Dichloroethylene	04/16/19	8	0.5	UG/L	
524.2 TVOC	04/16/19	19.8	0	UG/L	
Chloroform	04/16/19	1.4	0.5	UG/L	
Dichlorodifluoromethane	04/16/19	3.8	0.5	UG/L	
Trichloroethylene	04/16/19	1.5	0.5	UG/L	
1,1,1-Trichloroethane	04/23/19	3.6	0.5	UG/L	
1,1-Dichloroethane	04/23/19	0.8	0.5	UG/L	
1,1-Dichloroethylene	04/23/19	6.8	0.5	UG/L	
524.2 TVOC	04/23/19	17.1	0	UG/L	
Chloroform	04/23/19	1.4	0.5	UG/L	
Dichlorodifluoromethane	04/23/19	3.1	0.5	UG/L	
Trichloroethylene	04/23/19	1.4	0.5	UG/L	
1,1,1-Trichloroethane	05/01/19	3.2	0.5	UG/L	
1,1-Dichloroethane	05/01/19	0.68	0.5	UG/L	
1,1-Dichloroethylene	05/01/19	5.7	0.5	UG/L	
524.2 TVOC	05/01/19	14.58	0	UG/L	
Chloroform	05/01/19	1.3	0.5	UG/L	
Dichlorodifluoromethane	05/01/19	2.4	0.5	UG/L	
Trichloroethylene	05/01/19	1.3	0.5	UG/L	
1,1,1-Trichloroethane	05/14/19	2.9	0.5	UG/L	
1,1-Dichloroethane	05/14/19	0.63	0.5	UG/L	
1,1-Dichloroethylene	05/14/19	5.2	0.5	UG/L	
524.2 TVOC	05/14/19	13.23	0	UG/L	
Chloroform	05/14/19	1.2	0.5	UG/L	
Dichlorodifluoromethane	05/14/19	2.2	0.5	UG/L	
Trichloroethylene	05/14/19	1.1	0.5	UG/L	
1,1,1-Trichloroethane	06/06/19	3	0.5	UG/L	
1,1-Dichloroethane	06/06/19	0.6	0.5	UG/L	
1,1-Dichloroethylene	06/06/19	4.8	0.5	UG/L	
524.2 TVOC	06/06/19	11.7	0	UG/L	
Chloroform	06/06/19	1.2	0.5	UG/L	
Dichlorodifluoromethane	06/06/19	1.1	0.5	UG/L	
Trichloroethylene	06/06/19	1	0.5	UG/L	
1,1,1-Trichloroethane	06/19/19	3.1	0.5	UG/L	
1,1-Dichloroethane	06/19/19	0.57	0.5	UG/L	
1,1-Dichloroethylene	06/19/19	4.7	0.5	UG/L	
524.2 TVOC	06/19/19	11.63	0	UG/L	
Chloroform	06/19/19	1.2	0.5	UG/L	
Dichlorodifluoromethane	06/19/19	1.1	0.5	UG/L	
Trichloroethylene	06/19/19	0.96	0.5	UG/L	
1,1,1-Trichloroethane	07/03/19	3.5	0.5	UG/L	
1,1-Dichloroethane	07/03/19	0.56	0.5	UG/L	
1,1-Dichloroethylene	07/03/19	5.2	0.5	UG/L	
524.2 TVOC	07/03/19	12.72	0	UG/L	
Chloroform	07/03/19	1.2	0.5	UG/L	
Dichlorodifluoromethane	07/03/19	1.3	0.5	UG/L	
Trichloroethylene	07/03/19	0.96	0.5	UG/L	
1,1,1-Trichloroethane	07/18/19	3.4	0.5	UG/L	
1,1-Dichloroethane	07/18/19	0.53	0.5	UG/L	
1,1-Dichloroethylene	07/18/19	4.9	0.5	UG/L	
524.2 TVOC	07/18/19	12.03	0	UG/L	
Chloroform	07/18/19	1.1	0.5	UG/L	

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Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	03/25/19	4.1	0.5	UG/L	
Dichlorodifluoromethane	07/18/19	1.1	0.5	UG/L	
Trichloroethylene	07/18/19	1	0.5	UG/L	
1,1,1-Trichloroethane	08/20/19	4	0.5	UG/L	
1,1-Dichloroethane	08/20/19	0.59	0.5	UG/L	
1,1-Dichloroethylene	08/20/19	5	0.5	UG/L	
524.2 TVOC	08/20/19	12.77	0	UG/L	
Chloroform	08/20/19	0.9	0.5	UG/L	
Dichlorodifluoromethane	08/20/19	1.4	0.5	UG/L	
Trichloroethylene	08/20/19	0.88	0.5	UG/L	
1,1,1-Trichloroethane	09/04/19	3.7	0.5	UG/L	
1,1-Dichloroethane	09/04/19	0.48	0.5	UG/L	J
1,1-Dichloroethylene	09/04/19	4.3	0.5	UG/L	
524.2 TVOC	09/04/19	11.4	0	UG/L	
Chloroform	09/04/19	0.92	0.5	UG/L	
Dichlorodifluoromethane	09/04/19	1.1	0.5	UG/L	
Trichloroethylene	09/04/19	0.9	0.5	UG/L	
1,1,1-Trichloroethane	09/18/19	2.6	0.5	UG/L	
1,1-Dichloroethane	09/18/19	0.42	0.5	UG/L	J
1,1-Dichloroethylene	09/18/19	3.7	0.5	UG/L	
524.2 TVOC	09/18/19	9.75	0	UG/L	
Chloroform	09/18/19	0.99	0.5	UG/L	
Dichlorodifluoromethane	09/18/19	0.84	0.5	UG/L	
Trichloroethylene	09/18/19	1.2	0.5	UG/L	
1,4-Dioxane	09/18/19	4.6	0.2	UG/L	
1,1,1-Trichloroethane	10/01/19	3.7	0.5	UG/L	
1,1-Dichloroethane	10/01/19	0.59	0.5	UG/L	
1,1-Dichloroethylene	10/01/19	5.6	0.5	UG/L	
524.2 TVOC	10/01/19	12.98	0	UG/L	
Chloroform	10/01/19	0.89	0.5	UG/L	
Dichlorodifluoromethane	10/01/19	1.3	0.5	UG/L	
Trichloroethylene	10/01/19	0.9	0.5	UG/L	
1,1,1-Trichloroethane	10/16/19	3	0.5	UG/L	
1,1-Dichloroethane	10/16/19	0.57	0.5	UG/L	
1,1-Dichloroethylene	10/16/19	4.4	0.5	UG/L	
524.2 TVOC	10/16/19	11.64	0	UG/L	
Chloroform	10/16/19	0.97	0.5	UG/L	
Dichlorodifluoromethane	10/16/19	1.5	0.5	UG/L	
Trichloroethylene	10/16/19	1.2	0.5	UG/L	
1,1,1-Trichloroethane	11/06/19	3.1	0.5	UG/L	
1,1-Dichloroethane	11/06/19	0.46	0.5	UG/L	J
1,1-Dichloroethylene	11/06/19	4.7	0.5	UG/L	
524.2 TVOC	11/06/19	11.58	0	UG/L	
Chloroform	11/06/19	0.86	0.5	UG/L	
Dichlorodifluoromethane	11/06/19	1.2	0.5	UG/L	
Methyl chloride	11/06/19	0.42	0.5	UG/L	J
Trichloroethylene	11/06/19	0.84	0.5	UG/L	
1,1,1-Trichloroethane	12/04/19	3	0.5	UG/L	
1,1-Dichloroethane	12/04/19	0.45	0.5	UG/L	J
1,1-Dichloroethylene	12/04/19	4.4	0.5	UG/L	
524.2 TVOC	12/04/19	10.45	0	UG/L	
Chloroform	12/04/19	0.87	0.5	UG/L	
Dichlorodifluoromethane	12/04/19	0.91	0.5	UG/L	
Trichloroethylene	12/04/19	0.82	0.5	UG/L	

Table F-21
Air Stripper Effluent Data
OU III Western South Boundary System

2019 BNL Groundwater Status Report

Site ID : 119-05 (Effluent)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
524.2 TVOC	01/22/19	0	0	UG/L	
524.2 TVOC	02/06/19	0	0	UG/L	
524.2 TVOC	03/13/19	0	0	UG/L	
524.2 TVOC	03/25/19	0	0	UG/L	
524.2 TVOC	03/26/19	0.26	0	UG/L	
Chloroform	03/26/19	0.26	0.5	UG/L	J
524.2 TVOC	03/27/19	0	0	UG/L	
524.2 TVOC	03/28/19	0	0	UG/L	
524.2 TVOC	03/29/19	0	0	UG/L	
Perfluorobutanesulfonate (PFBS)	04/01/19	1.49	1.54	NG/L	J
Perfluorobutyric acid (PFBA)	04/01/19	6.95	1.73	NG/L	
Perfluoroheptanoic acid (PFHpA)	04/01/19	0.745	1.73	NG/L	J
Perfluorohexanesulfonate (PFHxS)	04/01/19	16.8	1.58	NG/L	
Perfluorohexanoic acid (PFHxA)	04/01/19	3.34	1.73	NG/L	
Perfluorooctanesulfonate (PFOS)	04/01/19	7.57	1.73	NG/L	
Perfluorooctanoic acid (PFOA)	04/01/19	4.11	1.73	NG/L	
Perfluoropentanesulfonate (PFPeS)	04/01/19	1.5	1.63	NG/L	J
Perfluoropentanoic acid (PFPeA)	04/01/19	0.968	1.73	NG/L	J
524.2 TVOC	04/01/19	0	0	UG/L	
524.2 TVOC	04/09/19	0	0	UG/L	
524.2 TVOC	04/16/19	0	0	UG/L	
524.2 TVOC	04/23/19	0	0	UG/L	
524.2 TVOC	05/01/19	0	0	UG/L	
524.2 TVOC	05/14/19	0	0	UG/L	
524.2 TVOC	06/06/19	0	0	UG/L	
524.2 TVOC	06/19/19	0	0	UG/L	
524.2 TVOC	07/03/19	0	0	UG/L	
524.2 TVOC	09/18/19	0	0	UG/L	
1,4-Dioxane	09/18/19	4.33	0.2	UG/L	
524.2 TVOC	10/01/19	0	0	UG/L	
524.2 TVOC	10/16/19	0	0	UG/L	
524.2 TVOC	11/06/19	0	0	UG/L	

Site ID : 095-270 (Effluent)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
524.2 TVOC	05/01/19	0	0	UG/L	
524.2 TVOC	05/14/19	0	0	UG/L	
524.2 TVOC	07/17/19	0	0	UG/L	
524.2 TVOC	07/18/19	0	0	UG/L	
524.2 TVOC	08/20/19	0.21	0	UG/L	
Methyl chloride	08/20/19	0.21	0.5	UG/L	J
524.2 TVOC	09/04/19	0	0	UG/L	

Table F-22
OU III Western South Boundary System
Cumulative Mass Removal

2019 BNL Groundwater Status Report

Date Sampled	Total VOCs (µg/L)	Flow Rates (gpm)	Cumulative VOCs (lbs)
3/29/19	24.2	54	144.99
4/23/19	17.1	420	149.98
5/14/19	13.23	462	151.82
6/19/19	11.63	470	153.41
7/18/19	12.03	291	154.45
8/20/19	12.77	134	154.69
9/18/19	9.75	229	155.39
10/16/19	11.64	405	156.12
11/6/19	11.58	317	156.65
12/4/19	10.45	413	157.27

NOTES:

µg/L - Micrograms per liter

gpm - Gallons per minute

lbs - Pounds

TABLE F-23
TVOC Influent, Effluent and Efficiency Performance
OU III Industrial Park System

2019 BNL Groundwater Status Report

Date	UVB1			UVB2			UVB3			UVB4			UVB5			UVB6			UVB7		
	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency
Units	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)
09/29/99	1900.00	184.42	90.29	70.02	3.03	95.67	49.45	3.08	93.77	158.10	10.70	93.23	284.50	29.19	89.74	90.69	1.97	97.83	NS	NS	0.00
10/07/99	1352.98	97.69	92.78	71.48	3.08	95.69	25.38	3.44	86.45	110.38	8.38	92.41	315.10	33.77	89.28	89.13	9.73	89.08	NS	NS	0.00
10/12/99	1485.00	59.78	95.97	94.75	2.12	97.76	20.11	2.23	88.91	92.28	6.75	92.69	359.44	31.23	91.31	96.88	1.70	98.25	NS	NS	0.00
10/19/99	820.50	52.42	93.61	875.60	39.47	95.49	19.59	1.91	90.25	84.58	5.96	92.95	230.58	29.94	87.02	98.78	1.50	98.48	NS	NS	0.00
10/26/99	730.22	47.73	93.46	571.49	25.18	95.59	18.56	1.15	93.80	77.02	4.10	94.68	192.19	25.99	86.48	90.21	1.39	98.46	NS	NS	0.00
11/2/1999 ^s	608.70	23.48	96.14	461.20	11.25	97.56	16.26	1.63	89.98	72.14	4.73	93.44	181.98	22.39	87.70	95.15	1.78	98.13	43.62	4.79	89.02
11/9/1999 ^d	574.00	26.60	95.37	420.50	8.95	97.87	15.62	1.09	93.02	69.44	3.92	94.35	170.97	21.01	87.71	NS	NS	-	32.12	2.58	91.97
11/16/1999 ^r	602.30	36.06	94.01	383.30	14.05	96.33	23.37	0.92	96.06	77.12	3.49	95.47	181.90	23.91	86.86	NS	NS	-	38.06	6.43	83.11
11/23/1999 ^{sa}	461.18	15.28	96.69	245.86	7.25	97.05	19.58	2.13	89.12	63.16	4.43	92.99	143.04	16.23	88.65	NS	NS	-	32.92	6.92	78.98
12/7/1999 ^s	410.00	27.07	93.40	265.80	11.10	95.82	14.41	0.00	100.00	62.33	4.42	92.91	152.74	16.90	88.94	133.08	12.53	90.58	35.90	4.82	86.57
12/14/99	394.00	23.80	93.96	212.40	6.80	96.80	18.36	0.00	100.00	62.40	3.48	94.42	157.11	20.64	86.86	89.82	5.83	93.51	33.41	3.49	89.55
12/21/99	459.00	27.36	94.04	193.20	6.10	96.84	18.01	0.00	100.00	62.09	3.55	94.28	154.30	16.30	89.44	**	4.85	-	84.61	2.37	97.20
01/27/00	85.26	33.14	61.13	125.69	6.48	94.84	18.23	1.26	93.09	70.91	5.67	92.00	161.47	22.44	86.10	84.33	9.92	88.24	34.94	4.18	88.04
02/24/00	106.56	25.44	76.13	126.18	7.90	93.74	23.82	4.65	80.48	80.78	10.78	86.66	69.66	25.73	63.06	75.02	10.17	86.44	37.31	3.10	91.69
03/20/00	439.47	27.69	93.70	138.15	9.69	92.99	21.41	1.78	91.69	94.02	8.62	90.83	219.34	16.19	92.62	71.94	4.11	94.29	34.30	2.44	92.89
04/18/00	238.38	23.18	90.28	126.68	7.84	93.81	26.01	1.78	93.16	92.87	8.16	91.21	195.77	19.70	89.94	65.93	5.48	91.69	33.06	2.26	93.16
05/16/00	375.40	16.50	95.60	92.10	7.80	91.53	24.90	1.60	93.57	117.60	5.30	95.49	195.10	19.70	89.90	67.60	3.10	95.41	29.90	1.10	96.32
06/14/00	349.00	18.30	94.76	158.90	6.40	95.97	27.30	1.30	95.24	103.10	8.20	92.05	236.50	15.80	93.32	63.60	1.60	97.48	27.30	0.90	96.70
07/24/00	319.10	25.70	91.95	157.30	7.30	95.36	28.10	1.80	93.59	106.10	9.60	90.95	234.00	19.60	91.62	69.30	1.60	97.69	30.00	0.80	97.33
08/15/00	282.00	27.80	90.14	175.60	8.80	94.99	28.80	1.90	93.40	143.80	10.90	92.42	196.10	18.40	90.62	59.80	1.80	96.99	27.10	0.80	97.05
09/19/00	272.60	20.70	92.41	203.70	8.90	95.63	28.20	1.70	93.97	101.60	6.80	93.31	NS	NS		56.50	2.50	95.58	49.10	1.20	97.56
10/24/00	41.10	15.00	63.50	156.90	10.40	93.37	27.70	0.00	100.00	101.10	6.80	93.27	431.10	30.60	92.90	65.20	2.20	96.63	58.80	0.00	100.00
11/13/00	185.20	15.10	91.85	153.70	11.20	92.71	33.30	0.00	100.00	85.50	10.50	87.72	274.80	23.70	91.38	70.50	0.00	100.00	73.90	0.00	100.00
12/19/00	259.50	14.60	94.37	206.60	8.50	95.89	NS	NS		NS	NS		299.40	24.40	91.85	52.50	2.40	95.43	39.10	0.00	100.00
01/24/01	200.00	12.50	93.75	242.90	12.60	94.81	45.60	1.70	96.27	124.80	4.00	96.79	326.60	22.20	93.20	96.40	4.30	95.54	44.40	3.30	92.57
02/26/01	149.20	10.10	93.23	232.10	12.00	94.83	54.60	3.30	93.96	129.80	7.10	94.53	299.20	23.00	92.31	91.20	4.50	95.07	44.20	2.80	93.67
03/20/01	157.10	8.10	94.84	230.80	12.30	94.67	53.00	3.40	93.58	120.80	4.00	96.69	NS	NS		102.90	4.40	95.72	41.00	3.20	92.20
04/19/01	124.90	5.30	95.76	230.50	12.00	94.79	59.80	5.20	91.30	154.70	7.40	95.22	306.40	23.20	92.43	122.20	4.80	96.07	46.40	3.30	92.89
05/29/01	72.81	5.99	91.77	173.20	13.31	92.32	64.49	5.55	91.39	162.34	9.29	94.28	291.82	21.19	92.74	105.34	5.20	95.06	43.86	3.53	91.95
06/26/01	73.25	6.82	90.69	232.85	17.21	92.61	58.15	5.70	90.20	145.44	5.40	96.29	228.30	18.99	91.68	111.77	6.74	93.97	48.51	4.87	89.96
07/31/01	73.25	6.82	90.69	232.85	17.21	92.61	58.15	5.70	90.20	145.44	5.40	96.29	228.30	18.99	91.68	111.77	6.74	93.97	48.51	4.87	89.96
08/31/01	73.25	6.82	90.69	232.85	17.21	92.61	58.15	5.70	90.20	145.44	5.40	96.29	228.30	18.99	91.68	111.77	6.74	93.97	48.51	4.87	89.96
09/30/01	73.25	6.82	90.69	232.85	17.21	92.61	58.15	5.70	90.20	145.44	5.40	96.29	228.30	18.99	91.68	111.77	6.74	93.97	48.51	4.87	89.96
10/02/01	67.76	5.93	91.25	254.28	15.84	93.77	74.34	8.21	88.96	155.95	18.55	88.11	312.77	14.69	95.30	117.30	5.94	94.94	41.93	2.98	92.89
11/02/01	58.61	6.19	89.44	238.11	19.32	91.89	96.97	10.16	89.52	205.18	13.59	93.38	420.87	19.73	95.31	160.04	7.14	95.54	73.21	3.40	95.36
12/19/01	56.33	3.19	94.34	172.19	17.36	89.92	63.98	4.22	93.40	151.04	14.66	90.29	303.89	15.26	94.98	141.04	5.15	96.35	82.96	4.31	94.80
01/14/02	42.71	3.07	92.81	181.37	14.56	91.97	70.28	4.47	93.64	145.98	19.39	86.72	321.73	20.69	93.57	132.80	5.46	95.89	62.07	3.32	94.65
02/25/02	25.64	2.62	89.78	208.09	15.21	92.69	66.69	5.34	91.99	134.41	17.81	86.75	278.49	14.41	94.83	152.11	6.51	95.72	63.16	4.22	93.32
03/25/02	12.32	1.59	87.09	191.99	15.17	92.10	60.15	4.64	92.29	117.92	15.04	87.25	243.94	8.88	96.36	136.04	6.43	95.27	55.36	4.49	91.89
04/30/02	0.00	0.00	0.00	224.95	16.80	92.53	82.43	6.30	92.36	111.75	18.13	83.78	281.15	13.96	95.03	138.72	6.88	95.04	57.88	4.15	92.83
05/29/02	0.00	0.00	0.00	174.95	17.26	90.13	72.81	7.38	89.86	111.48	15.52	86.08	247.56	13.77	94.44	145.59	7.99	94.51	60.89	6.46	89.39
06/26/02	9.31	1.17	87.43	207.51	18.40	91.13	64.07	5.21	91.87	95.49	13.02	86.37	216.80	9.69	95.53	131.10	6.07	95.37	55.57	4.64	91.65
07/25/02	21.66	2.38	89.01	210.54	18.25	91.33	70.55	6.64	90.59	94.05	7.19	92.36	226.54	6.87	96.97	148.11	5.95	95.98	48.51	4.41	90.91

TABLE F-23
TVOC Influent, Effluent and Efficiency Performance
OU III Industrial Park System

2019 BNL Groundwater Status Report

Date	UVB1			UVB2			UVB3			UVB4			UVB5			UVB6			UVB7		
	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency
Units	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)
08/27/02	27.80	2.52	90.94	218.79	19.17	91.24	64.52	7.63	88.17	95.05	11.87	87.51	212.32	7.72	96.36	145.48	5.58	96.16	65.36	3.96	93.94
09/23/02	22.42	1.66	92.60	239.94	20.13	91.61	73.34	6.22	91.52	100.22	9.40	90.62	207.98	15.28	92.65	158.22	4.10	97.41	65.36	3.96	93.94
10/29/02	18.55	1.82	90.19	197.88	15.79	92.02	127.93	11.72	90.84	88.12	11.27	87.21	338.48	3.57	98.95	146.42	4.57	96.88	65.36	0.30	99.54
11/19/02	14.40	0.00	100.00	154.00	13.20	91.43	66.30	5.30	92.01	100.90	5.30	94.75	168.10	11.40	93.22	146.42	4.57	96.88	61.60	0.00	100.00
12/19/02	15.30	0.00	100.00	155.00	10.20	93.42	52.70	4.40	91.65	87.40	4.40	94.97	146.50	10.50	92.83	146.42	4.57	96.88	56.90	0.80	98.59
01/29/03	9.8	0	100.00	188.2	14	92.56	51.8	3.7	92.86	103.2	9.5	90.79	168.7	8.9	94.72	185	6.8	96.32	61	2.1	96.56
02/25/03	7.3	0.7	90.41	157.2	10.4	93.38	57.2	4.8	91.61	92.7	11.2	87.92	188.4	11.3	94.00	144	8.4	94.17	54.4	1.8	96.69
03/20/03	6.1	0	100.00	129.5	10.5	91.89	58.2	4.8	91.75	93.6	13.1	86.00	154.4	9.5	93.85	148.7	10.1	93.21	58.7	2.7	95.40
04/30/03	7.1	0	100.00	133.7	10.2	92.37	41.7	2.9	93.05	79.2	11.1	85.98	127.6	12	90.60	101.7	7.3	92.82	34.1	0.9	97.36
05/31/03	7.1	0	100.00	123.6	10.5	91.50	51.7	5.1	90.14	87.3	12.9	85.22	144	14.9	89.65	183	8	95.63	50.4	2	96.03
06/30/03	4.6	1	78.26	176.5	10.2	94.22	46	4.9	89.35	79	11.3	85.70	134.9	13.6	89.92	146.8	10.3	92.98	50.6	2.1	95.85
07/31/03	5.4	1.2	77.78	153.1	14.6	90.46	2.2	0	100.00	73	13.3	81.78	147.3	13.9	90.56	153.1	13.5	91.18	51.7	1.8	96.52
08/31/03	5.7	0.9	84.21	158.8	16.6	89.55	49.8	5.6	88.76	68.2	13.2	80.65	121.8	13.2	89.16	132.1	14	89.40	46.9	1	97.87
09/30/03	5	0	100.00	158.8	16.6	89.55	49.3	5.2	89.45	61.9	12.5	79.81	121.7	12.5	89.73	124.7	12	90.38	54.1	0.8	98.52
10/31/03	2.16	0	100.00	132.79	14.53	89.06	42.87	4.01	90.65	49.7	9.82	80.24	99.74	10.8	89.17	110.23	10.66	90.33	35.98	0.98	97.28
11/30/03	3.79	0	100.00	226.15	20.3	91.02	33.86	2.88	91.49	46.57	9.35	79.92	97.64	10.75	88.99	103.49	10.59	89.77	40.4	1.5	96.29
12/31/03	1.99	0	100.00	361	74.4	79.39	36.7	3.03	91.74	48.42	8	83.48	92.79	10.56	88.62	105.01	7.39	92.96	45.21	0.76	98.32
01/26/04	1.99	0.00	100.00	151.26	23.04	84.77	36.7	3.03	91.74	46.33	8.08	82.56	86.35	10.27	88.11	100.20	14.96	85.07	NA	NA	NA
02/25/04	1.99	0.73	63.32	149.61	13.53	90.96	36.7	3.03	91.74	46.33	17.54	62.14	99.76	10.28	89.70	106.66	9.28	91.30	70.37	1.58	97.75
03/24/04	2.06	0.69	66.50	133.38	12.63	90.53	36.7	3.03	91.74	44.82	14.33	68.03	77.91	11.86	84.78	88.61	8.02	90.95	70.37	1.58	97.75
04/27/04	1.53	1.10	28.10	100.13	17.10	82.92	36.7	3.03	91.74	47.43	12.70	73.22	77.91	11.86	84.78	96.83	11.27	88.36	66.79	3.42	94.88
05/27/04	3.65	1.12	69.32	123.20	16.54	86.57	36.7	3.03	91.74	47.88	12.70	73.48	77.91	11.86	84.78	99.49	12.09	87.85	65.11	4.15	93.63
06/29/04	4.59	4.10	10.68	123.20	21.02	82.94	124.00	14.14	88.60	47.54	9.50	80.02	91.17	14.42	84.18	82.67	10.87	86.85	58.85	3.69	93.73
07/23/04	4.59	4.10	10.68	NA	NA	NA	56.04	5.32	90.51	47.54	9.50	80.02	91.17	14.42	84.18	82.67	10.87	86.85	58.85	3.69	93.73
08/26/04	2.96	0.22	92.53	190.88	0.00	100.00	56.04	5.32	90.51	43.70	9.43	78.42	91.17	12.78	85.98	36.75	13.28	63.86	55.34	2.29	95.86
09/21/04	3.06	0.25	91.83	190.88	0.00	100.00	56.04	5.32	90.51	46.90	12.38	73.60	89.51	9.95	88.88	91.49	9.91	89.17	54.95	2.43	95.58
10/26/04	2.82	0.13	95.39	190.88	0.00	100.00	52.13	5.50	89.45	37.35	9.00	75.90	97.02	12.62	86.99	67.00	8.21	87.75	51.39	3.08	94.01
11/23/04	1.89	0.00	100.00	NA	NA	NA	52.13	5.50	89.45	34.74	9.87	71.59	60.84	11.50	81.10	64.01	6.92	89.19	52.40	2.77	94.71
12/15/04	5.49	0.00	100.00	190.88	0.00	100.00	52.13	5.50	89.45	36.32	9.60	73.57	92.09	12.41	86.52	65.59	7.08	89.21	57.16	2.77	95.15
01/31/05	3.34	0.66	80.24	115.00	10.00	91.30	54.51	5.04	90.75	41.12	9.80	76.17	81.30	10.53	87.05	42.18	7.77	81.58	59.11	4.22	92.86
02/28/05	2.77	0.33	88.09	40.40	1.81	95.52	51.00	4.20	91.76	41.12	9.80	76.17	26.91	1.51	94.39	24.45	7.01	71.33	20.60	3.53	82.86
03/31/05	2.20	0.00	100.00	40.40	1.81	95.52	47.70	3.84	91.95	41.12	9.80	76.17	79.31	14.50	81.72	98.59	8.58	91.30	62.83	4.15	93.39
04/30/05	2.2	0.00	100.00	40.40	1.81	95.52	35.14	3.44	90.21	41.12	9.80	76.17	105.42	9.06	91.41	86.16	6.25	92.75	47.5	3.1	93.47
05/31/05	2.2	0.00	100.00	40.40	1.81	95.52	48.07	2.95	93.86	41.12	9.80	76.17	81.43	10.23	87.44	79.35	7.36	90.72	47.5	3.1	93.47
6/31/2005	2.2	0.00	100.00	40.40	1.81	95.52	48.64	3.15	93.52	41.12	9.80	76.17	75	11.19	85.08	139.7	7.54	94.60	47.5	3.1	93.47
07/31/05	1.49	0.07	95.30	160	10	93.75	50	3	94.00	51	3.5	93.14	100	17.5	82.5	78.6	8.4	89.31	95	3	96.84
08/31/05	1.49	0.07	95.30	160	10	93.75	50	3	94.00	51	3.5	93.14	100	17.5	82.5	74	5.52	92.54	95	3	96.84
09/30/05	1.49	0.07	95.30	160	10	93.75	50	3	94.00	51	3.5	93.14	100	17.5	82.5	80.71	6.55	91.88	95	3	96.84
10/31/05	1.49	0.07	95.30	182.00	10.00	94.51	56.53	8.06	85.74	1.67	0.87	47.90	124.34	17.49	85.93	70.06	6.55	90.65	143.91	6.38	95.57
11/30/05	1.00	0.00	100.00	204.71	10.57	94.84	72.90	7.71	89.42	0.65	0.42	35.38	116.55	12.04	89.67	72.11	6.49	91.00	101.44	5.08	94.99
12/31/05	1.49	0.07	95.30	204.71	10.57	94.84	56.67	8.41	85.16	0.27	0.16	40.74	104.44	10.36	90.08	71.47	4.58	93.59	81.23	3.22	96.04
01/31/06	1.57	0.19	87.90	295.58	17.48	94.09	52.82	7.78	85.27	5.67	0.32	94.36	86.11	9.57	88.89	64.60	5.19	91.97	53.82	2.33	95.67
02/28/06	1.65	0.2	87.88	270.80	19.18	92.92	55.59	7.80	85.97	3.50	0.30	91.43	90.83	9.90	89.10	68.19	5.35	92.15	55.49	2.38	95.71
03/31/06	1.85	0.33	82.16	246.02	20.89	91.51	58.36	7.92	86.43	0.33	0.29	12.12	95.56	10.23	89.29	71.77	5.51	92.32	57.16	2.42	95.77

TABLE F-23
TVOC Influent, Effluent and Efficiency Performance
OU III Industrial Park System

2019 BNL Groundwater Status Report

Date	UVB1			UVB2			UVB3			UVB4			UVB5			UVB6			UVB7		
	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency
Units	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)
04/30/06	2.13	0.43	79.81	549.90	47.15	91.43	65.47	10.55	83.89	6.47	0.64	90.11	83.28	12.03	85.55	67.18	7.17	89.33	54.68	2.14	96.09
05/31/06	2.10	0.62	70.48	343.56	25.48	92.58	59.23	10.57	82.15	0.77	0.31	59.74	83.17	11.12	86.63	62.12	5.55	91.07	49.15	3.00	93.90
06/30/06	1.53	0.70	54.25	269.81	129.00	52.19	62.59	9.66	84.57	1.30	0.35	73.08	76.55	8.65	88.70	57.48	4.54	92.10	43.53	2.81	93.54
07/31/06	2.19	0.79	63.93	244.73	34.89	85.74	73.36	12.79	82.57	6.20	0.40	93.55	84.98	10.62	87.50	55.36	5.11	90.77	44.72	3.38	92.44
08/31/06	1.87	0.35	81.28	244.73	34.89	85.74	102.84	13.00	87.36	0.60	0.30	50.00	71.05	11.31	84.08	55.29	3.33	93.98	42.00	1.80	95.71
09/30/06	2.07	0.22	89.37	244.73	34.89	85.74	132.32	14.12	89.33	2.24	0.00	100.00	65.90	8.98	86.37	53.35	4.31	91.92	46.83	1.59	96.60
10/31/06	2.18	0.34	84.40	120.00	19.00	84.17	65.20	8.07	87.62	2.00	0.71	64.50	61.65	7.32	88.13	44.49	2.80	93.71	46.83	1.59	96.60
11/30/06	1.19	0.40	66.39	60.00	8.00	86.67	64.78	8.65	86.65	1.53	0.37	75.82	61.65	7.32	88.13	44.49	2.80	93.71	100.96	0.35	99.65
12/31/06	1.99	0.16	91.96	5.17	2.90	43.91	63.36	8.34	86.84	1.65	0.48	70.91	61.65	7.32	88.13	44.49	2.80	93.71	43.68	1.08	97.53
01/31/07	1.75	0.25	85.71	8.40	2.18	74.05	52.83	7.99	84.88	2.76	0.50	81.88	127.06	12.95	89.81	199.58	0.56	99.72	0.58	0.46	20.69
02/28/07	1.43	0.40	72.17	9.66	0.91	90.58	46.28	6.33	86.32	3.88	0.52	86.60	1.95	0.56	71.23	59.02	4.19	92.90	0.60	0.02	96.67
03/31/07	1.60	0.53	66.79	0.45	0.36	20.00	52.97	5.36	89.88	1.07	0.39	63.55	2.32	0.94	59.70	191.48	4.65	97.57	0.74	0.07	90.54
04/30/07	1.48	0.271	81.69	148.61	45.28	69.53	57.22	8.22	85.63	3.88	0.29	92.53	2.32	0.94	99.35	192.80	7.47	96.13	1.96	0.50	74.49
05/30/07	1.48	0.271	81.69	6.02	1.70	71.76	45.11	7.51	83.35	44.79	7.95	82.25	142.76	0.94	88.24	142.76	3.30	97.69	23.83	2.12	91.10
06/30/07	1.48	0.271	81.69	2.60	1.90	26.92	45.33	7.70	83.01	2.81	0.84	70.11	7.95	0.94	88.24	7.95	2.02	74.59	4.26	1.22	71.36
07/31/07	1.48	0.271	81.69	2.60	1.90	26.92	45.33	7.70	83.01	20	5	75	7.95	0.94	88.24	113.95	3.42	97.00	2.13	0.75	64.79
08/31/07	1.48	0.271	81.69	2.42	0.56	76.86	45.33	7.70	83.01	41.68	10.77	74.16	7.95	0.94	88.24	113.95	3.42	97.00	0.79	0.4	49.37
09/30/07	1.48	0.271	81.69	2.42	0.56	76.86	45.33	7.70	83.01	41.68	10.77	74.16	7.95	0.94	88.24	113.95	3.42	97.00	0.79	0.4	49.37
10/31/07	2.00	0.50	75.00	4.38	0.47	89.27	56.88	9.66	83.02	41.60	9.57	77.00	105.00	80.47	23.36	53.51	3.05	94.30	2.57	0.56	78.21
11/30/07	2.00	0.50	75.00	234.51	16.99	92.76	56.88	9.66	83.02	27.94	7.81	72.05	83.32	68.27	18.06	43.02	1.72	96.00	40.79	2.08	94.90
12/31/07	2.63	1.20	54.37	2.00	1.20	40.00	68.44	11.63	83.01	18.91	7.70	59.28	71.52	55.00	23.10	31.09	1.52	95.11	17.92	1.42	92.08
01/31/08	2.42	0.82	66.12	1.3	0.7	46.15	58.13	10.63	81.71	27.2	7.81	71.29	2.93	1.02	65.19	32.29	1.16	96.41	15.43	1.07	93.07
02/28/08	1.66	0.13	92.17	41.27	4.39	89.36	53.8	7.65	85.78	19.6	5.19	73.52	28.59	2.8	90.21	29.17	1.11	96.19	11.16	1.48	86.74
03/31/08	0.88	0.19	78.41	8.65	6.52	24.62	44.46	7.22	83.76	32.51	8.49	73.88	28.59	2.8	90.21	28.89	1.08	96.26	12.81	1.6	87.51
04/30/08	1.70	0.21	87.65	82.30	5.13	93.77	26.03	6.06	76.72	22.01	8.40	61.84	23.73	2.40	89.89	5.37	0.00	100.00	1.01	0.30	70.30
05/31/08	1.22	0.47	61.48	82.30	5.13	93.77	28.84	5.00	82.66	17.20	5.90	65.70	3.83	1.44	62.40	30.59	5.40	82.35	1.01	0.30	70.30
06/30/08	1.22	0.47	61.48	82.30	5.13	93.77	28.84	5.00	82.66	17.20	5.90	65.70	3.83	1.44	62.40	30.59	5.40	82.35	1.01	0.30	70.30
07/31/08	2.14	0.40	81.31	42.62	2.60	93.90	85.00	12.00	85.88	9.10	2.00	78.02	72.00	6.50	90.97	30.00	3.00	90.00	2.00	0.40	80.00
08/31/08	2.14	0.40	81.31	42.62	2.60	93.90	85.00	12.00	85.88	9.10	2.00	78.02	72.00	6.50	90.97	30.00	3.00	90.00	2.00	0.40	80.00
09/30/08	3.06	0.40	86.93	2.91	0.45	84.54	141.90	19.19	86.48	1.06	0.28	73.58	139.85	9.72	93.05	29.74	1.13	96.20	3.06	0.25	91.83
10/31/08	2.34	0.84	64.10	42.29	4.24	89.97	30.30	4.42	85.41	12.40	2.90	76.61	71.00	5.00	92.96	22.24	1.13	94.92	2.34	0.11	95.30
11/30/08	3.06	0.27	91.18	39.10	3.43	91.23	24.16	3.54	85.35	12.50	3.90	68.80	71.00	5.00	92.96	20.71	1.13	94.54	3.06	0.78	74.51
12/31/08	19.31	5.48	71.62	31.00	2.14	93.10	18.24	2.78	84.76	12.50	3.90	68.80	71.00	5.00	92.96	20.71	1.13	94.54	3.06	0.78	74.51
01/31/09	9.90	2.40	75.76	15.00	1.20	92.00	19.00	2.10	88.95	5.46	1.20	78.02	3.10	0.30	90.32	36.86	5.35	85.49	0.70	0.11	84.29
02/28/09	0.63	0.24	62.09	0.44	0.28	36.36	20.80	1.42	93.17	6.27	1.03	83.57	25.24	2.40	90.49	51.33	8.36	83.71	0.49	0.38	23.27
03/31/09	0.90	0.25	72.35	0.21	0.18	14.29	30.01	3.00	90.00	4.74	1.16	75.53	1.63	0.17	89.57	51.33	8.36	83.71	0.39	0.17	56.41
04/30/09	0.83	0.41	50.30	1.01	0.23	77.23	15.69	2.60	83.43	6.44	1.13	82.45	33.43	5.00	85.04	55.00	7.89	85.65	0.62	0.12	80.65
05/31/09	6.21	4.10	33.98	1.96	0.23	88.27	15.25	2.10	86.23	6.07	1.53	74.79	19.61	2.53	87.10	61.38	7.49	87.80	0.77	0.11	85.71
06/30/09	3.81	2.60	31.76	3.53	0.59	83.29	14.44	1.97	86.36	6.04	1.78	70.53	25.70	3.21	87.51	26.62	4.41	83.43	0.88	0.47	46.59
07/31/09	3.14	2.36	24.84	1.36	1.36	0.00	11.75	1.88	84.00	5.40	2.20	59.26	6.22	6.22	0.00	21.08	2.24	89.37	0.74	0.61	17.57
08/31/09	3.56	3.33	6.46	1.45	1.28	11.72	10.52	1.57	85.08	5.64	1.00	82.27	14.90	3.55	76.17	14.18	2.03	85.68	7.58	1.28	83.11
09/30/09	4.82	2.90	39.83	1.45	1.28	11.72	10.56	2.31	78.13	5.49	1.79	67.40	3.89	0.95	75.58	14.43	2.49	82.74	1.16	0.22	81.03
10/31/09	3.73	2.46	34.05	1.62	0.60	62.96	10.56	2.31	78.13	0.93	0.58	37.63	1.79	0.55	69.27	12.78	1.52	88.11	0.35	0.27	22.86
11/30/09	3.86	2.65	31.35	2.06	0.65	68.45	10.56	2.31	78.13	0.60	0.30	50.00	1.99	0.46	76.88	13.64	1.82	86.66	0.66	0.66	0.00

TABLE F-23
TVOC Influent, Effluent and Efficiency Performance
OU III Industrial Park System

2019 BNL Groundwater Status Report

Date	UVB1			UVB2			UVB3			UVB4			UVB5			UVB6			UVB7		
	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency
Units	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)
08/31/13																					
09/30/13																					
10/31/13	1.58			0.47			0.29			3.46			54.02			15.57			0.34		
11/30/13																					
12/31/13																					
01/31/14	1.11			1.08			2.98			3.71			51.14			14.57			0		
02/28/14																					
03/21/14	1.22						6.6	0.81	87.73	3.46	1.01	70.81	17.41	3.78	78.29	8.65	1.28	85.20	0.19	0.18	5.26
04/17/14	1.6			261.92			0.3		100.00	2.86	0.86	69.93	11.26	2.9	74.25	6.55	1.4	78.63	3.07		
05/15/14							1.62	0.86	46.91				8.65	2.37	72.60	4.88	1.01	79.30			
06/17/14							4.038	3.16	21.74				10.18	6.11	39.98	4.68	1.07	77.14			
07/29/14	2.2			10.81						2.58	1.19		14.58	2.33	84.02	4.93	0.72	85.40	2.81		
08/27/14								1.31		2.96	1.28		8.53	1.80	78.90	0.91	0.90	1.10			
09/30/14								0.94		2.44	0.96					0.37	0.30	18.92			
10/29/14				14.38						2.03						0.23	1.27		2.7		
11/30/14																					
12/31/14																					
01/31/15																					
02/28/15																					
03/31/15																					
06/25/15	0.48			3.19			1.87			2.09			33.58			0.66			3.34		
07/22/15	1.058			5.62			3.35			4.16			15.12			1.42			3		
08/28/15							3.33	0.62	81.38	1.77	0.74	58.19	8.18	2.33	71.52	1.08	0.24	77.78	3.32		
09/24/15							1.65	0.57	65.45	1.53	0.7	54.25	5.79	1.89	67.36						
10/29/15	1.09			2			3.66	0.79	78.42	1.64	0.7	57.32	5.42	1.62	70.11	0.43	0.31	27.91	2.65		
11/20/15							3.34	0.65	80.54	1.25	0.64	48.80	7.9	2.11	73.29	0.28	0.19	32.14			
12/23/15							3.28	0.68	79.27	0.91	0.52	42.86	6.3	1.44	77.14	0.29	0.19	34.48			
01/21/16	0.774			1.85			1.53	0.56	63.40	1.11	0.67	39.64	9.56	1.81	81.07	0.40	0.00	100.00	7.36		
02/15/16																					
03/24/16							4.18	0.79	81.10	1.64	0.77	53.05									
04/27/16	0.65			1.92			3.24	0.85	73.77	1.85	1.53	17.30	7.01	1.49	78.74	0.64	0.22	65.63	0.55		
05/25/16							3.90	0.74	81.03	2.05	1.51	26.34	5.60	0.80	85.71	0.35	0.11	68.57			
06/16/16							3.49	0.90	74.21	1.72	0.88	48.84				0.23	0.11	52.17			
07/27/16	0.47			1.61			2.45	0.68	72.24	0.71	0.38	46.48	4.51	0.65	85.59	0.92	0.14	84.78	0.40		
08/24/16							1.25	0.66	47.20	0.94	0.92	2.13	3.63	0.74	79.61	0.48	0.22	54.17			
09/15/16							1.69	0.77	54.44	1.10	0.97	11.82	3.59	0.77	78.55	0.49	0.29	40.82			
10/19/16	1.60			1.34			0.13	0.00	100.00	0.80	0.59	26.25	3.79	0.54	85.75	0.61	0.00	100.00	1.04		
11/22/16							0.52	0.50	3.85	1.16	0.61	47.41	3.25	0.20	93.85	2.06	0.44	78.64			
12/21/16										0.81	0.44	45.68	4.05	0.28	93.09	2.27	0.42	81.50			
01/25/17				1.57						0.75	0.59	21.33	3.55	0.14	96.06	2.06	0.28	86.41	0.00		
04/26/17				1.53			0			1.34			6.98			4.14			0.35		
07/26/17	9.51			1.4			0.12			1.95			16.15			4.27			0.39		
10/26/17	3.6			1.92			0.24			2.08			16.02			4.13			0.1		
01/25/18	0			1.94			0.54			1.65			18.27			2.69			0		

TABLE F-23
TVOC Influent, Effluent and Efficiency Performance
OU III Industrial Park System

2019 BNL Groundwater Status Report

Date	UVB1			UVB2			UVB3			UVB4			UVB5			UVB6			UVB7		
	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency	Inf	Eff	Efficiency
Units	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)	(ug/l)	(ug/l)	(%)
04/05/18	0			1.9			0			1.74			22.76			2.08			0		
07/26/18	1.23			2.17			0.32			1.29			26.09			1.07			0.41		
10/26/18	0.41						0			1.31			26.61			0.46			0		
01/30/19	0						0			0.95			28.01			0			0		
04/17/19	0						0			1.1			24.2			0			0		
07/30/19	0			1.23			0.27			0.74			17.33			0.23			0		
10/30/19	0						0						16.24			0			0		

NOTE: The system was placed in stand-by mode on May 1, 2013 and put back into full time operation in March 2014, and placed in stand-by mode again January 2017

Average Efficiency	NA		NA		NA		NA		NA		NA		NA		NA		NA
1st qtr. 2019 Average Efficiency	NA		NA		NA		NA		NA		NA		NA		NA		NA
2nd qtr. 2019 Average Efficiency	NA		NA		NA		NA		NA		NA		NA		NA		NA
3rd qtr. 2019 Average Efficiency	NA		NA		NA		NA		NA		NA		NA		NA		NA
4th qtr. 2019 Average Efficiency	NA		NA		NA		NA		NA		NA		NA		NA		NA

1st qtr. 2019 AVERAGE SYSTEM EFFICIENCY	NA
2nd qtr. 2019 AVERAGE SYSTEM EFFICIENCY	NA
3rd qtr. 2019 AVERAGE SYSTEM EFFICIENCY	NA
4th qtr. 2019 AVERAGE SYSTEM EFFICIENCY	NA
2019 AVERAGE SYSTEM EFFICIENCY	NA

Wells 1,2 and 7 were not counted in average efficiency as they were on stand-by for the year.

Efficiency Percent = 100 - (effluent concentration/influent concentration) * 100
 NS = Not Sampled
 ** Laboratory lost sample.

TABLE F-24
Cumulative Mass Recovery
OU III Industrial Park System

2019 BNL Groundwater Status Report

Date	UVB1	UVB1	UVB1	UVB2	UVB2	UVB2	UVB3	UVB3	UVB3	UVB4	UVB4	UVB4	UVB5	UVB5	UVB5	UVB6	UVB6	UVB6	UVB7	UVB7	UVB7	Total	Cumulative
	Monthly Total	Total Pumped	Mass Recovered	Monthly Total	Total Pumped	Mass Recovered	Monthly Total	Total Pumped	Mass Recovered	Monthly Total	Total Pumped	Mass Recovered	Monthly Total	Total Pumped	Mass Recovered	Monthly Total	Total Pumped	Mass Recovered	Monthly Total	Total Pumped	Mass Recovered	Mass Recovered	Mass Recovered
		(Gallons)	(lbs)		(Gallons)	(lbs)		(Gallons)	(lbs)		(Gallons)	(lbs)		(Gallons)	(lbs)		(Gallons)	(lbs)		(Gallons)	(lbs)	(lbs)	(lbs)
05/31/19	0	136,203,638	0	0	247,893,471	0	0	345,872,677	0.00	0	392,517,561	0.00	0	370,253,833	0.00	0	411,583,818	0.00	0	244,889,959	0.00	0.00	1065.62
06/30/19	0	136,203,638	0	0	247,893,471	0	0	345,872,677	0.00	0	392,517,561	0.00	0	370,253,833	0.00	0	411,583,818	0.00	0	244,889,959	0.00	0.00	1065.62
07/31/19	0	136,203,638	0	0	247,893,471	0	0	345,872,677	0.00	0	392,517,561	0.00	0	370,253,833	0.00	0	411,583,818	0.00	0	244,889,959	0.00	0.00	1065.62
08/31/19	0	136,203,638	0	0	247,893,471	0	0	345,872,677	0.00	0	392,517,561	0.00	0	370,253,833	0.00	0	411,583,818	0.00	0	244,889,959	0.00	0.00	1065.62
09/29/19	0	136,203,638	0	0	247,893,471	0	0	345,872,677	0.00	0	392,517,561	0.00	0	370,253,833	0.00	0	411,583,818	0.00	0	244,889,959	0.00	0.00	1065.62
10/31/19	0	136,203,638	0	0	247,893,471	0	0	345,872,677	0.00	0	392,517,561	0.00	0	370,253,833	0.00	0	411,583,818	0.00	0	244,889,959	0.00	0.00	1065.62
11/30/19	0	136,203,638	0	0	247,893,471	0	0	345,872,677	0.00	0	392,517,561	0.00	0	370,253,833	0.00	0	411,583,818	0.00	0	244,889,959	0.00	0.00	1065.62
12/31/19	0	136,203,638	0	0	247,893,471	0	0	345,872,677	0.00	0	392,517,561	0.00	0	370,253,833	0.00	0	411,583,818	0.00	0	244,889,959	0.00	0.00	1065.62

1065.62

NOTES: The system was placed in stand-by mode on May 1, 2013 and resumed full time operations in March 2014, and back into stand-by mode in January 2017.

Total from all wells: 1075.06 lbs.

Mass recovered = total gallons pumped * influent concentration (ug/L) * (percent efficiency/100) * 8.4 X 10⁻⁹ (conversion factor)

NO = Not operational

* = Unable to calculate mass due to missing influent and effluent well data

No Samples were taken in April 2001 and the pounds removed were estimated using the 2nd quarter's average values for influent concentrations and system efficiency

TABLE F-24
Cumulative Mass Recovery
OU III Industrial Park System

2019 BNL Groundwater Status Report

EW-8 and EW-9

DATE	FLOW (GPM)	TVOC's (PPB)	LBS/DAY	CUM. LBS
01/14/15	--	--	--	0.00
01/15/15	81	0.32		
01/21/15	81	0.18	0.01	0.01
01/22/15	81	0.38	0.00	0.02
01/23/15	81	0.33	0.00	0.02
02/04/15	170	0.68	0.00	0.02
02/05/15	170	0.66	0.00	0.03
02/09/15	170	0.51	0.00	0.03
02/18/15	170	0.62	0.00	0.04
02/26/15	170	0.67	0.00	0.05
03/03/15	227	0.55	0.00	0.06
03/09/15	227	0.92	0.00	0.07
03/16/15	227	1.04	0.00	0.08
03/23/15	227	1.14	0.00	0.10
04/02/15	222	1.47	0.00	0.13
04/07/15	222	2.28	0.01	0.15
04/14/15	222	1.49	0.00	0.20
04/20/15	222	2.01	0.01	0.22
04/28/15	222	2.13	0.01	0.26
05/06/15	80	3.12	0.00	0.31
05/28/15	80	2.36	0.00	0.38
06/01/15	170	2.68	0.01	0.38
06/09/15	170	2.57	0.01	0.43
06/15/15	170	2.51	0.01	0.46
06/22/15	170	2.68	0.01	0.50
07/01/15	216	2.91	0.01	0.54
07/07/15	216	2.56	0.01	0.59
07/14/15	216	2.72	0.01	0.64
07/21/15	216	3.02	0.01	0.69
07/28/15	216	3.18	0.01	0.74
08/03/15	236	2.93	0.01	0.79
08/10/15	236	2.75	0.01	0.85
09/01/15	208	2.83	0.01	1.02
09/22/15	208	2.81	0.01	1.17
10/02/15	217	3.27	0.01	1.24
11/02/15	213	3.1	0.01	1.50
11/16/15	213	3.45	0.01	1.61
12/03/15	203	3.28	0.01	1.76
12/15/15	203	3.08	0.01	1.86
01/04/16	185	3.39	0.01	2.01
01/20/16	185	3.49	0.01	2.13
02/01/16	104	2.63	0.003	2.22
02/17/16	104	1.99	0.002	2.28
03/02/16	114	2.98	0.004	2.31
03/14/16	114	3.03	0.004	2.36
04/04/16	206	6.75	0.02	2.45
04/27/16	206	3.49	0.01	2.83
05/02/16	246	3.7	0.01	2.87
05/16/16	246	3.62	0.01	3.03

TABLE F-24
Cumulative Mass Recovery
OU III Industrial Park System

2019 BNL Groundwater Status Report

EW-8 and EW-9

DATE	FLOW (GPM)	TVOC's (PPB)	LBS/DAY	CUM. LBS
06/01/16	239	3.59	0.01	3.20
06/13/16	239	3.83	0.01	3.32
07/06/16	247	4.24	0.01	3.57
08/02/16	233	3.24	0.01	3.91
08/15/16	233	3.24	0.01	4.03
09/01/16	221	3.3	0.01	4.19
09/12/16	221	3.26	0.01	4.28
10/03/16	239	2.81	0.01	4.46
10/17/16	239	3.17	0.01	4.58
11/01/16	216	3.17	0.01	4.71
11/21/16	216	3.41	0.01	4.88
12/06/16	221	3.27	0.01	5.01
12/19/16	221	3.11	0.01	5.12
01/04/17	230	2.8	0.008	5.26
01/17/17	230	2.94	0.008	5.36
02/01/17	219	2.8	0.007	5.48
02/13/17	219	3.07	0.008	5.57
03/06/17	229	2.89	0.008	5.74
03/20/17	229	3.37	0.009	5.85
04/05/17	230	2.42	0.007	6.00
04/19/17	230	3.16	0.009	6.09
05/02/17	222	2.7	0.007	6.20
05/16/17	222	2.81	0.007	6.30
06/07/17	190	2.92	0.007	6.47
06/20/17	190	3.02	0.007	6.55
07/06/17	167	2.97	0.006	6.67
07/25/17	167	2.28	0.005	6.78
08/01/17	175	2.84	0.006	6.81
08/15/17	175	7.22	0.015	6.89
09/07/17	236	2.65	0.008	7.24
09/19/17	236	3.01	0.009	7.33
10/05/17	220	3.47	0.009	7.47
10/18/17	220	2.45	0.006	7.59
11/01/17	240	2.54	0.007	7.68
11/15/17	240	2.38	0.007	7.78
12/05/17	216	2.3	0.006	7.92
12/19/17	216	3.48	0.009	8.00
01/10/18	223	4.1	0.011	8.20
01/23/18	223	3.5	0.009	8.34
03/31/18	258	2.2	0.007	8.56
05/31/18	260	2.36	0.007	8.78
07/31/18	246	2.27	0.007	8.99
09/30/18	282	2.2	0.007	9.22
11/30/18	262	2.27	0.0071	9.44
01/31/19	246	2.4	0.007	9.66
03/31/19	120	3.05	0.004	9.80
05/31/19	264	1.58	0.005	9.96

Mass recovered = 9.44 lbs
total gallons pumped * influent concentration (ug/L) * (percent efficiency/100) * 8.4 X 10⁻⁹ (conversion factor)

* = Unable to calculate mass due to missing influent and effluent well data

**TABLE F-25
AIR FLOW RATES
OU III INDUSTRIAL PARK SYSTEM**

2019 BNL Groundwater Status Report

Note: System in Stand-By Mode.

Table F-26
Extraction Well VOC Data
OU III Industrial Park Modification System

2019 BNL Groundwater Status Report

	IP-EW-8, 9 Combined
Date	Effluent
01/04/17	0.11
01/17/17	0.11
02/01/17	0.094
02/13/17	0.12
03/06/17	0.12
03/20/17	0.15
04/05/17	0.54
04/19/17	0.16
05/02/17	0.16
05/16/17	0.14
06/07/17	0.28
06/20/17	0.19
07/06/17	0.16
07/25/17	0.16
08/01/17	0.17
08/15/17	0.2
09/07/17	0.2
09/19/17	0.21
10/05/17	0.38
10/18/17	0.4
11/01/17	0.21
11/15/17	0.41
12/05/17	0.39
12/19/17	0.59
01/10/18	0.38
01/23/18	0.46
03/06/18	0.0
03/20/18	0.0
05/03/18	0.0
05/15/18	0.0
07/03/18	0.0
07/17/18	0.0
09/05/18	0.0
09/18/18	0.0
11/01/18	0.0
11/15/18	0.0
01/10/19	0.0
01/22/19	0.0
03/12/19	0.0
03/28/19	0.0
05/02/19	0.0
05/14/19	0.0

	IP-EW-8	IP-EW-9
Date	Influent	Influent
01/04/17	2.83	2.89
02/01/17	2.62	2.73
03/06/17	3.14	3
04/05/17	2.91	2.41
05/02/17	3.1	2.49
06/07/17	2.74	2.67
07/06/17	3.5	2.43
08/01/17	3.05	2.75
09/07/17	2.71	2.96
10/05/17	2.87	2.74
11/01/17	3.27	2.59
12/05/17	2.6	1.27
01/10/18	3.16	5.42
03/06/18	2.48	1.92
05/03/18	2.71	1.98
07/03/18	2.34	1.91
09/05/18	2.03	2.04
11/01/18	2.8	1.77
01/10/19	2.56	2.4
04/10/19	2.49	4.04
07/09/19	1.85	3.68
10/16/19	2.28	4.73

Table F-27
Cumulative Mass Removal
OU III North Street System

2019 BNL Groundwater Status Report

OU III North Street East Treatment System was in standby mode during 2019.

Table F-28
Extraction Wells VOC Data and Tritium Data
OU III North Street System

2019 BNL Groundwater Status Report

Site ID : 000-471 (EW-1)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	01/18/19	0.27	0.5	UG/L	J
524.2 TVOC	01/18/19	3.76	0	UG/L	
Carbon tetrachloride	01/18/19	1.6	0.5	UG/L	
Chloroform	01/18/19	0.81	0.5	UG/L	
Tetrachloroethylene	01/18/19	0.23	0.5	UG/L	J
Trichloroethylene	01/18/19	0.85	0.5	UG/L	
524.2 TVOC	04/03/19	2.96	0	UG/L	
Carbon tetrachloride	04/03/19	1.2	0.5	UG/L	
Chloroform	04/03/19	0.76	0.5	UG/L	
Trichloroethylene	04/03/19	1	0.5	UG/L	
1,1,1-Trichloroethane	07/17/19	0.28	0.5	UG/L	J
1,1,2,2-Tetrachloroethane	07/17/19	0.17	0.5	UG/L	J
524.2 TVOC	07/17/19	3.83	0	UG/L	
Carbon tetrachloride	07/17/19	1.25	0.5	UG/L	
Chloroform	07/17/19	0.85	0.5	UG/L	
Tetrachloroethylene	07/17/19	0.21	0.5	UG/L	J
Trichloroethylene	07/17/19	1.07	0.5	UG/L	

Site ID : 000-473 (EW-2)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	01/18/19	4.26	0.5	UG/L	
1,1-Dichloroethane	01/18/19	0.21	0.5	UG/L	J
1,1-Dichloroethylene	01/18/19	1.79	0.5	UG/L	
524.2 TVOC	01/18/19	13.86	0	UG/L	
Carbon tetrachloride	01/18/19	0.8	0.5	UG/L	
Chloroform	01/18/19	2.02	0.5	UG/L	
Tetrachloroethylene	01/18/19	4.78	0.5	UG/L	
1,1,1-Trichloroethane	04/03/19	3.6	0.5	UG/L	
1,1-Dichloroethylene	04/03/19	1.5	0.5	UG/L	
524.2 TVOC	04/03/19	13.78	0	UG/L	
Carbon tetrachloride	04/03/19	0.58	0.5	UG/L	
Chloroform	04/03/19	2	0.5	UG/L	
Tetrachloroethylene	04/03/19	6.1	0.5	UG/L	
1,1,1-Trichloroethane	07/17/19	3.34	0.5	UG/L	
1,1-Dichloroethylene	07/17/19	1.48	0.5	UG/L	
524.2 TVOC	07/17/19	12.29	0	UG/L	
Carbon tetrachloride	07/17/19	0.55	0.5	UG/L	
Chloroform	07/17/19	2.27	0.5	UG/L	
Tetrachloroethylene	07/17/19	4.44	0.5	UG/L	
Trichloroethylene	07/17/19	0.21	0.5	UG/L	J

Table F-29
Carbon Influent VOC Data
OU III North Street System

2019 BNL Groundwater Status Report

OU III North Street Treatment System was in standby mode during 2019.

Table F-30
Carbon Effluent VOC and Tritium Data
OU III North Street System

2019 BNL Groundwater Status Report

OU III North Street Treatment System was in standby mode during 2019 .

**Table F-31
Extraction Wells VOC Data
OU III North Street East System**

2019 BNL Groundwater Status Report

Site ID : 000-487 (NSE-1)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	01/18/19	2.03	0.5	UG/L	
1,1-Dichloroethylene	01/18/19	0.93	0.5	UG/L	
524.2 TVOC	01/18/19	7.48	0	UG/L	
Chloroform	01/18/19	2.64	0.5	UG/L	
Tetrachloroethylene	01/18/19	0.35	0.5	UG/L	J
Trichloroethylene	01/18/19	1.53	0.5	UG/L	
1,1,1-Trichloroethane	04/03/19	1.67	0.5	UG/L	
1,1,1-Trichloroethane	04/03/19	1.67	0.5	UG/L	
1,1-Dichloroethylene	04/03/19	1.13	0.5	UG/L	
1,1-Dichloroethylene	04/03/19	1.13	0.5	UG/L	
524.2 TVOC	04/03/19	6.78	0	UG/L	
524.2 TVOC	04/03/19	6.78	0	UG/L	
Carbon tetrachloride	04/03/19	0.18	0.5	UG/L	J
Carbon tetrachloride	04/03/19	0.18	0.5	UG/L	J
Chloroform	04/03/19	2.04	0.5	UG/L	
Chloroform	04/03/19	2.04	0.5	UG/L	
Tetrachloroethylene	04/03/19	0.49	0.5	UG/L	J
Tetrachloroethylene	04/03/19	0.49	0.5	UG/L	J
Trichloroethylene	04/03/19	1.27	0.5	UG/L	
Trichloroethylene	04/03/19	1.27	0.5	UG/L	
1,1,1-Trichloroethane	07/17/19	1.14	0.5	UG/L	
1,1-Dichloroethylene	07/17/19	0.84	0.5	UG/L	
524.2 TVOC	07/17/19	5.41	0	UG/L	
Chloroform	07/17/19	1.81	0.5	UG/L	
Tetrachloroethylene	07/17/19	0.45	0.5	UG/L	J
Trichloroethylene	07/17/19	1.17	0.5	UG/L	

Site ID : 000-488 (NSE-2)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
524.2 TVOC	01/18/19	1.06	0	UG/L	
Chloroform	01/18/19	1.06	0.5	UG/L	
524.2 TVOC	04/03/19	1.04	0	UG/L	
524.2 TVOC	04/03/19	1.04	0	UG/L	
Chloroform	04/03/19	1.04	0.5	UG/L	
Chloroform	04/03/19	1.04	0.5	UG/L	
524.2 TVOC	07/17/19	1.27	0	UG/L	
Chloroform	07/17/19	1.27	0.5	UG/L	

Table F-32
Carbon Influent VOC Data
OU III North Street East System

2019 BNL Groundwater Status Report

OU III North Street East Treatment System was in standby mode during 2019.

Table F-33
Carbon Effluent VOC and Tritium Data
OU III North Street East System

2019 BNL Groundwater Status Report

OU III North Street East Treatment System was in standby mode during 2019.

Table F-34
Cumulative Mass Removal
OU III North Street East System

2019 BNL Groundwater Status Report

OU III North Street East Treatment System was in standby mode during 2019.

Table F-35
Cumulative Mass Removal
OU III LIPA/Airport System

2019 BNL Groundwater Status Report

Date Sampled	Total VOC's (ug/L)	Flow Rates (gpm)	Cumulative VOC's (lbs)
01/18/19	5.9	387	457.09
02/20/19	4.92	359	457.89
03/27/19	3.11	389	458.90
04/23/19	4.32	426	460.33
05/14/19	3.55	364	461.39
06/19/19	4.6	283	462.31
07/25/19	5.08	382	463.70
08/20/19	5.96	400	465.18
09/17/19	5.11	401	466.63
10/16/19	5.67	401	468.01
11/19/19	5.09	435	469.66
12/17/19	4.15	407	471.00

ug/L Micrograms per liter
gpm Gallons per minute
lbs Pounds

**Table F-36
Extraction Well VOC Data
OU III LIPA/Airport System**

2019 BNL Groundwater Status Report

Site ID : 000-453 (EW-1L)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	01/18/19	5.83	0.5	UG/L	
1,1-Dichloroethylene	01/18/19	3.81	0.5	UG/L	
524.2 TVOC	01/18/19	15.05	0	UG/L	
Carbon tetrachloride	01/18/19	0.6	0.5	UG/L	
Chloroform	01/18/19	2.66	0.5	UG/L	
Toluene	01/18/19	0.6	0.5	UG/L	
Trichloroethylene	01/18/19	1.55	0.5	UG/L	
1,1,1-Trichloroethane	04/09/19	2.6	0.5	UG/L	
1,1-Dichloroethylene	04/09/19	1.9	0.5	UG/L	
524.2 TVOC	04/09/19	8.1	0	UG/L	
Chloroform	04/09/19	2.1	0.5	UG/L	
Trichloroethylene	04/09/19	1.5	0.5	UG/L	
1,1,1-Trichloroethane	07/10/19	2.2	0.5	UG/L	
1,1-Dichloroethylene	07/10/19	1.4	0.5	UG/L	
524.2 TVOC	07/10/19	6.7	0	UG/L	
Chloroform	07/10/19	1.9	0.5	UG/L	
Trichloroethylene	07/10/19	1.2	0.5	UG/L	
1,1,1-Trichloroethane	10/04/19	1.6	0.5	UG/L	
1,1-Dichloroethylene	10/04/19	0.94	0.5	UG/L	
524.2 TVOC	10/04/19	5.18	0	UG/L	
Carbon tetrachloride	10/04/19	0.24	0.5	UG/L	J
Chloroform	10/04/19	1.3	0.5	UG/L	
Trichloroethylene	10/04/19	1.1	0.5	UG/L	

Site ID : 000-455 (EW-2L)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	01/18/19	1.95	0.5	UG/L	
1,1-Dichloroethylene	01/18/19	1.13	0.5	UG/L	
524.2 TVOC	01/18/19	7.11	0	UG/L	
Carbon tetrachloride	01/18/19	0.74	0.5	UG/L	
Chloroform	01/18/19	1.83	0.5	UG/L	
Trichloroethylene	01/18/19	1.46	0.5	UG/L	
1,1,1-Trichloroethane	04/09/19	1	0.5	UG/L	
1,1-Dichloroethylene	04/09/19	0.8	0.5	UG/L	
524.2 TVOC	04/09/19	4.08	0	UG/L	
Chloroform	04/09/19	0.98	0.5	UG/L	
Trichloroethylene	04/09/19	1.3	0.5	UG/L	
1,1,1-Trichloroethane	07/10/19	0.93	0.5	UG/L	
1,1-Dichloroethylene	07/10/19	0.61	0.5	UG/L	
524.2 TVOC	07/10/19	3.45	0	UG/L	
Chloroform	07/10/19	0.92	0.5	UG/L	
Trichloroethylene	07/10/19	0.99	0.5	UG/L	
1,1,1-Trichloroethane	10/04/19	0.99	0.5	UG/L	
1,1-Dichloroethylene	10/04/19	0.63	0.5	UG/L	
1,2-Dichloroethane	10/04/19	0.22	0.5	UG/L	J
524.2 TVOC	10/04/19	3.73	0	UG/L	
Carbon tetrachloride	10/04/19	0.24	0.5	UG/L	J
Chloroform	10/04/19	0.77	0.5	UG/L	
Trichloroethylene	10/04/19	0.88	0.5	UG/L	

**Table F-36
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OU III LIPA/Airport System**

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Site ID : 000-457 (EW-3L)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	01/18/19	0.18	0.5	UG/L	J
524.2 TVOC	01/18/19	1.24	0	UG/L	
Chloroform	01/18/19	0.84	0.5	UG/L	
Trichloroethylene	01/18/19	0.22	0.5	UG/L	J
524.2 TVOC	04/09/19	0.77	0	UG/L	
Chloroform	04/09/19	0.77	0.5	UG/L	
524.2 TVOC	07/10/19	0.86	0	UG/L	
Chloroform	07/10/19	0.86	0.5	UG/L	
1,1,1-Trichloroethane	10/04/19	0.34	0.5	UG/L	J
1,1-Dichloroethylene	10/04/19	0.27	0.5	UG/L	J
524.2 TVOC	10/04/19	2.1	0	UG/L	
Chloroform	10/04/19	0.86	0.5	UG/L	
Toluene	10/04/19	0.25	0.5	UG/L	J
Trichloroethylene	10/04/19	0.38	0.5	UG/L	J

Site ID : 000-461 (EW-4L)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	01/18/19	0.26	0.5	UG/L	J
524.2 TVOC	01/18/19	7.98	0	UG/L	
Carbon tetrachloride	01/18/19	1.62	0.5	UG/L	
Chloroform	01/18/19	0.96	0.5	UG/L	
Tetrachloroethylene	01/18/19	3.69	0.5	UG/L	
Trichloroethylene	01/18/19	1.45	0.5	UG/L	
524.2 TVOC	04/09/19	7.87	0	UG/L	
Carbon tetrachloride	04/09/19	1.3	0.5	UG/L	
Chloroform	04/09/19	0.87	0.5	UG/L	
Tetrachloroethylene	04/09/19	4	0.5	UG/L	
Trichloroethylene	04/09/19	1.7	0.5	UG/L	
524.2 TVOC	07/10/19	7.8	0	UG/L	
Carbon tetrachloride	07/10/19	1.5	0.5	UG/L	
Chloroform	07/10/19	1	0.5	UG/L	
Tetrachloroethylene	07/10/19	3.7	0.5	UG/L	
Trichloroethylene	07/10/19	1.6	0.5	UG/L	
524.2 TVOC	10/04/19	6.11	0	UG/L	
Carbon tetrachloride	10/04/19	0.66	0.5	UG/L	
Chloroform	10/04/19	0.55	0.5	UG/L	
Ethylbenzene	10/04/19	0.13	0.5	UG/L	J
m/p xylene	10/04/19	0.31	1	UG/L	J
Tetrachloroethylene	10/04/19	3	0.5	UG/L	
Toluene	10/04/19	0.36	0.5	UG/L	J
Trichloroethylene	10/04/19	1.1	0.5	UG/L	

**Table F-36
Extraction Well VOC Data
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Site ID : 800-109 (RTW-1A)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
524.2 TVOC	01/18/19	1.92	0	UG/L	
Carbon tetrachloride	01/18/19	0.87	0.5	UG/L	
Chloroform	01/18/19	0.78	0.5	UG/L	
Trichloroethylene	01/18/19	0.27	0.5	UG/L	J
524.2 TVOC	04/09/19	1.18	0	UG/L	
Carbon tetrachloride	04/09/19	0.64	0.5	UG/L	
Chloroform	04/09/19	0.54	0.5	UG/L	
524.2 TVOC	07/10/19	1.54	0	UG/L	
Carbon tetrachloride	07/10/19	0.85	0.5	UG/L	
Chloroform	07/10/19	0.69	0.5	UG/L	
524.2 TVOC	10/04/19	2.26	0	UG/L	
Carbon tetrachloride	10/04/19	1.1	0.5	UG/L	
Chloroform	10/04/19	0.81	0.5	UG/L	
Trichloroethylene	10/04/19	0.35	0.5	UG/L	J

Site ID : 800-110 (RTW-2A)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
524.2 TVOC	01/18/19	1.4	0	UG/L	
Carbon tetrachloride	01/18/19	0.26	0.5	UG/L	J
Chloroform	01/18/19	1.14	0.5	UG/L	
524.2 TVOC	04/09/19	0.75	0	UG/L	
Chloroform	04/09/19	0.75	0.5	UG/L	
524.2 TVOC	07/10/19	0.86	0	UG/L	
Chloroform	07/10/19	0.86	0.5	UG/L	
524.2 TVOC	10/04/19	1.12	0	UG/L	
Carbon tetrachloride	10/04/19	0.36	0.5	UG/L	J
Chloroform	10/04/19	0.76	0.5	UG/L	

Site ID : 800-111 (RTW-3A)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
524.2 TVOC	01/18/19	0.88	0	UG/L	
Chloroform	01/18/19	0.67	0.5	UG/L	
Trichloroethylene	01/18/19	0.21	0.5	UG/L	J
1,1,1-Trichloroethane	04/09/19	0.56	0.5	UG/L	
1,1-Dichloroethylene	04/09/19	0.63	0.5	UG/L	
524.2 TVOC	04/09/19	2.86	0	UG/L	
Chloroform	04/09/19	0.7	0.5	UG/L	
Trichloroethylene	04/09/19	0.97	0.5	UG/L	
524.2 TVOC	07/10/19	0	0	UG/L	
1,1,1-Trichloroethane	10/04/19	0.63	0.5	UG/L	
1,1-Dichloroethylene	10/04/19	0.62	0.5	UG/L	
524.2 TVOC	10/04/19	3.72	0	UG/L	
Carbon tetrachloride	10/04/19	0.28	0.5	UG/L	J
Chloroform	10/04/19	0.79	0.5	UG/L	
Trichloroethylene	10/04/19	1.4	0.5	UG/L	

**Table F-36
Extraction Well VOC Data
OU III LIPA/Airport System**

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Site ID : 800-112 (RTW-4A)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	01/18/19	0.31	0.5	UG/L	J
1,1,2,2-Tetrachloroethane	01/18/19	0.36	0.5	UG/L	J
1,1-Dichloroethylene	01/18/19	0.22	0.5	UG/L	J
524.2 TVOC	01/18/19	3.66	0	UG/L	
Carbon tetrachloride	01/18/19	0.39	0.5	UG/L	J
Chloroform	01/18/19	1.37	0.5	UG/L	
Trichloroethylene	01/18/19	1.01	0.5	UG/L	
524.2 TVOC	04/09/19	2.1	0	UG/L	
Chloroform	04/09/19	1	0.5	UG/L	
Trichloroethylene	04/09/19	1.1	0.5	UG/L	
524.2 TVOC	07/10/19	2.1	0	UG/L	
Chloroform	07/10/19	1	0.5	UG/L	
Trichloroethylene	07/10/19	1.1	0.5	UG/L	
1,1,2,2-Tetrachloroethane	10/04/19	0.36	0.5	UG/L	J
524.2 TVOC	10/04/19	2.51	0	UG/L	
Carbon tetrachloride	10/04/19	0.24	0.5	UG/L	J
Chloroform	10/04/19	0.91	0.5	UG/L	
Trichloroethylene	10/04/19	1	0.5	UG/L	

Site ID : 800-113 (RTW-5A)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
524.2 TVOC	01/18/19	0.85	0	UG/L	
Chloroform	01/18/19	0.65	0.5	UG/L	
Toluene	01/18/19	0.2	0.5	UG/L	J
524.2 TVOC	04/09/19	0	0	UG/L	
524.2 TVOC	07/10/19	0.5	0	UG/L	
Chloroform	07/10/19	0.5	0.5	UG/L	
524.2 TVOC	10/04/19	0.64	0	UG/L	
Chloroform	10/04/19	0.64	0.5	UG/L	

Site ID : 800-132 (RTW-6A)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	01/18/19	0.41	0.5	UG/L	J
1,1-Dichloroethylene	01/18/19	0.57	0.5	UG/L	
524.2 TVOC	01/18/19	11.3	0	UG/L	
Carbon tetrachloride	01/18/19	3.96	0.5	UG/L	
Chloroform	01/18/19	0.97	0.5	UG/L	
cis-1,2-Dichloroethylene	01/18/19	0.18	0.5	UG/L	J
Trichloroethylene	01/18/19	5.21	0.5	UG/L	
524.2 TVOC	04/09/19	8.51	0	UG/L	
Carbon tetrachloride	04/09/19	2.3	0.5	UG/L	
Chloroform	04/09/19	0.71	0.5	UG/L	
Trichloroethylene	04/09/19	5.5	0.5	UG/L	
1,1-Dichloroethylene	07/10/19	0.53	0.5	UG/L	
524.2 TVOC	07/10/19	9.65	0	UG/L	
Carbon tetrachloride	07/10/19	2.8	0.5	UG/L	
Chloroform	07/10/19	0.72	0.5	UG/L	
Trichloroethylene	07/10/19	5.6	0.5	UG/L	
1,1,1-Trichloroethane	10/04/19	0.39	0.5	UG/L	J
1,1-Dichloroethylene	10/04/19	0.55	0.5	UG/L	
524.2 TVOC	10/04/19	10.43	0	UG/L	
Carbon tetrachloride	10/04/19	2.6	0.5	UG/L	
Chloroform	10/04/19	0.71	0.5	UG/L	
cis-1,2-Dichloroethylene	10/04/19	0.18	0.5	UG/L	J
Trichloroethylene	10/04/19	6	0.5	UG/L	

**Table F-37
Carbon influent VOC Data
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Site ID : 800-122 (Influent)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	01/10/19	0.27	0.5	UG/L	J
524.2 TVOC	01/10/19	5.97	0	UG/L	
Carbon tetrachloride	01/10/19	1.9	0.5	UG/L	
Chloroform	01/10/19	1.04	0.5	UG/L	
Trichloroethylene	01/10/19	2.76	0.5	UG/L	
1,1,1-Trichloroethane	01/18/19	0.22	0.5	UG/L	J
1,1,2,2-Tetrachloroethane	01/18/19	0.21	0.5	UG/L	J
524.2 TVOC	01/18/19	5.9	0	UG/L	
Carbon tetrachloride	01/18/19	1.88	0.5	UG/L	
Chloroform	01/18/19	0.97	0.5	UG/L	
Trichloroethylene	01/18/19	2.62	0.5	UG/L	
524.2 TVOC	02/05/19	1.29	0	UG/L	
Carbon tetrachloride	02/05/19	0.27	0.5	UG/L	J
Chloroform	02/05/19	1.02	0.5	UG/L	
1,1,1-Trichloroethane	02/20/19	0.25	0.5	UG/L	J
524.2 TVOC	02/20/19	4.92	0	UG/L	
Carbon tetrachloride	02/20/19	1.72	0.5	UG/L	
Chloroform	02/20/19	0.86	0.5	UG/L	
Trichloroethylene	02/20/19	2.09	0.5	UG/L	
524.2 TVOC	03/12/19	4.09	0	UG/L	
Carbon tetrachloride	03/12/19	1.1	0.5	UG/L	
Chloroform	03/12/19	0.69	0.5	UG/L	
Trichloroethylene	03/12/19	2.3	0.5	UG/L	
524.2 TVOC	03/27/19	3.11	0	UG/L	
Carbon tetrachloride	03/27/19	0.7	0.5	UG/L	
Chloroform	03/27/19	0.71	0.5	UG/L	
Trichloroethylene	03/27/19	1.7	0.5	UG/L	
1,1,1-Trichloroethane	04/09/19	0.62	0.5	UG/L	
1,1-Dichloroethylene	04/09/19	0.61	0.5	UG/L	
524.2 TVOC	04/09/19	5.04	0	UG/L	
Carbon tetrachloride	04/09/19	0.75	0.5	UG/L	
Chloroform	04/09/19	0.95	0.5	UG/L	
Tetrachloroethylene	04/09/19	0.51	0.5	UG/L	
Trichloroethylene	04/09/19	1.6	0.5	UG/L	
524.2 TVOC	04/23/19	4.32	0	UG/L	
Carbon tetrachloride	04/23/19	1.2	0.5	UG/L	
Chloroform	04/23/19	0.72	0.5	UG/L	
Trichloroethylene	04/23/19	2.4	0.5	UG/L	
524.2 TVOC	05/01/19	4.47	0	UG/L	
Carbon tetrachloride	05/01/19	1.2	0.5	UG/L	
Chloroform	05/01/19	0.77	0.5	UG/L	
Trichloroethylene	05/01/19	2.5	0.5	UG/L	
524.2 TVOC	05/14/19	3.55	0	UG/L	
Carbon tetrachloride	05/14/19	0.86	0.5	UG/L	
Chloroform	05/14/19	0.69	0.5	UG/L	
Trichloroethylene	05/14/19	2	0.5	UG/L	
524.2 TVOC	06/05/19	4.44	0	UG/L	
Carbon tetrachloride	06/05/19	1.2	0.5	UG/L	
Chloroform	06/05/19	0.84	0.5	UG/L	
Trichloroethylene	06/05/19	2.4	0.5	UG/L	
524.2 TVOC	06/19/19	4.6	0	UG/L	
Carbon tetrachloride	06/19/19	1.3	0.5	UG/L	
Chloroform	06/19/19	0.8	0.5	UG/L	
Trichloroethylene	06/19/19	2.5	0.5	UG/L	
524.2 TVOC	07/10/19	5.06	0	UG/L	
Carbon tetrachloride	07/10/19	1.5	0.5	UG/L	
Chloroform	07/10/19	0.86	0.5	UG/L	
Trichloroethylene	07/10/19	2.7	0.5	UG/L	

**Table F-37
Carbon influent VOC Data
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Site ID : 800-122 (Influent)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	07/25/19	0.2	0.5	UG/L	J
1,1-Dichloroethylene	07/25/19	0.23	0.5	UG/L	J
524.2 TVOC	07/25/19	5.08	0	UG/L	
Carbon tetrachloride	07/25/19	1.4	0.5	UG/L	
Chloroform	07/25/19	0.75	0.5	UG/L	
Trichloroethylene	07/25/19	2.5	0.5	UG/L	
1,1,1-Trichloroethane	08/06/19	0.3	0.5	UG/L	J
1,1-Dichloroethylene	08/06/19	0.33	0.5	UG/L	J
524.2 TVOC	08/06/19	4.28	0	UG/L	
Carbon tetrachloride	08/06/19	0.91	0.5	UG/L	
Chloroform	08/06/19	0.74	0.5	UG/L	
Trichloroethylene	08/06/19	2	0.5	UG/L	
1,1,1-Trichloroethane	08/20/19	0.24	0.5	UG/L	J
1,1-Dichloroethylene	08/20/19	0.23	0.5	UG/L	J
524.2 TVOC	08/20/19	5.96	0	UG/L	
Carbon tetrachloride	08/20/19	2	0.5	UG/L	
Chloroform	08/20/19	0.79	0.5	UG/L	
Trichloroethylene	08/20/19	2.7	0.5	UG/L	
1,1,1-Trichloroethane	09/05/19	0.23	0.5	UG/L	J
1,1-Dichloroethylene	09/05/19	0.22	0.5	UG/L	J
524.2 TVOC	09/05/19	5	0	UG/L	
Carbon tetrachloride	09/05/19	1.3	0.5	UG/L	
Chloroform	09/05/19	0.75	0.5	UG/L	
Trichloroethylene	09/05/19	2.5	0.5	UG/L	
1,1,1-Trichloroethane	09/17/19	0.2	0.5	UG/L	J
1,1-Dichloroethylene	09/17/19	0.27	0.5	UG/L	J
524.2 TVOC	09/17/19	5.11	0	UG/L	
Carbon tetrachloride	09/17/19	1.3	0.5	UG/L	
Chloroform	09/17/19	0.74	0.5	UG/L	
Trichloroethylene	09/17/19	2.6	0.5	UG/L	
1,1,1-Trichloroethane	10/04/19	0.25	0.5	UG/L	J
1,1-Dichloroethylene	10/04/19	0.28	0.5	UG/L	J
524.2 TVOC	10/04/19	3.87	0	UG/L	
Carbon tetrachloride	10/04/19	0.8	0.5	UG/L	
Chloroform	10/04/19	0.74	0.5	UG/L	
Trichloroethylene	10/04/19	1.8	0.5	UG/L	
1,1,1-Trichloroethane	10/16/19	0.24	0.5	UG/L	J
1,1-Dichloroethylene	10/16/19	0.26	0.5	UG/L	J
524.2 TVOC	10/16/19	5.67	0	UG/L	
Carbon tetrachloride	10/16/19	1.4	0.5	UG/L	
Chloroform	10/16/19	0.87	0.5	UG/L	
Trichloroethylene	10/16/19	2.9	0.5	UG/L	
1,1,1-Trichloroethane	11/05/19	0.22	0.5	UG/L	J
1,1-Dichloroethylene	11/05/19	0.25	0.5	UG/L	J
524.2 TVOC	11/05/19	5.45	0	UG/L	
Carbon tetrachloride	11/05/19	1.4	0.5	UG/L	
Chloroform	11/05/19	0.78	0.5	UG/L	
Trichloroethylene	11/05/19	2.8	0.5	UG/L	
1,1,1-Trichloroethane	11/19/19	0.17	0.5	UG/L	J
1,1-Dichloroethylene	11/19/19	0.24	0.5	UG/L	J
524.2 TVOC	11/19/19	5.09	0	UG/L	
Carbon tetrachloride	11/19/19	1.2	0.5	UG/L	
Chloroform	11/19/19	0.78	0.5	UG/L	
Trichloroethylene	11/19/19	2.7	0.5	UG/L	
1,1,1-Trichloroethane	12/03/19	0.2	0.5	UG/L	J
1,1-Dichloroethylene	12/03/19	0.24	0.5	UG/L	J
524.2 TVOC	12/03/19	4.96	0	UG/L	
Carbon tetrachloride	12/03/19	1.2	0.5	UG/L	
Chloroform	12/03/19	0.72	0.5	UG/L	
Trichloroethylene	12/03/19	2.6	0.5	UG/L	

Table F-37
Carbon influent VOC Data
OU III LIPA/Airport System

2019 BNL Groundwater Status Report

Site ID : 800-122 (Influent)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
1,1,1-Trichloroethane	12/17/19	0.17	0.5	UG/L	J
524.2 TVOC	12/17/19	4.15	0	UG/L	
Carbon tetrachloride	12/17/19	1	0.5	UG/L	
Chloroform	12/17/19	0.78	0.5	UG/L	
Trichloroethylene	12/17/19	2.2	0.5	UG/L	

Table F-38
Carbon Effluent VOC Data
OU III LIPA/Airport System

2019 BNL Groundwater Status Report

Site ID : 800-124 (Effluent)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
524.2 TVOC	01/10/19	0.97	0	UG/L	
Chloroform	01/10/19	0.97	0.5	UG/L	
524.2 TVOC	01/18/19	1.16	0	UG/L	
Chloroform	01/18/19	1.16	0.5	UG/L	
524.2 TVOC	02/05/19	1.02	0	UG/L	
Chloroform	02/05/19	1.02	0.5	UG/L	
524.2 TVOC	02/20/19	1.31	0	UG/L	
Chloroform	02/20/19	1.31	0.5	UG/L	
524.2 TVOC	03/12/19	0	0	UG/L	
524.2 TVOC	03/27/19	0	0	UG/L	
524.2 TVOC	04/09/19	0	0	UG/L	
524.2 TVOC	04/23/19	0	0	UG/L	
524.2 TVOC	05/01/19	0	0	UG/L	
524.2 TVOC	05/14/19	0	0	UG/L	
524.2 TVOC	06/05/19	0	0	UG/L	
524.2 TVOC	06/19/19	0	0	UG/L	
524.2 TVOC	07/10/19	0.76	0	UG/L	
Chloroform	07/10/19	0.76	0.5	UG/L	
524.2 TVOC	07/25/19	0	0	UG/L	
524.2 TVOC	08/06/19	0	0	UG/L	
524.2 TVOC	08/20/19	0	0	UG/L	
524.2 TVOC	09/05/19	0	0	UG/L	
524.2 TVOC	09/17/19	0	0	UG/L	
524.2 TVOC	10/04/19	0.4	0	UG/L	
Chloroform	10/04/19	0.4	0.5	UG/L	J
524.2 TVOC	10/16/19	0.6	0	UG/L	
Chloroform	10/16/19	0.6	0.5	UG/L	
524.2 TVOC	11/05/19	0.63	0	UG/L	
Chloroform	11/05/19	0.63	0.5	UG/L	
524.2 TVOC	11/19/19	0.77	0	UG/L	
Chloroform	11/19/19	0.77	0.5	UG/L	
524.2 TVOC	12/03/19	0.89	0	UG/L	
Chloroform	12/03/19	0.89	0.5	UG/L	
524.2 TVOC	12/17/19	0	0	UG/L	

Table F-39
Extraction Well Data
OU III BGRR/WCF Sr-90 System

2019 BNL Groundwater Status Report

Site ID : 065-368 (SR-1)

Chemical Name	Sample Date	Value	Detlim	Error	Units	Depth	Qual	Matrix
Strontium-90	01/17/19	20.9	1.19	1.34	PCI/L	0		W
Strontium-90	02/05/19	22.1	0.683	0.796	PCI/L	0		W
Strontium-90	03/12/19	11.2	0.719	1.1	PCI/L	0		W
Strontium-90	04/02/19	59.5	0.742	2.56	PCI/L	0		W
Strontium-90	05/02/19	28.1	0.491	0.856	PCI/L	0		W
Strontium-90	06/06/19	30.7	0.64	1.45	PCI/L	0		W
Strontium-90	07/09/19	21	0.43	0.733	PCI/L	0		W
Strontium-90	08/06/19	30	0.827	1	PCI/L	0		W
Strontium-90	09/05/19	26.9	0.759	1.6	PCI/L	0		W
Strontium-90	10/02/19	41.2	0.768	2.04	PCI/L	0		W
Strontium-90	11/06/19	30	0.681	1.74	PCI/L	0		W
Strontium-90	12/04/19	18.5	0.719	1.65	PCI/L	0		W

Site ID : 065-369 (SR-2)

Chemical Name	Sample Date	Value	Detlim	Error	Units	Depth	Qual	Matrix
Strontium-90	01/17/19	15.2	0.957	0.868	PCI/L	0		W
Strontium-90	02/05/19	12.4	0.632	0.637	PCI/L	0		W
Strontium-90	03/12/19	12.8	0.882	0.882	PCI/L	0		W
Strontium-90	04/02/19	31.2	0.487	1.8	PCI/L	0		W
Strontium-90	05/02/19	8.49	0.407	0.468	PCI/L	0		W
Strontium-90	06/06/19	8.21	0.755	0.819	PCI/L	0		W
Strontium-90	07/09/19	6.36	0.691	0.56	PCI/L	0		W
Strontium-90	08/06/19	11.1	0.778	0.691	PCI/L	0		W
Strontium-90	09/05/19	11.1	0.756	1.09	PCI/L	0		W
Strontium-90	10/02/19	16.3	0.776	1.24	PCI/L	0		W
Strontium-90	11/06/19	11.4	0.653	1.12	PCI/L	0		W
Strontium-90	12/04/19	9.02	0.798	1.08	PCI/L	0		W

Site ID : 075-676 (SR-3)

Chemical Name	Sample Date	Value	Detlim	Error	Units	Depth	Qual	Matrix
Strontium-90	01/17/19	1.87	0.451	0.339	PCI/L	0		W
Strontium-90	02/13/19	13.1	1.23	1.03	PCI/L	0		W
Strontium-90	03/12/19	12.7	0.518	0.999	PCI/L	0		W
Strontium-90	04/02/19	9.53	0.775	0.805	PCI/L	0		W
Strontium-90	05/02/19	6.36	0.763	0.578	PCI/L	0		W
Strontium-90	06/06/19	11.8	0.785	0.868	PCI/L	0		W
Strontium-90	07/09/19	9.01	0.323	0.452	PCI/L	0		W
Strontium-90	08/06/19	10.7	0.552	0.6	PCI/L	0		W
Strontium-90	09/05/19	14.7	0.777	1.27	PCI/L	0		W
Strontium-90	10/02/19	20.6	0.792	1.42	PCI/L	0		W
Strontium-90	11/06/19	25.3	0.73	1.63	PCI/L	0		W
Strontium-90	12/04/19	26.8	0.722	1.84	PCI/L	0		W

Site ID : 075-677 (SR-4)

Chemical Name	Sample Date	Value	Detlim	Error	Units	Depth	Qual	Matrix
Strontium-90	*Non-detect all samples							

Table F-39
Extraction Well Data
OU III BGRR/WCF Sr-90 System

2019 BNL Groundwater Status Report

Site ID : 075-678 (SR-5)

Chemical Name	Sample Date	Value	Detlim	Error	Units	Depth	Qual	Matrix
Strontium-90	01/17/19	1.83	0.792	0.621	PCI/L	0		W
Strontium-90	04/02/19	2.77	0.769	0.614	PCI/L	0		W
Strontium-90	07/09/19	1.47	0.466	0.322	PCI/L	0		W
Strontium-90	10/02/19	1.37	0.762	0.541	PCI/L	0		W

Site ID : 065-403 (SR-6)

Chemical Name	Sample Date	Value	Detlim	Error	Units	Depth	Qual	Matrix
Strontium-90	04/02/19	2.33	0.776	0.57	PCI/L	0		W
Strontium-90	07/09/19	1.42	0.573	0.382	PCI/L	0		W
Strontium-90	10/02/19	3.1	0.786	0.602	PCI/L	0		W

Site ID : 075-702 (SR-7)

Chemical Name	Sample Date	Value	Detlim	Error	Units	Depth	Qual	Matrix
Strontium-90	01/17/19	2.05	0.787	0.621	PCI/L	0		W
Strontium-90	04/02/19	7.05	0.625	0.945	PCI/L	0		W
Strontium-90	07/09/19	4.5	0.571	0.451	PCI/L	0		W
Strontium-90	10/02/19	3.14	0.771	0.668	PCI/L	0		W

Site ID : 075-703 (SR-8)

Chemical Name	Sample Date	Value	Detlim	Error	Units	Depth	Qual	Matrix
Strontium-90	01/17/19	6.11	0.779	0.879	PCI/L	0		W
Strontium-90	03/12/19	8.51	0.631	0.595	PCI/L	0		W
Strontium-90	04/02/19	12.7	0.771	1.07	PCI/L	0		W
Strontium-90	05/02/19	10.3	0.547	0.571	PCI/L	0		W
Strontium-90	07/09/19	4.45	0.633	0.5	PCI/L	0		W
Strontium-90	09/05/19	8.54	0.787	1.03	PCI/L	0		W
Strontium-90	10/02/19	10.5	0.773	0.969	PCI/L	0		W
Strontium-90	11/06/19	5.43	0.626	0.798	PCI/L	0		W

Site ID : 075-704 (SR-9)

Chemical Name	Sample Date	Value	Detlim	Error	Units	Depth	Qual	Matrix
Strontium-90	01/17/19	11.8	0.777	1.15	PCI/L	0		W
Strontium-90	02/05/19	11	1.04	0.854	PCI/L	0		W
Strontium-90	03/12/19	12.4	0.753	0.764	PCI/L	0		W
Strontium-90	04/02/19	12.1	0.763	1.06	PCI/L	0		W
Strontium-90	05/02/19	7.94	0.511	0.494	PCI/L	0		W
Strontium-90	06/06/19	10.8	0.762	1.2	PCI/L	0		W
Strontium-90	07/09/19	7.69	0.45	0.509	PCI/L	0		W
Strontium-90	08/06/19	18.4	0.474	0.717	PCI/L	0		W
Strontium-90	09/05/19	6.22	0.777	0.866	PCI/L	0		W
Strontium-90	10/02/19	8.36	0.772	0.848	PCI/L	0		W
Strontium-90	11/06/19	3.81	0.738	0.723	PCI/L	0		W
Strontium-90	12/04/19	5.63	0.708	0.906	PCI/L	0		W

Table F-40
System Influent Data
OU III BGRR/WCF Sr-90 System

2019 BNL Groundwater Status Report

Site ID: 066-216 (Influent)

Chemical Name	Sample Date	Value	Detlim	Error	Units	Depth	Qual
1,1,1-Trichloroethane	01/17/19	0.54	0.5	0	UG/L	0	
1,1-Dichloroethane	01/17/19	0.28	0.5	0	UG/L	0	J
524.2 TVOC	01/17/19	0.82	0	0	UG/L	0	
Strontium-90	01/17/19	19.4	0.495	1.31	PCI/L	0	
Perfluorobutanesulfonate (PFBS)	01/17/19	0.897	1.62	0	NG/L	0	J
Perfluorobutyric acid (PFBA)	01/17/19	7.5	1.83	0	NG/L	0	
Perfluoroheptanoic acid (PFHpA)	01/17/19	1.2	1.83	0	NG/L	0	J
Perfluorohexanesulfonate (PFHxS)	01/17/19	1.28	1.66	0	NG/L	0	J
Perfluorohexanoic acid (PFHxA)	01/17/19	1.44	1.83	0	NG/L	0	J
Perfluorononanoic acid (PFNA)	01/17/19	1.72	1.83	0	NG/L	0	J
Perfluorooctanesulfonate (PFOS)	01/17/19	6.46	1.83	0	NG/L	0	
Perfluorooctanoic acid (PFOA)	01/17/19	3.75	1.83	0	NG/L	0	
Perfluoropentanoic acid (PFPeA)	01/17/19	1.48	1.83	0	NG/L	0	J
1,1,1-Trichloroethane	02/05/19	0.5	0.5	0	UG/L	0	
1,1-Dichloroethane	02/05/19	0.23	0.5	0	UG/L	0	J
524.2 TVOC	02/05/19	0.73	0	0	UG/L	0	
Strontium-90	02/05/19	19	0.997	0.939	PCI/L	0	
1,1,1-Trichloroethane	03/12/19	0.29	0.5	0	UG/L	0	J
1,1,1-Trichloroethane	03/12/19	0.29	0.5	0	UG/L	0	J
524.2 TVOC	03/12/19	1.14	0	0	UG/L	0	
524.2 TVOC	03/12/19	1.14	0	0	UG/L	0	
Ethene, 1,2-dichloro-, (E)-	03/12/19	0.85	0.5	0	UG/L	0	
Ethene, 1,2-dichloro-, (E)-	03/12/19	0.85	0.5	0	UG/L	0	
Strontium-90	03/12/19	11.5	0.92	0.808	PCI/L	0	
Strontium-90	03/12/19	11.5	0.92	0.808	PCI/L	0	
1,1,1-Trichloroethane	04/02/19	0.3	0.5	0	UG/L	0	J
524.2 TVOC	04/02/19	0.77	0	0	UG/L	0	
Ethene, 1,2-dichloro-, (E)-	04/02/19	0.47	0.5	0	UG/L	0	J
Strontium-90	04/02/19	13.3	0.768	1.1	PCI/L	0	
Tritium	04/02/19	455	340	222	PCI/L	0	J
1,1,1-Trichloroethane	05/02/19	0.28	0.5	0	UG/L	0	J
1,1-Dichloroethane	05/02/19	0.17	0.5	0	UG/L	0	J
524.2 TVOC	05/02/19	1.26	0	0	UG/L	0	
Ethene, 1,2-dichloro-, (E)-	05/02/19	0.45	0.5	0	UG/L	0	J
Strontium-90	05/02/19	13.5	0.785	0.733	PCI/L	0	
Trichloroethylene	05/02/19	0.36	0.5	0	UG/L	0	J
1,1,1-Trichloroethane	06/06/19	0.28	0.5	0	UG/L	0	J
524.2 TVOC	06/06/19	0.28	0	0	UG/L	0	
Strontium-90	06/06/19	17.2	0.788	1.54	PCI/L	0	
1,1,1-Trichloroethane	07/09/19	0.21	0.5	0	UG/L	0	J
524.2 TVOC	07/09/19	0.4	0	0	UG/L	0	
Ethene, 1,2-dichloro-, (E)-	07/09/19	0.19	0.5	0	UG/L	0	J
Strontium-90	07/09/19	21.1	0.653	0.816	PCI/L	0	
1,1,1-Trichloroethane	08/06/19	0.34	0.5	0	UG/L	0	J
524.2 TVOC	08/06/19	0.98	0	0	UG/L	0	
Ethene, 1,2-dichloro-, (E)-	08/06/19	0.43	0.5	0	UG/L	0	J
Strontium-90	08/06/19	16.5	0.577	0.703	PCI/L	0	
Trichloroethylene	08/06/19	0.21	0.5	0	UG/L	0	J
1,1,1-Trichloroethane	09/05/19	0.32	0.5	0	UG/L	0	J
524.2 TVOC	09/05/19	0.68	0	0	UG/L	0	
Ethene, 1,2-dichloro-, (E)-	09/05/19	0.36	0.5	0	UG/L	0	J
Strontium-90	09/05/19	13.4	0.777	1.23	PCI/L	0	
Tritium	09/05/19	442	400	253	PCI/L	0	J

Table F-40
System Influent Data
OU III BGRR/WCF Sr-90 System

2019 BNL Groundwater Status Report

Site ID: 066-216 (Influent)

Chemical Name	Sample Date	Value	Detlim	Error	Units	Depth	Qual
1,1,1-Trichloroethane	10/02/19	0.34	0.5	0	UG/L	0	J
524.2 TVOC	10/02/19	0.71	0	0	UG/L	0	
Ethene, 1,2-dichloro-, (E)-	10/02/19	0.37	0.5	0	UG/L	0	J
Strontium-90	10/02/19	15.4	0.788	1.13	PCI/L	0	
1,1,1-Trichloroethane	11/06/19	0.27	0.5	0	UG/L	0	J
1,1,1-Trichloroethane	11/06/19	0.27	0.5	0	UG/L	0	J
524.2 TVOC	11/06/19	0.54	0	0	UG/L	0	
524.2 TVOC	11/06/19	0.54	0	0	UG/L	0	
Ethene, 1,2-dichloro-, (E)-	11/06/19	0.27	0.5	0	UG/L	0	J
Ethene, 1,2-dichloro-, (E)-	11/06/19	0.27	0.5	0	UG/L	0	J
Strontium-90	11/06/19	12.9	0.706	1.33	PCI/L	0	
Strontium-90	11/06/19	12.9	0.706	1.33	PCI/L	0	
1,1,1-Trichloroethane	12/04/19	0.25	0.5	0	UG/L	0	J
524.2 TVOC	12/04/19	0.82	0	0	UG/L	0	
Ethene, 1,2-dichloro-, (E)-	12/04/19	0.57	0.5	0	UG/L	0	
Strontium-90	12/04/19	13	0.713	1.27	PCI/L	0	

J = Estimated Value below the method detection limit of 0.50 UG/L

B = Compound was found in both the sample and associated laboratory blank.

Table F-41
System Effluent Data
OU III BGRR/WCF Sr-90 System

2019 BNL Groundwater Status Report

Site ID: 066-219 (Effluent)

Chemical Name	Sample Date	Value	Detlim	Error	Units	Depth	Qual
1,1,1-Trichloroethane	01/17/19	0.52	0.5	0	UG/L	0	
1,1-Dichloroethane	01/17/19	0.22	0.5	0	UG/L	0	J
524.2 TVOC	01/17/19	1.69	0	0	UG/L	0	
Chloroform	01/17/19	0.18	0.5	0	UG/L	0	J
Ethene, 1,2-dichloro-, (E)-	01/17/19	0.77	0.5	0	UG/L	0	
Perfluorobutanesulfonate (PFBS)	01/17/19	1.02	1.61	0	NG/L	0	J
Perfluorobutyric acid (PFBA)	01/17/19	8.18	1.81	0	NG/L	0	
Perfluoroheptanoic acid (PFHpA)	01/17/19	1.11	1.81	0	NG/L	0	J
Perfluorohexanesulfonate (PFHxS)	01/17/19	1.26	1.64	0	NG/L	0	J
Perfluorohexanoic acid (PFHxA)	01/17/19	1.69	1.81	0	NG/L	0	J
Perfluorononanoic acid (PFNA)	01/17/19	1.48	1.81	0	NG/L	0	J
Perfluorooctanesulfonate (PFOS)	01/17/19	3.69	1.81	0	NG/L	0	
Perfluorooctanoic acid (PFOA)	01/17/19	4.22	1.81	0	NG/L	0	
Perfluoropentanoic acid (PFPeA)	01/17/19	1.85	1.81	0	NG/L	0	
1,1,1-Trichloroethane	02/05/19	0.37	0.5	0	UG/L	0	J
1,1-Dichloroethane	02/05/19	0.24	0.5	0	UG/L	0	J
524.2 TVOC	02/05/19	0.98	0	0	UG/L	0	
Ethene, 1,2-dichloro-, (E)-	02/05/19	0.37	0.5	0	UG/L	0	J
1,1,1-Trichloroethane	03/12/19	0.33	0.5	0	UG/L	0	J
1,1,1-Trichloroethane	03/12/19	0.33	0.5	0	UG/L	0	J
524.2 TVOC	03/12/19	1.02	0	0	UG/L	0	
524.2 TVOC	03/12/19	1.02	0	0	UG/L	0	
Ethene, 1,2-dichloro-, (E)-	03/12/19	0.69	0.5	0	UG/L	0	
Ethene, 1,2-dichloro-, (E)-	03/12/19	0.69	0.5	0	UG/L	0	
1,1,1-Trichloroethane	04/02/19	0.39	0.5	0	UG/L	0	J
524.2 TVOC	04/02/19	1.41	0	0	UG/L	0	
Ethene, 1,2-dichloro-, (E)-	04/02/19	1.02	0.5	0	UG/L	0	
1,1,1-Trichloroethane	05/02/19	0.28	0.5	0	UG/L	0	J
524.2 TVOC	05/02/19	1.38	0	0	UG/L	0	
Ethene, 1,2-dichloro-, (E)-	05/02/19	0.64	0.5	0	UG/L	0	
Trichloroethylene	05/02/19	0.46	0.5	0	UG/L	0	J
1,1-Dichloroethane	06/06/19	0.17	0.5	0	UG/L	0	J
524.2 TVOC	06/06/19	0.17	0	0	UG/L	0	
1,1,1-Trichloroethane	07/09/19	0.22	0.5	0	UG/L	0	J
524.2 TVOC	07/09/19	0.68	0	0	UG/L	0	
Ethene, 1,2-dichloro-, (E)-	07/09/19	0.46	0.5	0	UG/L	0	J
1,1,1-Trichloroethane	08/06/19	0.41	0.5	0	UG/L	0	J
524.2 TVOC	08/06/19	1.03	0	0	UG/L	0	
Ethene, 1,2-dichloro-, (E)-	08/06/19	0.45	0.5	0	UG/L	0	J
Strontium-90	08/06/19	2.17	0.597	0.418	PCI/L	0	
Trichloroethylene	08/06/19	0.17	0.5	0	UG/L	0	J
1,1,1-Trichloroethane	09/05/19	0.31	0.5	0	UG/L	0	J
524.2 TVOC	09/05/19	0.67	0	0	UG/L	0	
Ethene, 1,2-dichloro-, (E)-	09/05/19	0.36	0.5	0	UG/L	0	J
Strontium-90	09/05/19	2.41	0.767	0.63	PCI/L	0	
1,1,1-Trichloroethane	10/02/19	0.34	0.5	0	UG/L	0	J
1,1-Dichloroethane	10/02/19	0.19	0.5	0	UG/L	0	J
524.2 TVOC	10/02/19	2.64	0	0	UG/L	0	
Ethene, 1,2-dichloro-, (E)-	10/02/19	2.11	0.5	0	UG/L	0	
1,1,1-Trichloroethane	11/06/19	0.28	0.5	0	UG/L	0	J
1,1,1-Trichloroethane	11/06/19	0.28	0.5	0	UG/L	0	J
524.2 TVOC	11/06/19	0.7	0	0	UG/L	0	
524.2 TVOC	11/06/19	0.7	0	0	UG/L	0	
Ethene, 1,2-dichloro-, (E)-	11/06/19	0.42	0.5	0	UG/L	0	J
Ethene, 1,2-dichloro-, (E)-	11/06/19	0.42	0.5	0	UG/L	0	J
1,1,1-Trichloroethane	12/04/19	0.36	0.5	0	UG/L	0	J
524.2 TVOC	12/04/19	1.31	0	0	UG/L	0	
Chloroform	12/04/19	0.17	0.5	0	UG/L	0	J
Ethene, 1,2-dichloro-, (E)-	12/04/19	0.78	0.5	0	UG/L	0	

J = Estimated Value below the method detection limit of 0.50 UG/L

B = Compound was found in both the sample and associated laboratory blank.

Table F-42
OU III BGRR/WCF Sr-90 System
Cumulative Mass Removal

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Sample date	Influent Concentration (pCi/L)	Liters Pumped	picoCuries pumped	milliCuries pumped	Cumulative mCi
6/20/05	79.0	18927	1495238	0.00	0.16
7/13/05	349.0	769968	268718798	0.27	0.43
7/21/05	251	212755	53401576	0.05	0.48
7/27/05	223	322086	71825077	0.07	0.56
8/3/05	376	970829	365031863	0.37	0.92
8/11/05	436	1167095	508853618	0.51	1.43
8/17/05	401	325905	130687917	0.13	1.56
8/24/05	285	1029515	293411679	0.29	1.85
9/1/05	175	1342269	234897105	0.23	2.09
9/28/05	245	2176949	533352428	0.53	2.62
10/6/05	273	983420	268473579	0.27	2.89
10/13/05	373	1026013	382702907	0.38	3.27
10/19/05	315	537881	169432363	0.17	3.44
10/25/05	271	657772	178256234	0.18	3.62
11/8/05	278	565056	157085565	0.16	3.78
11/18/05	266	1057530	281303112	0.28	4.06
11/22/05	254	373794	94943745	0.09	4.15
1/13/06	386	639364	246794359	0.25	4.40
1/20/06	317	860992	272934437	0.27	4.67
1/25/06	304	585895	178111983	0.18	4.85
2/1/06	243	822120	199775043	0.20	5.05
2/10/06	184	1068451	196595059	0.20	5.25
2/15/06	191	559862	106933719	0.11	5.36
2/23/06	150	1016811	152521623	0.15	5.51
3/3/06	174	838669	145928465	0.15	5.65
3/8/06	71.6	339468	24305920	0.02	5.68
3/14/06	63.4	570091	36143743	0.04	5.72
3/21/06	52	806490	41937457	0.04	5.76
3/29/06	164	541480	88802793	0.09	5.85
4/18/06	130	973892	126605937	0.13	5.97
4/25/06	155	887433	137552117	0.14	6.11
5/3/06	187	1220932	228314206	0.23	6.34
5/9/06	140	629158	88082142	0.09	6.43
5/16/06	158	1046462	165340988	0.17	6.59
5/24/06	114	999894	113987895	0.11	6.71
6/7/06	104	1837568	191107030	0.19	6.90
6/14/06	96.4	778133	75012025	0.08	6.97
6/22/06	108	1062902	114793415	0.11	7.09
6/28/06	105	1023992	107519133	0.11	7.19
7/6/06	90.1	1200449	108160429	0.11	7.30
7/12/06	99.7	775256	77293035	0.08	7.38
7/19/06	91.9	936746	86086918	0.09	7.47
7/26/06	91.4	1036090	94698619	0.09	7.56
8/2/06	98.3	875721	86083370	0.09	7.65
8/8/06	90.8	690838	62728059	0.06	7.71

Table F-42
OU III BGRR/WCF Sr-90 System
Cumulative Mass Removal

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Sample date	Influent Concentration (pCi/L)	Liters Pumped	picoCuries pumped	milliCuries pumped	Cumulative mCi
8/16/06	93.5	1097232	102591182	0.10	7.81
8/23/06	97.8	958409	93732448	0.09	7.91
8/30/06	84.8	938487	79583686	0.08	7.99
9/6/06	89.2	960401	85667735	0.09	8.07
10/4/06	101	1152268	116379068	0.12	8.19
10/11/06	102	948477	96744610	0.10	8.28
10/18/06	96.1	951406	91430162	0.09	8.38
11/9/06	127	818546	103955354	0.10	8.48
11/15/06	97.2	817649	79475478	0.08	8.56
11/29/06	167	1090199	182063166	0.18	8.74
12/5/06	125	643384	80422966	0.08	8.82
12/14/06	150	1125176	168776371	0.17	8.99
12/20/06	139	939191	130547542	0.13	9.12
12/27/06	148	941129	139287104	0.14	9.26
1/10/07	112	1883114	210908731	0.21	9.47
1/17/07	122	941557	114869934	0.11	9.59
1/24/07	137	941557	128993286	0.13	9.71
1/31/07	121	941557	113928377	0.11	9.83
2/7/07	103	879162	90553675	0.09	9.92
2/14/07	122	879162	107257751	0.11	10.03
3/2/07	47.2	1758293	82991453	0.08	10.11
3/8/07	50.6	22712	1149251	0.00	10.11
4/11/07	40.7	2882970	117336864	0.12	10.23
4/19/07	40.7	678346	27608674	0.03	10.26
4/25/07	41.1	508759	20910009	0.02	10.28
5/3/07	44.5	678346	30186388	0.03	10.31
5/8/07	38.9	413197	16073349	0.02	10.32
5/16/07	264	661115	174534254	0.17	10.50
5/24/07	415	663204	275229721	0.28	10.77
6/1/07	504	578475	291551539	0.29	11.06
6/12/07	451	506587	228470520	0.23	11.29
6/21/07	426	414480	176568429	0.18	11.47
6/27/07	426	276320	117712286	0.12	11.59
7/3/07	445	145360	64685117	0.06	11.65
9/6/07	391	143770	56214047	0.06	11.71
9/26/07	401	479233	192172487	0.19	11.90
10/18/07	308	1703057	524541485	0.52	12.42
11/8/07	363	1939077	703885022	0.70	13.13
11/20/07	321	1399088	449107313	0.45	13.58
12/6/07	209	1877564	392410929	0.39	13.97
12/20/07	114	1792392	204332744	0.20	14.17
1/4/08	137	1051966	144119334	0.14	14.32
1/15/08	127	824463	104706762	0.10	14.42
2/21/08	41.1	2095282	86116099	0.09	14.51
3/12/08	65.2	1196966	78042192	0.08	14.59

Table F-42
OU III BGRR/WCF Sr-90 System
Cumulative Mass Removal

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Sample date	Influent Concentration (pCi/L)	Liters Pumped	picoCuries pumped	milliCuries pumped	Cumulative mCi
3/25/08	74.4	946069	70387537	0.07	14.66
4/9/08	61.3	1012219	62049032	0.06	14.72
4/22/08	65.9	939918	61940580	0.06	14.78
5/8/08	85.7	1474796	126390055	0.13	14.91
5/19/08	95.4	1232530	117583370	0.12	15.03
6/4/08	60.1	1685265	101284447	0.10	15.13
6/19/08	44.9	1697757	76229298	0.08	15.20
7/2/08	61.2	1130173	69166560	0.07	15.27
7/29/08	52.5	2502006	131355304	0.13	15.40
8/28/08	105	654119	68682512	0.07	15.47
9/12/08	59.7	1526278	91118799	0.09	15.56
9/23/08	55.9	1199218	67036312	0.07	15.63
10/10/08	73.4	2316672	170043726	0.17	15.80
10/22/08	53.2	1499023	79748027	0.08	15.88
11/5/08	43.4	1831534	79488560	0.08	15.96
11/19/08	44.6	1831534	81686401	0.08	16.04
12/2/08	35.1	1651045	57951687	0.06	16.10
12/17/08	25.6	1589873	40700748	0.04	16.14
1/13/09	33.1	3444725	114020389	0.11	16.25
1/27/09	36.6	1854852	67887575	0.07	16.32
2/10/09	32.6	1665581	54297947	0.05	16.38
3/25/09	53.9	3198673	172408473	0.17	16.55
4/1/09	50.9	715443	36416040	0.04	16.58
4/15/09	39.7	1788607	71007701	0.07	16.66
5/4/09	29.3	2265569	66381171	0.07	16.72
5/21/09	28.7	2104310	60393709	0.06	16.78
6/3/09	31.5	1485396	46789961	0.05	16.83
6/18/09	35.3	2225822	78571521	0.08	16.91
7/16/09	44.4	3040443	134995658	0.13	17.04
7/28/09	30.1	944839	28439647	0.03	17.07
8/10/09	20.8	792665	16487437	0.02	17.09
10/22/09	52.1	2639416	137513586	0.14	17.23
10/30/09	28.7	554184	15905089	0.02	17.24
11/10/09	51	921116	46976896	0.05	17.29
12/8/09	49.1	2540011	124714556	0.12	17.41
12/30/09	40.3	2109708	85021249	0.09	17.50
1/6/10	38.3	522387	20007416	0.02	17.52
1/27/10	37.6	1828354	68746107	0.07	17.59
2/4/10	32.5	696516	22636763	0.02	17.61
2/17/10	30	2066835	62005045	0.06	17.67
3/3/10	33.7	2066835	69652334	0.07	17.74
3/17/10	31.7	1960843	62158733	0.06	17.80
4/1/10	29.6	1820783	53895179	0.05	17.86
4/14/10	25.3	1640329	41500316	0.04	17.90
5/4/10	30.1	2398346	72190217	0.07	17.97

Table F-42
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Sample date	Influent Concentration (pCi/L)	Liters Pumped	picoCuries pumped	milliCuries pumped	Cumulative mCi
5/19/10	28.7	1423050	40841531	0.04	18.01
6/15/10	27.7	2122412	58790820	0.06	18.07
8/17/10	90.2	2176574	196326969	0.20	18.27
8/24/10	25.7	529958	13619912	0.01	18.28
9/1/10	51.7	529958	27398811	0.03	18.31
9/13/10	44.2	766137	33863258	0.03	18.34
10/6/10	24.3	2182184	53027069	0.05	18.39
10/19/10	35.3	1233408	43539313	0.04	18.44
11/4/10	28.5	1306739	37242070	0.04	18.48
11/15/10	53.6	723487	38778894	0.04	18.51
12/2/10	44.5	1127973	50194808	0.05	18.56
12/16/10	37	989802	36622671	0.04	18.60
1/7/11	30.5	1533470	46770845	0.05	18.65
1/19/11	31.8	808564	25712334	0.03	18.67
3/3/11	24.9	1667474	41520100	0.04	18.72
3/24/11	25.5	1486531	37906546	0.04	18.75
5/2/11	59.6	2949105	175766632	0.18	18.93
5/27/11	95.8	822759	78820337	0.08	19.01
6/13/11	61	3134272	191190577	0.19	19.20
7/6/11	51	5005514	255281233	0.26	19.45
7/19/11	48.7	2288872	111468064	0.11	19.57
8/9/11	49.7	3873203	192498193	0.19	19.76
8/26/11	38.7	3719546	143946416	0.14	19.90
9/2/11	40.7	1174485	47801522	0.05	19.95
9/29/11	88.1	1086758	95743350	0.10	20.05
10/5/11	39.4	1194449	47061284	0.05	20.09
10/25/11	136	3981496	541483474	0.54	20.63
11/10/11	63.9	2951561	188604766	0.19	20.82
11/15/11	68.8	978094	67292842	0.07	20.89
12/14/11	43.3	5010814	216968244	0.22	21.11
12/20/11	60.8	889943	54108519	0.05	21.16
1/4/12	33.9	2113657	71652959	0.07	21.23
1/25/12	48.5	2530998	122753415	0.12	21.36
2/13/12	21	3823395	80291287	0.08	21.44
2/22/12	43.4	2146328	93150656	0.09	21.53
3/2/12	27.6	2369539	65399279	0.07	21.59
3/14/12	24.1	4201035	101244940	0.10	21.70
4/6/12	22.1	7633245	168694715	0.17	21.86
4/16/12	23.3	2802454	65297176	0.07	21.93
5/2/12	16.8	4699566	78952709	0.08	22.01
5/15/12	16.2	5044849	81726547	0.08	22.09
6/6/12	22.9	7302968	167237964	0.17	22.26
6/19/12	24.5	3210976	78668901	0.08	22.34
6/25/12	24.5	1481989	36308724	0.04	22.37
7/24/12	20.3	1473097	29903865	0.03	22.40

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Sample date	Influent Concentration (pCi/L)	Liters Pumped	picoCuries pumped	milliCuries pumped	Cumulative mCi
7/30/12	14	304786	4267007	0.00	22.41
8/8/12	23.6	324031	7647138	0.01	22.41
8/20/12	29.3	486047	14241173	0.01	22.43
9/6/12	21.2	1331844	28235096	0.03	22.46
9/18/12	16.3	1853610	30213846	0.03	22.49
10/1/12	17.5	3394606	59405603	0.06	22.55
10/16/12	17.3	3602766	62327846	0.06	22.61
11/20/12	20.6	5711051	117647646	0.12	22.73
11/30/12	15.5	1174235	18200638	0.02	22.74
12/5/12	20.2	1494481	30188508	0.03	22.77
12/18/12	17.3	3885650	67221736	0.07	22.84
1/3/13	14.2	4338990	61613664	0.06	22.90
1/15/13	13.6	3008948	40921695	0.04	22.94
2/5/13	16	4497069	71953107	0.07	23.02
2/20/13	26	2207652	57398956	0.06	23.07
3/11/13	15.4	3819443	58819417	0.06	23.13
3/21/13	13.2	2642028	34874772	0.03	23.17
4/3/13	19	2542956	48316171	0.05	23.22
4/15/13	15.2	852444	12957156	0.01	23.23
5/7/13	14.7	2396980	35235599	0.04	23.26
5/28/13	13.6	3992568	54298931	0.05	23.32
6/4/13	13.7	1484570	20338614	0.02	23.34
6/17/13	22.2	3589059	79677103	0.08	23.42
7/2/13	13.4	3917542	52495057	0.05	23.47
7/19/13	14.6	2784575	40654801	0.04	23.51
8/6/13	17.5	3481167	60920421	0.06	23.57
8/20/13	18.1	3918560	70925934	0.07	23.64
9/4/13	15.7	3504103	55014413	0.06	23.70
9/17/13	11.5	2291677	26354285	0.03	23.72
10/3/13	19.9	2756374	54851845	0.05	23.78
10/22/13	24	2944017	70656407	0.07	23.85
11/6/13	13.6	3115367	42368997	0.04	23.89
11/19/13	12.4	3728472	46233048	0.05	23.94
12/2/13	10.7	3559900	38090927	0.04	23.98
12/16/13	14.2	2835273	40260883	0.04	24.02
1/8/14	14.1	5479989	77267848	0.08	24.09
1/23/14	11.7	4579118	53575681	0.05	24.15
2/4/14	16.3	3282558	53505690	0.05	24.20
4/8/14	30.1	6922761	208375109	0.21	24.41
4/21/14	19	3055963	58063296	0.06	24.47
5/7/14	21.7	3390215	73567661	0.07	24.54
5/19/14	20.7	2184940	45228252	0.05	24.59
6/5/14	19.5	3321453	64768330	0.06	24.65
6/17/14	15.8	3164619	50000987	0.05	24.70
7/1/14	13.1	3955774	51820643	0.05	24.75

Table F-42
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Sample date	Influent Concentration (pCi/L)	Liters Pumped	picoCuries pumped	milliCuries pumped	Cumulative mCi
7/16/14	15	2292067	34381003	0.03	24.79
8/5/14	16.6	3259065	54100486	0.05	24.84
8/18/14	10.5	2911580	30571588	0.03	24.87
9/9/14	9.85	3230429	31819724	0.03	24.90
9/30/14	9.85	1362445	13420087	0.01	24.92
11/6/14	16.5	1801303	29721505	0.03	24.95
11/18/14	13.4	3580076	47973017	0.05	25.00
12/2/14	14.4	3894515	56081015	0.06	25.05
12/16/14	14.4	4559366	65654867	0.07	25.12
1/6/15	14.9	4559366	67934550	0.07	25.18
1/21/15	13.7	1596460	21871496	0.02	25.21
2/12/15	18.3	3092167	56586649	0.06	25.26
2/25/15	16.5	2196849	36248002	0.04	25.30
3/10/15	13.7	3132943	42921320	0.04	25.34
3/23/15	10.7	3413771	36527354	0.04	25.38
4/1/15	11.8	2331144	27507495	0.03	25.41
4/14/15	13.4	2994696	40128927	0.04	25.45
5/6/15	10.3	5287554	54461807	0.05	25.50
5/27/15	6.3	5606210	35375185	0.04	25.54
6/10/15	18.7	2365413	44233223	0.04	25.58
6/22/15	13.0	1557485	20247305	0.02	25.60
7/10/15	13.6	2885998	39249572	0.04	25.64
7/22/15	10.2	2216737	22610719	0.02	25.66
8/5/15	14.8	2654331	39284095	0.04	25.70
8/18/15	12.7	2578623	32748506	0.03	25.73
9/2/15	10.2	3132807	31954629	0.03	25.77
9/23/15	8.8	5818935	50915681	0.05	25.82
10/1/15	9.5	2171691	20631062	0.02	25.84
10/20/15	9.9	4433035	43665397	0.04	25.88
11/5/15	7.2	3516065	25456308	0.03	25.91
11/23/15	12.6	3418454	43072520	0.04	25.95
12/2/15	8.4	1722347	14536611	0.01	25.97
12/15/15	10.1	2697659	27246352	0.03	25.99
1/7/16	7.1	4288429	30233422	0.03	26.02
2/9/16	46.7	5255859	245448606	0.25	26.27
2/18/16	8.3	1330690	10978189	0.01	26.28
3/3/16	7.9	2167977	17148700	0.02	26.30
3/29/16	8.4	4693684	39286131	0.04	26.34
4/11/16	8.2	3033228	24902800	0.02	26.36
4/25/16	5.8	3266553	18848011	0.02	26.38
5/4/16	7.8	2305217	17980695	0.02	26.40
5/17/16	7.1	3700422	26198986	0.03	26.42
6/7/16	10.1	5455119	55096703	0.06	26.48
6/21/16	8.9	2940099	26078679	0.03	26.50
7/18/16	8.6	6430945	55434748	0.06	26.56

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Cumulative Mass Removal

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Sample date	Influent Concentration (pCi/L)	Liters Pumped	picoCuries pumped	milliCuries pumped	Cumulative mCi
7/25/16	6.4	1774722	11304980	0.01	26.57
8/3/16	7.5	2125285	15854629	0.02	26.59
8/16/16	7.5	2617745	19502198	0.02	26.61
9/20/16	9.8	4832078	47499328	0.05	26.65
10/4/16	7.9	1246135	9794620	0.01	26.66
10/26/16	16.4	2425586	39779609	0.04	26.70
11/17/16	9.4	4014887	37780089	0.04	26.74
11/29/16	7.5	2444907	18361249	0.02	26.76
12/8/16	9.7	2245502	21669099	0.02	26.78
12/19/16	9.0	2296980	20649853	0.02	26.80
1/5/17	9.5	1717438	16332831	0.02	26.82
1/18/17	7.2	3671437	26287488	0.03	26.84
2/2/17	6.2	3909032	24196908	0.02	26.87
3/7/17	7.1	4146506	29440193	0.03	26.90
3/20/17	8.1	1964428	15911868	0.02	26.91
4/5/17	8.3	2729801	22711940	0.02	26.94
4/20/17	3.7	3008778	11162566	0.01	26.95
5/3/17	8.6	2970678	25399294	0.03	26.97
5/17/17	7.2	4502520	32373120	0.03	27.01
6/6/17	7.1	6174817	43841199	0.04	27.05
6/20/17	8.1	3902025	31450323	0.03	27.08
7/14/17	8.2	6742803	55290982	0.06	27.14
7/25/17	6.4	3143368	20117556	0.02	27.16
8/1/17	7.7	1971215	15198070	0.02	27.17
8/16/17	5.3	3850218	20213645	0.02	27.19
9/7/17	6.1	5962894	36075510	0.04	27.23
9/19/17	5.2	3621731	18651913	0.02	27.25
10/6/17	7.9	4154853	32657143	0.03	27.28
10/18/17	8.6	2169677	18680918	0.02	27.30
11/2/17	4.3	2801636	12047036	0.01	27.31
11/15/17	3.5	2932494	10263730	0.01	27.32
12/13/17	9.6	5236368	50269130	0.05	27.37
12/19/17	4.4	855102	3728244	0.00	27.37
1/3/18	4.6	2206214	10170645	0.01	27.38
1/18/18	3.3	3198881	10396364	0.01	27.40
2/1/18	4.8	2922281	14026949	0.01	27.41
2/13/18	4.1	1799009	7375938	0.01	27.42
3/7/18	8.1	3659165	29639233	0.03	27.45
3/20/18	9.2	2619319	24176319	0.02	27.47
4/3/18	8.2	3350161	27471323	0.03	27.50
4/17/18	13.1	2658321	34824000	0.03	27.53
5/15/18	7.9	5319310	41916162	0.04	27.57
5/22/18	7.9	1330406	10510205	0.01	27.59
6/5/18	8.3	2238681	18581054	0.02	27.60
6/21/18	15.0	1690111	25351660	0.03	27.63

Table F-42
OU III BGRR/WCF Sr-90 System
Cumulative Mass Removal

2019 BNL Groundwater Status Report

Sample date	Influent Concentration (pCi/L)	Liters Pumped	picoCuries pumped	milliCuries pumped	Cumulative mCi
7/3/18	11.1	1546121	17161945	0.02	27.65
8/1/18	14.9	5662397	84369714	0.08	27.73
8/14/18	16.5	1365637	22533003	0.02	27.75
9/6/18	8.9	3024839	26800076	0.03	27.78
9/18/18	10.5	2688112	28225174	0.03	27.81
10/11/18	5.7	4164400	23612146	0.02	27.83
10/25/18	10.5	1878912	19728575	0.02	27.85
11/1/18	9.0	814583	7298662	0.01	27.86
01/17/19	19.4	1902953	36917288	0.04	27.90
02/05/19	19	3958042	75202793	0.08	27.97
03/12/19	11.5	4252918	48908554	0.05	28.02
04/02/19	13.3	2910853	38714345	0.04	28.06
05/02/19	13.5	4600025	62100335	0.06	28.12
06/06/19	17.2	5613599	96553905	0.10	28.22
07/31/19	21.1	5347068	112823141	0.11	28.33
08/31/19	16.5	4483271	73973978	0.07	28.40
9/31/2019	13.4	2616590	35062309	0.04	28.44
10/31/19	15.4	4238041	65265832	0.07	28.50
11/30/19	12.9	5477445	70659046	0.07	28.57
12/31/19	13	4063469	52825100	0.05	28.63

Table F-43
Extraction Well Data
OU III Chemical/Animal Holes Sr-90 System

2019 BNL Groundwater Status Report

Site ID : 106-92 (EW-1)

Chemical Name	Sample Date	Value	Detlim	Error	Units	Depth	Qual
Strontium-90	02/12/19	15.8	1.01	1.43	PCI/L	0	
Strontium-90	04/03/19	18.2	0.778	1.54	PCI/L	0	
Strontium-90	07/02/19	18.2	0.771	1.5	PCI/L	0	
Strontium-90	10/24/19	22.4	0.727	0.984	PCI/L	0	

Site ID : 106-123 (EW-2)

Chemical Name	Sample Date	Value	Detlim	Error	Units	Depth	Qual
Strontium-90	01/11/19	3.41	0.776	0.685	PCI/L	0	
Strontium-90	04/03/19	2.74	0.768	0.67	PCI/L	0	
Strontium-90	07/02/19	1.64	0.776	0.565	PCI/L	0	
Strontium-90	10/24/19	1.88	0.577	0.42	PCI/L	0	

Site ID : 106-124 (EW-3)

Chemical Name	Sample Date	Value	Detlim	Error	Units	Depth	Qual
Strontium-90	There were no detections of Sr-90 for this well for 2019.						

Table F-44
System Influent Data
OU III Chemical/Animal Holes Sr-90 System

2019 BNL Groundwater Status Report

No Influent samples collected as sytem has been in stand-by mode since 7/1/2018.

Table F-45
System Effluent Data
OU III Chemical/Animal Holes Sr-90 System

2019 BNL Groundwater Status Report

Site ID: 106-118 (Effluent)

No samples were collected due to the system being in stand-by mode since 7/1/2018.

Table F-46
Cumulative Mass Removal
OU III Chemical/Animal Holes Sr-90 System

2019 BNL Groundwater Status Report

Sample Date	Influent		Cumulative mCi
	Concentration (pCi/L)	Millicuries pumped	
December 31, 2003	31.7	0.884	
January 2, 2004	35.7	0.002	0.887
January 5, 2004	31.8	0.003	0.890
January 7, 2004	37.8	0.000	0.890
January 9, 2004	31.7	0.002	0.892
January 12, 2004	35.9	0.002	0.894
January 14, 2004	38.2	0.002	0.897
January 16, 2004	34.5	0.002	0.899
January 21, 2004	35.3	0.006	0.905
January 23, 2004	32.4	0.002	0.907
January 26, 2004	34.3	0.003	0.910
January 28, 2004	34.7	0.002	0.913
January 30, 2004	33.8	0.002	0.915
February 2, 2004	34.4	0.003	0.918
February 4, 2004	33.2	0.002	0.920
February 6, 2004	37.4	0.002	0.923
February 9, 2004	39.5	0.004	0.927
February 11, 2004	35.6	0.002	0.929
February 13, 2004	41.2	0.003	0.932
February 18, 2004	37.1	0.004	0.936
February 20, 2004	32.1	0.002	0.938
February 23, 2004	46.1	0.001	0.939
February 25, 2004	35.2	0.002	0.941
February 27, 2004	34.6	0.002	0.944
March 1, 2004	36.8	0.004	0.947
March 3, 2004	35.0	0.002	0.950
March 5, 2004	36.7	0.002	0.952
March 8, 2004	40.7	0.004	0.956
March 10, 2004	38.4	0.003	0.958
March 12, 2004	34.9	0.002	0.961
March 15, 2004	36.8	0.004	0.964
April 2, 2004	66.7	0.004	0.969
April 5, 2004	57.1	0.006	0.974
May 21, 2004	169.0	0.006	0.980
May 25, 2004	82.8	0.011	0.991
May 28, 2004	78.6	0.008	0.998
June 2, 2004	66.5	0.011	1.009
June 8, 2004	52.9	0.010	1.020
June 11, 2004	56.6	0.006	1.025
June 15, 2004	51.4	0.007	1.032
June 18, 2004	62.8	0.006	1.038
June 22, 2004	51.8	0.007	1.045
June 25, 2004	67.6	0.007	1.052
June 29, 2004	61.5	0.008	1.060
July 2, 2004	68.5	0.007	1.066
July 7, 2004	93.1	0.015	1.082
July 9, 2004	73.9	0.005	1.086
July 13, 2004	71.1	0.009	1.096
July 16, 2004	64.4	0.006	1.102
October 15, 2004	124.0	0.024	1.126
January 12, 2005	181.0	0.086	1.213
January 14, 2005	136.0	0.004	1.217
January 18, 2005	185.0	0.012	1.229

Table F-46
Cumulative Mass Removal
OU III Chemical/Animal Holes Sr-90 System

2019 BNL Groundwater Status Report

Sample Date	Influent		Cumulative mCi
	Concentration (pCi/L)	Millicuries pumped	
January 21, 2005	157.0	0.005	1.234
January 31, 2005	278.0	0.045	1.280
May 26, 2005	566.0	0.296	1.576
June 1, 2005	496.0	0.097	1.673
June 7, 2005	277.0	0.054	1.728
June 15, 2005	204.0	0.053	1.781
June 22, 2005	162.0	0.037	1.818
June 28, 2005	119.0	0.023	1.841
July 7, 2005	102	0.030	1.871
July 13, 2005	73.9	0.002	1.873
July 26, 2005	56.3	0.013	1.886
August 3, 2005	80.7	0.021	1.907
August 11, 2005	68.3	0.020	1.927
August 17, 2005	57.5	0.014	1.941
August 24, 2005	55.7	0.013	1.954
September 1, 2005	50.8	0.013	1.967
September 8, 2005	50	0.011	1.979
September 15, 2005	50.6	0.013	1.992
September 20, 2005	46.4	0.007	1.999
September 27, 2005	42.7	0.010	2.009
October 6, 2005	44.1	0.013	2.022
October 13, 2005	43.9	0.010	2.032
October 19, 2005	37	0.007	2.039
October 25, 2005	37.2	0.007	2.046
November 1, 2005	33	0.003	2.050
November 8, 2005	31.8	0.007	2.057
November 18, 2005	33.6	0.007	2.064
November 22, 2005	37.8	0.006	2.070
December 1, 2005	32.2	0.012	2.081
February 9, 2006	36	0.000	2.081
February 15, 2006	40	0.008	2.089
February 23, 2006	32.2	0.008	2.098
February 28, 2006	27.1	0.003	2.101
March 8, 2006	31.4	0.008	2.109
March 14, 2006	33.6	0.007	2.116
March 21, 2006	36.9	0.008	2.124
March 29, 2006	31.1	0.009	2.133
April 4, 2006	26.3	0.003	2.137
April 10, 2006	24.1	0.004	2.140
April 18, 2006	23	0.005	2.145
April 25, 2006	28.7	0.005	2.150
May 1, 2006	31.7	0.005	2.154
May 9, 2006	34.3	0.009	2.163
May 16, 2006	24.9	0.006	2.169
May 24, 2006	22.7	0.006	2.174
May 31, 2006	26.3	0.006	2.180
June 7, 2006	26.7	0.005	2.185
June 14, 2006	24.6	0.005	2.190
June 22, 2006	27.7	0.006	2.196
June 28, 2006	26.2	0.004	2.200
July 6, 2006	16	0.003	2.203
July 12, 2006	23.9	0.005	2.208
August 8, 2006	22	0.010	2.218

Table F-46
Cumulative Mass Removal
OU III Chemical/Animal Holes Sr-90 System

2019 BNL Groundwater Status Report

Sample Date	Influent Concentration (pCi/L)	Millicuries pumped	Cumulative mCi
August 16, 2006	21.7	0.006	2.224
August 23, 2006	25.6	0.007	2.231
August 30, 2006	25.9	0.003	2.234
September 6, 2006	27.6	0.008	2.241
September 12, 2006	24.3	0.006	2.247
September 19, 2006	19	0.005	2.252
September 28, 2006	21.6	0.007	2.260
October 4, 2006	24.1	0.007	2.266
October 11, 2006	20.9	0.005	2.271
October 18, 2006	20.1	0.006	2.277
October 25, 2006	21.6	0.006	2.283
November 1, 2006	18.5	0.004	2.287
November 9, 2006	19.9	0.006	2.293
November 20, 2006	22.8	0.004	2.297
November 29, 2006	26.1	0.010	2.307
December 5, 2006	18.1	0.004	2.311
December 14, 2006	20.4	0.006	2.318
December 20, 2006	20.4	0.004	2.322
December 27, 2006	22.6	0.006	2.328
January 3, 2007	22.8	0.006	2.333
January 10, 2007	17.2	0.005	2.338
January 17, 2007	20.7	0.006	2.345
January 24, 2007	19.4	0.006	2.350
January 31, 2007	14.5	0.004	2.355
February 7, 2007	18.2	0.005	2.359
February 14, 2007	17.1	0.004	2.363
February 27, 2007	17.3	0.008	2.371
March 2, 2007	18.5	0.002	2.373
March 15, 2007	18.5	0.009	2.382
March 28, 2007	6.26	0.003	2.385
April 5, 2007	16.6	0.004	2.389
April 11, 2007	17.6	0.003	2.392
April 19, 2007	18.7	0.005	2.397
April 25, 2007	18.1	0.003	2.400
May 3, 2007	17.3	0.004	2.404
May 8, 2007	16.9	0.002	2.407
May 16, 2007	18	0.004	2.411
May 24, 2007	17.4	0.004	2.415
May 30, 2007	18.4	0.003	2.418
June 12, 2007	22.9	0.002	2.419
June 21, 2007	22.7	0.001	2.421
July 27, 2007	26.6	0.007	2.427
August 14, 2007	28.8	0.008	2.435
September 6, 2007	31.6	0.012	2.446
September 25, 2007	32.5	0.012	2.459
October 4, 2007	32.2	0.008	2.467
October 10, 2007	29.1	0.005	2.471
October 17, 2007	26.8	0.005	2.476
November 15, 2007	78.7	0.040	2.516
November 20, 2007	66.4	0.003	2.519
November 30, 2007	62	0.005	2.524
December 4, 2007	47	0.013	2.537
December 13, 2007	40.1	0.026	2.563

Table F-46
Cumulative Mass Removal
OU III Chemical/Animal Holes Sr-90 System

2019 BNL Groundwater Status Report

Sample Date	Influent Concentration (pCi/L)	Millicuries pumped	Cumulative mCi
December 20, 2007	36.7	0.018	2.581
December 26, 2007	41.2	0.018	2.599
January 4, 2008	38.5	0.030	2.629
January 15, 2008	36.8	0.035	2.664
January 23, 2008	32.7	0.023	2.687
January 31, 2008	35.9	0.025	2.712
February 6, 2008	30.3	0.012	2.724
February 12, 2008	51.4	0.021	2.745
February 20, 2008	30.8	0.016	2.761
February 27, 2008	34.1	0.015	2.776
March 5, 2008	34.9	0.015	2.791
March 11, 2008	28.5	0.012	2.804
March 17, 2008	28.9	0.012	2.816
March 25, 2008	27.9	0.016	2.832
April 2, 2008	32.5	0.017	2.850
April 9, 2008	33.4	0.018	2.867
April 14, 2008	28.3	0.013	2.880
April 21, 2008	39.1	0.021	2.901
April 25, 2008	26.2	0.008	2.909
May 6, 2008	19.8	0.013	2.922
May 12, 2008	18.4	0.005	2.927
May 19, 2008	18.2	0.006	2.932
May 29, 2008	19.3	0.008	2.941
June 4, 2008	21.5	0.008	2.949
June 9, 2008	23.7	0.009	2.958
June 16, 2008	23.3	0.012	2.970
June 23, 2008	15	0.008	2.978
July 1, 2008	18.2	0.006	2.984
July 16, 2008	15.8	0.009	2.993
July 22, 2008	20.5	0.005	2.998
July 28, 2008	17.3	0.004	3.002
August 11, 2008	33.4	0.033	3.035
August 22, 2008	23.5	0.018	3.053
August 28, 2008	23.7	0.010	3.063
September 3, 2008	21.8	0.006	3.070
September 9, 2008	18.5	0.005	3.075
September 17, 2008	15.2	0.006	3.081
September 22, 2008	13	0.003	3.084
September 29, 2008	12.1	0.004	3.088
October 7, 2008	43.2	0.028	3.116
October 13, 2008	41.4	0.018	3.133
October 22, 2008	22.4	0.014	3.148
October 27, 2008	23.3	0.008	3.156
November 5, 2008	26.6	0.016	3.172
November 13, 2008	15.5	0.008	3.180
November 18, 2008	16.5	0.005	3.186
November 24, 2008	14.3	0.006	3.191
December 2, 2008	13.2	0.013	3.205
December 9, 2008	28.2	0.021	3.225
December 19, 2008	40.9	0.043	3.269
December 26, 2008	51.2	0.038	3.307
December 31, 2008	45.8	0.024	3.331
January 8, 2009	25.1	0.008	3.339

Table F-46
Cumulative Mass Removal
OU III Chemical/Animal Holes Sr-90 System

2019 BNL Groundwater Status Report

Sample Date	Influent Concentration (pCi/L)	Millicuries pumped	Cumulative mCi
January 16, 2009	15.6	0.005	3.343
January 21, 2009	15.1	0.003	3.346
February 4, 2009	30.2	0.016	3.363
February 9, 2009	28.8	0.006	3.369
February 19, 2009	22.7	0.010	3.378
February 23, 2009	22.7	0.004	3.382
March 4, 2009	26.4	0.012	3.394
March 10, 2009	15.9	0.006	3.400
March 16, 2009	14.8	0.005	3.405
March 24, 2009	12.6	0.006	3.411
April 1, 2009	10.6	0.003	3.414
April 7, 2009	25	0.014	3.428
April 14, 2009	23.1	0.013	3.442
April 20, 2009	16.8	0.008	3.450
April 27, 2009	18.3	0.010	3.460
May 7, 2009	13.4	0.011	3.471
May 11, 2009	20.8	0.007	3.478
May 21, 2009	18.7	0.016	3.494
May 27, 2009	17.4	0.009	3.502
June 3, 2009	14.6	0.008	3.511
June 8, 2009	17.1	0.006	3.517
June 18, 2009	17.8	0.013	3.531
June 24, 2009	15.3	0.007	3.538
July 6, 2009	13.2	0.010	3.547
July 15, 2009	8.56	0.005	3.552
July 23, 2009	11.3	0.006	3.558
July 28, 2009	9.81	0.003	3.561
August 4, 2009	11.3	0.005	3.566
August 10, 2009	20.1	0.009	3.576
August 18, 2009	21.7	0.013	3.589
August 25, 2009	20.2	0.011	3.600
September 2, 2009	17.5	0.010	3.609
September 8, 2009	13	0.005	3.615
September 16, 2009	8.47	0.005	3.619
September 21, 2009	11.3	0.004	3.623
October 1, 2009	9.66	0.007	3.630
October 8, 2009	21.4	0.014	3.644
October 12, 2009	22.2	0.008	3.652
October 19, 2009	19.7	0.013	3.665
November 4, 2009	15.6	0.018	3.683
December 16, 2009	49.8	0.088	3.771
December 29, 2009	33.7	0.022	3.793
January 6, 2010	14	0.005	3.798
January 20, 2010	10.2	0.009	3.806
February 2, 2010	12.1	0.009	3.815
February 17, 2010	23	0.037	3.852
March 2, 2010	20.9	0.027	3.878
March 15, 2010	9.19	0.009	3.887
April 1, 2010	5.95	0.007	3.894
April 13, 2010	17.1	0.016	3.910
May 4, 2010	14	0.022	3.932
May 17, 2010	6.42	0.005	3.938
June 3, 2010	9.53	0.011	3.949

Table F-46
Cumulative Mass Removal
OU III Chemical/Animal Holes Sr-90 System

2019 BNL Groundwater Status Report

Sample Date	Influent		Cumulative mCi
	Concentration (pCi/L)	Millicuries pumped	
June 15, 2010	18.7	0.021	3.970
July 1, 2010	13.6	0.021	3.991
July 14, 2010	13	0.014	4.005
August 4, 2010	8.33	0.014	4.019
August 16, 2010	6.06	0.005	4.024
September 1, 2010	5.98	0.006	4.030
September 13, 2010	11.5	0.007	4.038
October 6, 2010	7.36	0.009	4.047
October 19, 2010	6.14	0.005	4.051
November 4, 2010	16.1	0.015	4.066
November 15, 2010	13.7	0.009	4.075
December 1, 2010	20.3	0.020	4.095
December 14, 2010	14.3	0.005	4.100
January 6, 2011	6.68	0.006	4.106
January 19, 2011	22.3	0.024	4.130
February 7, 2011	16.6	0.022	4.152
February 14, 2011	6.3	0.000	4.152
March 1, 2011	8.38	0.008	4.160
March 14, 2011	15.4	0.010	4.170
April 5, 2011	9.49	0.018	4.188
April 18, 2011	7.28	0.005	4.193
May 5, 2011	15.8	0.017	4.210
May 19, 2011	19.5	0.027	4.237
June 2, 2011	15.6	0.021	4.257
June 13, 2011	8.3	0.006	4.264
July 6, 2011	13	0.021	4.285
July 18, 2011	15.5	0.015	4.300
August 3, 2011	10.7	0.012	4.312
August 15, 2011	7.14	0.006	4.318
September 8, 2011	19.8	0.030	4.348
September 27, 2011	13.2	0.014	4.362
October 4, 2011	15.8	0.006	4.368
October 17, 2011	9.82	0.006	4.374
November 2, 2011	12.1	0.011	4.385
November 15, 2011	14.2	0.018	4.403
December 6, 2011	12.2	0.022	4.424
December 13, 2011	6.71	0.002	4.427
January 4, 2012	12.3	0.017	4.444
January 18, 2012	12.6	0.021	4.465
February 1, 2012	8.51	0.010	4.476
February 14, 2012	6.34	0.003	4.480
March 1, 2012	4.41	0.002	4.483
March 13, 2012	14.5	0.004	4.485
April 3, 2012	12.1	0.003	4.489
April 16, 2012	5.06	0.006	4.492
May 2, 2012	7.55	0.011	4.499
May 16, 2012	8.4	0.012	4.510
June 5, 2012	8.27	0.002	4.523
June 19, 2012	3.55	0.010	4.525
July 11, 2012	7.16	0.009	4.535
July 24, 2012	8.15	0.002	4.545
August 1, 2012	4.13	0.002	4.547
August 13, 2012	3.39	0.009	4.550

Table F-46
Cumulative Mass Removal
OU III Chemical/Animal Holes Sr-90 System

2019 BNL Groundwater Status Report

Sample Date	Influent Concentration (pCi/L)	Millicuries pumped	Cumulative mCi
September 5, 2012	6.13	0.010	4.559
September 17, 2012	8.43	0.005	4.569
October 4, 2012	4.51	0.002	4.575
October 16, 2012	2.59	0.002	4.577
November 5, 2012	4.04	0.006	4.584
November 19, 2012	5.41	0.007	4.592
December 4, 2012	5.37	0.007	4.600
December 18, 2012	2.52	0.002	4.602
January 2, 2013	1.33	0.001	4.601
January 15, 2013	4.94	0.007	4.608
January 22, 2013	4.43	0.003	4.611
February 4, 2013	4.24	0.005	4.615
February 20, 2013	1.98	0.001	4.617
March 5, 2013	4.98	0.003	4.619
March 27, 2013	7.58	0.007	4.626
April 2, 2013	6.54	0.002	4.628
April 15, 2013	2.06	0.001	4.629
May 1, 2013	2.69	0.002	4.632
May 14, 2013	5.95	0.010	4.642
June 3, 2013	4.11	0.009	4.651
June 17, 2013	1.09	0.001	4.652
July 2, 2013	3.07	0.003	4.655
July 15, 2013	11.8	0.010	4.665
August 5, 2013	3.8	0.005	4.670
August 20, 2013	1.62	0.001	4.672
September 4, 2013	2.21	0.002	4.674
September 16, 2013	4.73	0.006	4.681
November 18, 2013	8.5	0.025	4.705
November 25, 2013	7.3	0.003	4.709
January 10, 2014	7.57	0.003	4.711
January 31, 2014	7.88	0.006	4.718
March 4, 2014	6.84	0.003	4.721
March 18, 2014	5.5	0.008	4.729
May 6, 2014	4.61	0.010	4.738
May 19, 2014	5.13	0.008	4.746
July 8, 2014	4.23	0.008	4.755
July 24, 2014	3.59	0.002	4.757
September 3, 2014	5.03	0.003	4.759
September 17, 2014	4.12	0.005	4.764
December 2, 2014	5.93	0.011	4.775
December 23, 2014	5.08	0.010	4.785
March 6, 2015	6.05	0.008	4.818
March 23, 2015	2.61	0.006	4.824
June 2, 2015	8.83	0.002	4.826
June 30, 2015	4.33	0.015	4.840
September 2, 2015	6.79	0.002	4.842
September 16, 2015	3.46	0.006	4.848
November 23, 2015	5.07	0.021	4.869
December 1, 2015	5.22	0.002	4.872
December 15, 2015	2.45	0.004	4.876
January 5, 2016	2.25	0.005	4.881
February 17, 2016	4.45	0.004	4.885
March 2, 2016	4.34	0.003	4.887

Table F-46
Cumulative Mass Removal
OU III Chemical/Animal Holes Sr-90 System

2019 BNL Groundwater Status Report

Sample Date	Influent Concentration (pCi/L)	Millicuries pumped	Cumulative mCi
March 15, 2016	3.81	0.006	4.893
April 15, 2016	1.64	0.003	4.897
April 25, 2016	7	0.000	4.897
May 4, 2016	5.15	0.001	4.897
May 17, 2016	3.15	0.002	4.899
June 8, 2016	2.92	0.004	4.903
June 21, 2016	1.9	0.003	4.906
July 11, 2016	3.26	0.004	4.909
July 25, 2016	2.55	0.001	4.911
September 1, 2016	1.66	0.000	4.911
September 12, 2016	1.83	0.001	4.912
November 1, 2016	1.36	0.003	4.915
November 14, 2016	0.904	0.000	4.916
December 1, 2016	1.78	0.001	4.917
December 15, 2016	1.67	0.00001	4.917
January 15, 2017	2.69	0.00187	4.920
January 30, 2017	0.79	0.00055	4.921
March 15, 2017	3.42	0.00123	4.922
March 31, 2017	0.63	0.00028	4.923
June 6, 2017	2.31	0.00130	4.924
July 12, 2017	3	0.00155	4.925
July 25, 2017	1.37	0.00112	4.926
September 14, 2017	3.76	0.00160	4.928
September 26, 2017	1.17	0.00061	4.929
November 30, 2017	1	0.00085	4.930
January 9, 2018	2.63	0.00252	4.932
March 1, 2018	0.94	0.00039	4.932
March 14, 2018	2.78	0.00115	4.934
May 2, 2018	3.45	0.00146	4.935
May 16, 2018	5.09	0.00215	4.937

*System in stand-by mode as of July 2018

Table F-47
Extraction Well VOC Data
OU VI EDB Pump and Treat System

2019 BNL Groundwater Status Report

Site ID: 000-503 (EW-1)

Chemical Name	Sample Date	Value	Detlim	Units	Depth	Qual
524.2 TVOC	01/10/19	1.36	0	UG/L	0	
Chloroform	01/10/19	1.36	0.5	UG/L	0	
EDB	01/10/19	0.012	0.0199	UG/L	0	J
524.2 TVOC	04/10/19	1.74	0	UG/L	0	
Chloroform	04/10/19	1.36	0.5	UG/L	0	
Methyl tert-butyl ether	04/10/19	0.38	0.5	UG/L	0	J
524.2 TVOC	07/02/19	1.27	0	UG/L	0	
Chloroform	07/02/19	1.27	0.5	UG/L	0	
EDB	07/02/19	0.0106	0.02	UG/L	0	J
524.2 TVOC	10/02/19	1.65	0	UG/L	0	
Chloroform	10/02/19	1.65	0.5	UG/L	0	

Site ID : 000-504 (EW-2)

Chemical Name	Sample Date	Value	Detlim	Units	Depth	Qual
524.2 TVOC	01/10/19	1.25	0	UG/L	0	
Chloroform	01/10/19	1.25	0.5	UG/L	0	
EDB	01/10/19	0.0414	0.0198	UG/L	0	
524.2 TVOC	04/10/19	1.25	0	UG/L	0	
Chloroform	04/10/19	1.25	0.5	UG/L	0	
EDB	04/10/19	0.0134	0.0196	UG/L	0	J
524.2 TVOC	07/02/19	1.36	0	UG/L	0	
Chloroform	07/02/19	1.36	0.5	UG/L	0	
EDB	07/02/19	0.0385	0.0199	UG/L	0	
524.2 TVOC	10/02/19	1.53	0	UG/L	0	
Chloroform	10/02/19	1.53	0.5	UG/L	0	
EDB	10/02/19	0.0482	0.0198	UG/L	0	

J = Estimated Value below the method detection limit of 0.50 UG/L
 B = Compound was found in both the sample and associated laboratory blank.

Table F-48
System Influent VOC Data
OU VI EDB Pump and Treat System

2019 BNL Groundwater Status Report

Site ID: 000-512 (Combined Influent)

Chemical Name	Sample Date	Value	Detlim	Units	Depth	Qual
524.2 TVOC	01/10/19	1.26	0	UG/L	0	
Chloroform	01/10/19	1.26	0.5	UG/L	0	
EDB	01/10/19	0.0268	0.0199	UG/L	0	
524.2 TVOC	02/05/19	1.03	0	UG/L	0	
Chloroform	02/05/19	1.03	0.5	UG/L	0	
EDB	02/05/19	0.0289	0.0201	UG/L	0	
524.2 TVOC	04/10/19	1.58	0	UG/L	0	
Chloroform	04/10/19	1.41	0.5	UG/L	0	
EDB	04/10/19	0.0118	0.0193	UG/L	0	J
Methyl tert-butyl ether	04/10/19	0.17	0.5	UG/L	0	J
524.2 TVOC	05/02/19	1.24	0	UG/L	0	
Chloroform	05/02/19	1.24	0.5	UG/L	0	
EDB	05/02/19	0.011	0.0196	UG/L	0	J
524.2 TVOC	06/05/19	0	0	UG/L	0	
524.2 TVOC	07/02/19	1.06	0	UG/L	0	
Chloroform	07/02/19	1.06	0.5	UG/L	0	
EDB	07/02/19	0.0253	0.0198	UG/L	0	
524.2 TVOC	08/21/19	1.51	0	UG/L	0	
Chloroform	08/21/19	1.51	0.5	UG/L	0	
EDB	08/21/19	0.0216	0.0197	UG/L	0	
524.2 TVOC	09/10/19	1.3	0	UG/L	0	
Chloroform	09/10/19	1.3	0.5	UG/L	0	
EDB	09/10/19	0.023	0.0196	UG/L	0	
524.2 TVOC	10/02/19	1.48	0	UG/L	0	
Chloroform	10/02/19	1.48	0.5	UG/L	0	
EDB	10/02/19	0.0336	0.0199	UG/L	0	

J - Estimated value.

B = Compound was found in both the sample and associated laboratory blank.

Table F-49
System Effluent VOC Data
OU VI EDB Pumps and Treat System

2019 BNL Groundwater Status Report

Site ID: 000-510 (Effluent)

Chemical Name	Sample Date	Value	Detlim	Units	Depth	Qual
524.2 TVOC	01/10/19	1.26	0	UG/L	0	
Chloroform	01/10/19	1.26	0.5	UG/L	0	
524.2 TVOC	02/05/19	1.34	0	UG/L	0	
Chloroform	02/05/19	1.34	0.5	UG/L	0	
524.2 TVOC	04/10/19	0	0	UG/L	0	
524.2 TVOC	05/02/19	0	0	UG/L	0	
524.2 TVOC	06/05/19	0	0	UG/L	0	
524.2 TVOC	07/02/19	0.55	0	UG/L	0	
Chloroform	07/02/19	0.55	0.5	UG/L	0	
524.2 TVOC	08/21/19	0	0	UG/L	0	
524.2 TVOC	09/10/19	0	0	UG/L	0	
524.2 TVOC	10/02/19	0.33	0	UG/L	0	
Chloroform	10/02/19	0.33	0.5	UG/L	0	J

J = Estimated Value below the method detection limit of 0.50 UG/L

B = Compound was found in both the sample and associated laboratory blank.

Table F-50
OU III Tritium Pump and Recharge System
Extraction Wells VOC Data and Tritium Data

2019 BNL Groundwater Status Report

Site ID : 096-119 (EW-16)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
524.2 TVOC	01/11/19	0.27	0	UG/L	
Chloroform	01/11/19	0.27	0.5	UG/L	J
524.2 TVOC	04/10/19	0	0	UG/L	
524.2 TVOC	07/17/19	0.48	0	UG/L	
Chloroform	07/17/19	0.48	0.5	UG/L	J

Site ID : 105-39 (EW-10)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
Perfluorobutanesulfonate (PFBS)	01/11/19	1.48	1.53	NG/L	J
Perfluorobutyric acid (PFBA)	01/11/19	7.47	1.72	NG/L	
Perfluoroheptanoic acid (PFHpA)	01/11/19	1.8	1.72	NG/L	
Perfluorohexanesulfonate (PFHxS)	01/11/19	11.5	1.56	NG/L	
Perfluorohexanoic acid (PFHxA)	01/11/19	4.18	1.72	NG/L	
Perfluorononanoic acid (PFNA)	01/11/19	0.627	1.72	NG/L	J
Perfluorooctanesulfonate (PFOS)	01/11/19	9.29	1.72	NG/L	
Perfluorooctanoic acid (PFOA)	01/11/19	5.1	1.72	NG/L	
Perfluoropentanesulfonate (PFPeS)	01/11/19	1.17	1.61	NG/L	J
Perfluoropentanoic acid (PFPeA)	01/11/19	2.65	1.72	NG/L	
1,2,3-Trichlorobenzene	01/11/19	0.69	0.5	UG/L	
1,2,4-Trichlorobenzene	01/11/19	0.21	0.5	UG/L	J
524.2 TVOC	01/11/19	1.47	0	UG/L	
Chloroform	01/11/19	0.37	0.5	UG/L	J
Tetrachloroethylene	01/11/19	0.2	0.5	UG/L	J
524.2 TVOC	04/10/19	0	0	UG/L	
524.2 TVOC	07/17/19	0.54	0	UG/L	
Chloroform	07/17/19	0.31	0.5	UG/L	J
Tetrachloroethylene	07/17/19	0.23	0.5	UG/L	J

Table F-50
OU III Tritium Pump and Recharge System
Extraction Wells VOC Data and Tritium Data

2019 BNL Groundwater Status Report

Site ID : 105-40 (EW-9)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
Perfluorobutanesulfonate (PFBS)	01/11/19	1.7	1.52	NG/L	
Perfluorobutyric acid (PFBA)	01/11/19	8.76	1.71	NG/L	
Perfluoroheptanoic acid (PFHpA)	01/11/19	3	1.71	NG/L	
Perfluorohexanesulfonate (PFHxS)	01/11/19	12.3	1.55	NG/L	
Perfluorohexanoic acid (PFHxA)	01/11/19	5.95	1.71	NG/L	
Perfluorononanoic acid (PFNA)	01/11/19	0.801	1.71	NG/L	J
Perfluorooctanesulfonate (PFOS)	01/11/19	13.1	1.71	NG/L	
Perfluorooctanoic acid (PFOA)	01/11/19	7.11	1.71	NG/L	
Perfluoropentanesulfonate (PFPeS)	01/11/19	1.26	1.61	NG/L	J
Perfluoropentanoic acid (PFPeA)	01/11/19	5.04	1.71	NG/L	
Perfluorobutanesulfonate (PFBS)	01/11/19	1.39	1.58	NG/L	J
Perfluorobutyric acid (PFBA)	01/11/19	5.7	1.77	NG/L	
Perfluoroheptanoic acid (PFHpA)	01/11/19	1.75	1.77	NG/L	J
Perfluorohexanesulfonate (PFHxS)	01/11/19	12.2	1.61	NG/L	
Perfluorohexanoic acid (PFHxA)	01/11/19	4.42	1.77	NG/L	
Perfluorononanoic acid (PFNA)	01/11/19	1.17	1.77	NG/L	J
Perfluorooctanesulfonate (PFOS)	01/11/19	9.59	1.77	NG/L	
Perfluorooctanoic acid (PFOA)	01/11/19	5.34	1.77	NG/L	
Perfluoropentanesulfonate (PFPeS)	01/11/19	0.89	1.67	NG/L	J
Perfluoropentanoic acid (PFPeA)	01/11/19	3.27	1.77	NG/L	
1,2,3-Trichlorobenzene	01/11/19	0.73	0.5	UG/L	
1,2,4-Trichlorobenzene	01/11/19	0.24	0.5	UG/L	J
524.2 TVOC	01/11/19	1.75	0	UG/L	
Chloroform	01/11/19	0.3	0.5	UG/L	J
Tetrachloroethylene	01/11/19	0.48	0.5	UG/L	J
524.2 TVOC	04/10/19	0	0	UG/L	
1,2,3-Trichlorobenzene	07/17/19	0.22	0.5	UG/L	BJ
524.2 TVOC	07/17/19	0.96	0	UG/L	
Chloroform	07/17/19	0.33	0.5	UG/L	J
Tetrachloroethylene	07/17/19	0.41	0.5	UG/L	J

Site ID : 105-41 (EW-11)

Chemical Name	Sample Date	Value	Detlim	Units	Qual
Perfluorobutanesulfonate (PFBS)	01/11/19	1.44	1.58	NG/L	J
Perfluorobutyric acid (PFBA)	01/11/19	4.52	1.77	NG/L	
Perfluoroheptanoic acid (PFHpA)	01/11/19	1.11	1.77	NG/L	J
Perfluorohexanesulfonate (PFHxS)	01/11/19	17.1	1.61	NG/L	
Perfluorohexanoic acid (PFHxA)	01/11/19	3.31	1.77	NG/L	
Perfluorononanoic acid (PFNA)	01/11/19	0.902	1.77	NG/L	J
Perfluorooctanesulfonate (PFOS)	01/11/19	11.7	1.77	NG/L	
Perfluorooctanoic acid (PFOA)	01/11/19	5.32	1.77	NG/L	
Perfluoropentanesulfonate (PFPeS)	01/11/19	1.27	1.67	NG/L	J
Perfluoropentanoic acid (PFPeA)	01/11/19	1.97	1.77	NG/L	
524.2 TVOC	01/11/19	0.56	0	UG/L	
Chloroform	01/11/19	0.56	0.5	UG/L	
524.2 TVOC	04/10/19	0.52	0	UG/L	
Chloroform	04/10/19	0.52	0.5	UG/L	
524.2 TVOC	07/17/19	0.71	0	UG/L	
Chloroform	07/17/19	0.5	0.5	UG/L	
Tetrachloroethylene	07/17/19	0.21	0.5	UG/L	J