

Table 3.5.1-3

**Phase 4 Characterization: PFOS and PFOA Results for Extraction Wells and Treatment Systems  
2017-2020**

2020 BNL Groundwater Status Report

Well	Sample Date	Screen Interval (ft. BLS)	Aquifer Segment	Treatment System Extraction Well/Influent/Effluent	PFOS ng/L	PFOA ng/L
<b>OU I South Boundary Treatment System (Status: Closed)</b>						
115-27	1/11/19	150-190	DG	OU I South Boundary EW-1	5.59	5.09
115-43	1/11/19	104-124	DG	OU I South Boundary EW-2	7.28	3.28
<b>Chemical Holes Sr-90 Treatment System (Status: Closed)</b>						
106-92	2/12/19	23-38	SG	Chem Holes Sr-90 EW-1	2.3	8.85
106-123	1/11/19	35-45	SG	Chem Holes Sr-90 EW-2	1.65J	1.95
106-124	1/11/19	35-45	SG	Chem Holes Sr-90 EW-3	0.89J	1.23J
<b>HFBR Tritium Pump and Recharge System (Status: Closed)</b>						
105-40	1/11/19	130-150	DG	HFBR EW-9	<b>13.1</b>	7.11
" " BD	1/19/19	" "	" "	" "	9.59	5.34
105-39	1/11/19	130-150	DG	HFBR EW-10	9.29	5.1
105-41	1/11/19	130-150	DG	HFBR EW-11	<b>11.7</b>	5.32
096-119	1/11/19	80-120	MG	HFBR EW-16	9.6	5.3
<b>Building 96 VOC Treatment System (Status: Active); Building 452 Freon-11 Treatment System (Status: Closed)</b>						
095-151	12/15/18	25-35	SG	B96 RTW-1	<b>17.8</b>	5.79
095-151	12/6/17	---	---	B96 RTW-1 System Effluent	NA	NA
" "	12/15/18	---	---	" "	<b>16.2</b>	5.12
095-153	12/15/18	25-35	SG	B96 RTW-2	7.14	4.12
095-154	12/15/18	---	SG	B96 RTW-2 System Effluent	6.4	5.46
095-155	12/15/18	25-35	SG	B96 RTW-3	9.09	4.02
095-157	12/15/18	25-35	SG	B96 RTW-4	<b>40</b>	<b>13.8</b>
085-389	12/15/18	55-65	SG	B452 EW-18 (Influent 095-316)	<b>20.8</b>	8.7
<b>BGRR/WCF Sr-90 Treatment System (Status: Active)</b>						
065-368	1/17/19	33-53	SG	BGRR/WCF SR-1	5.32	5.45
" "	2/27/20	" "	" "	" "	NA	NA
065-369	1/17/19	33-53	SG	BGRR/WCF SR-2	3.6	2.57
" "	2/27/20	" "	" "	" "	NA	NA
075-676	1/17/19	51-71	SG	BGRR/WCF SR-3	2.44	6.22
" "	2/27/20	" "	" "	" "	NA	NA
075-677	1/17/19	35-75	SG	BGRR/WCF SR-4	8.74	5.53
" "	2/27/20	" "	" "	" "	NA	NA
075-678	1/17/19	35-75	SG	BGRR/WCF SR-5	7.02	3.27
" "	2/27/20	" "	" "	" "	NA	NA
065-403	1/17/19	85-105	SG	BGRR/WCF SR-6	<b>12.3</b>	4.12
" "	2/27/20	" "	" "	" "	NA	NA
075-702	1/17/19	82-102	SG	BGRR/WCF SR-7	<b>10.8</b>	4.33
" "	2/27/20	" "	" "	" "	NA	NA
075-703	1/17/19	77-97	SG	BGRR/WCF SR-8	8.12	3.72
" "	2/27/20	" "	" "	" "	NA	NA
" " BD	2/27/20	" "	" "	" "	NA	NA
075-704	1/17/19	67-87	SG	BGRR/WCF SR-9	7.01	3.1
" "	2/27/20	" "	" "	" "	NA	NA
066-216	1/17/19	---	---	BGRR/WCF System Influent	6.46	3.75
066-219	1/17/19	---	---	BGRR/WCF System Effluent	3.69	4.22

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<b>OU III Western South Boundary, Middle Road, and South Boundary Treatment Systems (Status: Active)</b>						
126-12	2/20/19	140-160	DG	WSB-1	5.66	3.17
" "	9/18/19	" "	" "	" "	NA	NA
127-05	2/20/19	150-170	DG	WSB-2	1.53J	1.76U
" "	9/18/19	" "	" "	" "	NA	NA
111-17	2/20/19	168-188	DG	WSB-3	1.1J	1.48
" "	9/18/19	" "	" "	" "	NA	NA
" "	9/2/20	" "	" "	" "	NA	NA
119-13	2/20/19	170-190	DG	WSB-4	1.80U	1.80U
" "	9/18/19	" "	" "	" "	NA	NA
130-12	2/20/19	160-190	DG	WSB-5	1.77U	1.77U
" "	9/18/19	" "	" "	" "	NA	NA
130-13	2/20/19	196-216	DG	WSB-6	1.80U	1.80U
" "	9/18/19	" "	" "	" "	NA	NA
119-05	12/5/17	---	---	Former WSB Effluent Location (b)	NA	NA
113-23	12/14/18	90-130	MG	Middle Road RW-1	<b>10.3</b>	9.6
113-24	12/14/18	170-200	DG	Middle Road RW-2	<b>11.2</b>	<b>10.9</b>
113-25	12/14/18	228-268	MAG	Middle Road RW-3	3	5.82
113-26	12/14/18	150-180	DG	Middle Road RW-4	7.14	8.79
113-27	12/14/18	150-180	DG	Middle Road RW-5	7.19	5.83
106-66	12/14/18	188-218	DG	Middle Road RW-6	4.48	1.65J
113-33	12/14/18	202-222	DG	Middle Road RW-7	2.15	5.35
113-34	12/14/18	---	---	Middle Road Influent to System	5.93	7.01
" " BD	12/14/18	---	---	" "	5.4	6.8
121-17	12/14/18	150-190	DG	OU III South Boundary EW-3	3.51	2.46
121-16	12/14/18	160-200	DG	OU III South Boundary EW-4	<b>17.6</b>	<b>10.9</b>
121-15	12/14/18	160-200	DG	OU III South Boundary EW-5	<b>18.9</b>	<b>12.5</b>
122-14	12/14/18	160-200	DG	OU III South Boundary EW-6	<b>11.7</b>	5.37
122-13	12/14/18	170-210	DG	OU III South Boundary EW-7	<b>11.8</b>	<b>16.4</b>
122-12	12/14/18	190-210/230-250	DG/MAG	OU III South Boundary EW-8	3.73	3.51
121-46	12/14/18	207-237	DG	OU III South Boundary EW-17	10	5.55
" " BD	12/14/18	" "	" "	" "	9.3	6.4
121-41	12/14/18	---	---	OU III South Boundary Inf. to Sys.	<b>14.4</b>	<b>10.3</b>
095-126	12/6/17	---	OU III WSB/MR/SB Combined System Effluent		NA	NA
" "	12/14/18	---		" "	4.83 (a)	5.82 (a)
" "	4/1/19	---	---	" "	7.57	4.11
" "	9/18/19	---	---	" "	NA	NA
" "	9/2/20	---	--	" "	NA	NA
" " BD	" "	---	---	" "	NA	NA

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2017-2020**

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Well	Sample Date	Screen Interval (ft. BLS)	Aquifer Segment	Treatment System Extraction Well/Influent/Effluent	PFOS ng/L	PFOA ng/L
<b>OU III Industrial Park VOC Treatment System (Status: Active)</b>						
000-231	1/23/20	220-240	DG	IP UVB-1	1.35J	2.36
000-233	1/23/20	195-215	DG	IP UVB-2	1.82U	1.05J
000-235	1/23/20	194-214	DG	IP UVB-3	4.6	2.62
000-237	1/23/20	170-190	DG	IP UVB-4	<b>18.1</b>	4.35
000-239	1/23/20	180-200	DG	IP UVB-5	2.48	1.16J
000-241	1/23/20	190-210	DG	IP UVB-6	6.3	2.61
000-243	1/23/20	205-225	DG	IP UVB-7	6.18	2.44
000-532	1/23/20	230-250	MAG	IP-EW-8	0.89J	1.80U
000-533	1/23/20	220-240	MAG	IP-EW-9	3.26	1.92
000-534	1/23/20	---	---	IP System Influent	2.13	1.12J
000-536	12/5/17	---	---	IP System Effluent	NA	NA
" "	1/23/20	---	---	" "	1.81U	1.81U
" " BD	" "	---	---	" "	1.84U	1.84U
<b>OU III LIPA/Airport VOC Treatment System (Status: Active)</b>						
000-453	4/7/20	217-237	DG	LIPA EW-1L	4.78	2.31
000-455	4/7/20	224-244	DG	LIPA EW-2L	6.32	3.74
000-457	4/7/20	216-236	DG	LIPA EW-3L	9.43	9.45
000-461	4/7/20	304-324	MAG	LIPA EW-4L	1.82U	1.3J
800-109	4/7/20	188-208	DG	AP RTW-1A	1.59J	3.59
800-110	4/7/20	188-208	DG	AP RTW-2A	1.80U	1.80U
800-111	4/7/20	210-230	MAG	AP RTW-3A	1.98	3.79
800-112	4/7/20	268-288	MAG	AP RTW-4A	1.81U	0.7J
800-113	4/7/20	220-240	MAG	AP RTW-5A	1.80U	1.80U
800-132	4/7/20	165-185	DG	AP RW-6A	1.47	3.24
800-122	4/7/20	---	---	LIPA/AP System Influent	1.79U	1.47J
800-124	1/17/18	---	---	LIPA/AP System Effluent	NA	NA
" "	4/7/20	---	---	" "	1.86U	1.86U
" " BD	" "	---	---	" "	1.79U	1.79U
<b>OU III North Street VOC Treatment System (Status: In Standby)</b>						
000-471	8/5/20	165-205	DG	NS-1	1.80U	1.80U
000-473	8/5/20	190-220	DG	NS-2	1.77U	1.77U
000-437	8/5/20	---	---	NS System Influent	1.79U	1.79U
000-440	8/5/20	---	---	NS System Effluent	1.84U	1.84U
<b>OU III North Street East VOC/EDB Treatment System (Status: Active)</b>						
000-487	8/5/20	161-191	DG	NSE-1	1.78U	4.24
000-488	8/5/20	152-182	DG	NSE-2	1.81U	1.81U
000-561	7/17/20	195-215	DG	NSE-EDB-EW3	1.84U	4.32
000-562	7/17/20	182-202	DG	NSE-EDB-EW4	0.681J	5.76
000-441	7/17/20	---	---	NSE System Influent	1.71U	4.71
" "	8/18/20	---	---	" "	NA	NA
000-444	7/17/20	---	---	NSE System Effluent	1.78U	1.78U
" " BD	" "	---	---	" "	1.77U	1.77U
" "	8/18/20	---	---	" "	NA	NA
" " BD	" "	---	---	" "	NA	NA

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<b>OU VI EDB Treatment System (Status: Active)</b>						
000-503	2/12/20	115-135	DG	EW-1E	1.84U	1.84U
000-504	2/12/20	115-135	DG	EW-2E	1.82U	1.82U
000-512	2/12/20	---	---	OU VI System Influent	1.75U	1.75U
000-510	2/12/20	---	---	OU VI System Effluent	1.80U	1.80U

SG=Shallow Upper Glacial, MG=Middle Upper Glacial, DG= Deep Upper Glacial

MAG=Upper Magothy

(a) Sample collected prior to the April 2019 redirection of water from the WSB extraction wells to the OU III MR/SB treatment system.

(b) Use of the former WSB air stripper tower was discontinued in April 2019.

U: Not detected at or above the method detection limits.

J: Estimated concentration.

E:

BD: Blind Duplicate sample.

NA: Samples not analyzed for specified chemical during this sample period.