TOBSWMF's Groundwater Monitoring Program
June 2019

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Laboratory data and summary report associated with the Town of Babylon Solid Waste Management facilities from March and June 2019 generated pursuant to the Town of Babylon Groundwater Monitoring Program.

June 2019
TOBSWMF's Groundwater Monitoring Program Results

Introduction

Groundwater sampling for the Groundwater Monitoring Program (GMP) at the Town of Babylon Solid Waste Management Facilities (TOBSWMF's) occurred in March 2019 (Cell 7 GMP) and June 2019. Laboratory analysis for the traditional GMP (wells GM-2, 4, 5, 6, 7, 15, 16, 17, 18 and 19) was for routine parameters plus TAL metals, 1,4 dioxane and PFOA's. Laboratory analysis associated with the Cell 7 GMP (well clusters 26, 27 and 28) was scheduled for routine parameters, 1,4 dioxane and PFOA's in March and June 2019. Details on the Groundwater Monitoring Program for Cell 7 is described in an Addendum to the Groundwater Monitoring Program for Cell 7[1] prepared by P.W. Grosser Consulting. Laboratory analysis for the March and June 2019 GMP was performed by Pace Analytical Services Inc (Laboratory ID 10478). Pace Analytical subcontracted a portion of the analysis to Eurofins TestAmerica and Envirotest Laboratories Inc..

The laboratory data package was prepared by Pace Analytical Services Inc with subcontract reports from Eurofins TestAmerica and Envirotest Laboratories Inc. The data package is comprised of the laboratory results, project narratives and laboratory QA/QC documentation prepared by Pace Analytical Services Inc and the subcontracted labs. Any issues, deficiencies or flagging of results were summarized in these narratives and can be found in appendix 1 of this report. In addition to internal laboratory QA/QC an equipment blank and field duplicate (GM-27I) were included as part of the March 2019 and June 2019 GMP (duplicate GM-27I). The field duplicates for March and June 2019 did not indicate any notable discrepancies in analytical results. For the June 2019 GMP a trip blank was obtained in addition to internal laboratory QA/QC as part of the operational QA/QC requirements. The trip blank (sampled for volatiles) collected was clean. The March 2019 GMP was limited to routine parameters therefore a trip blank for volatiles was not obtained. An equipment blank was also obtained in addition to internal laboratory QA/QC for June 2019. The June 2019 equipment blank (obtained the same day for the LMP) did not possess any notable discrepancies. The project narrative for dioxane noted that dioxane was detected in the method blank for March 2019. Review of qualifiers in the March 2019 lab report noted certain PFAS compounds were found in the blank and sample.

Overall, each data package was certified by the laboratory as being in compliance with the laboratories quality assurance manual both technically and for completeness.

[1] P.W. Grosser Consulting, "Addendum to Groundwater Monitoring Program for Lateral Expansion of the Southern Ashfill (SA EXP), Town of Babylon Landfill". August 2015.

Monitoring Network

The TOBSWMF's are located on Gleam Street in West Babylon, New York (Map 1). Map 2 illustrates the location of the ash facilities and monitoring well network utilized with the GMP.

Groundwater wells 2, 4, 5, 6, 7, 15, 16, 17, 18 and 19 were originally part of the monitoring network constructed for the Babylon RI/FS. This matrix of groundwater wells is comprised of two bands of sampling stations downgradient of the former Babylon Landfill and SA, ONU and NNU ash facilities, and one upgradient sampling point (GM-2). These monitoring wells comprise Babylon's traditional GMP that has been in place since 2001. These wells continue to be sampled semiannually and provide the necessary data to monitor both the long term progress of the remedial actions implemented at the former Babylon Landfill and the groundwater quality downgradient of the Southern and Northern U ashfills.

Map 1
Location of Babylon SWMF's

Legend

Babylon_SWMF's

Source:TOBGIS
Town of Babylon Department of Environmental Control
June 2012

Groundwater well clusters 26, 27 and 28 were constructed specifically to satisfy the groundwater monitoring requirements for Cell 7. Well cluster 26 provides upgradient data and well clusters 27 and 28 the downgradient data to monitor Cell 7. These wells are scheduled to be sampled quarterly for the Cell 7 GMP.

GMP for Landfill plume, Southern Ashfill and Northern U Ashfills

The first section of this report focuses on the monitoring requirements associated with the former Babylon Landfill and the Southern and Northern U ashfills. The monitoring plan for these facilities incorporates the two northernmost bands of wells constructed for the former Babylon Landfill RI/FS. This network was designed to delineate the plume associated with the former Babylon Landfill and is now utilized to monitor the long term trend of the former landfill plume as required by the ROD, and to satisfy the permit/regulatory requirements for a groundwater monitoring component associated with operation of the Southern and Northern U Ashfills. This segment of the Babylon GMP has been ongoing since 2001 and is referred to in this report as the traditional GMP. The lab report for this round of sampling has been attached as appendix 1. Sampling procedures are provided within the Site Analytical Plan for the Town of Babylon Solid Waste Management Facilities' (SAP) (TOBDEC, 2018).

Data: Groundwater Monitoring for Traditional GMP
The following spreadsheets provide a tabular comparison of the June 2019 results and historical dataset at wells 2, 4, 5, 6, 7, 15, 16, 17, 18, and 19. From the June 2019 data:

- The June 2019 laboratory results largely conform to recent datasets with the following notations:
    - Indicators from monitoring points GM-6 and 7 remain variable during sampling for the GMP.
        - Leachate indicators (chloride, alkalinity and calcium) for June 2019 at GM-6 were notably reduced from recent values.
        - Chloride at GM-7 is erratic but has been observed at background 4 of the past 5 samples.
        - Calcium remains elevated at GM- 7.
        - TKN had been elevated at GM-6 and was reduced for June 2016. TKN at GM-7 remains at background.
    - A number of indicators for traditional GMP were observed at or near background for June 2019.
        - Chloride at well GM-7 and 17 were at background and slightly above background at GM-16. Chloride at Well 7 has been highly variable.
        - Calcium at wells GM-4, 5, 16, 17 and 19 (slightly above) were at background.
        - TKN was observed at background at wells GM-4, 5, 7, 16, 17,18 and 19. TKN at GM-6 and GM-15 remain the only wells within this network with measurable values for TKN. TKN at GM's 6 and 15 remain variable and are within their historical range.

        - TDS at wells GM-4, 15, 16 and 17 were observed at background. TDS at GM-15 (6 mg/l) are well below its historical range and are questionable.
        - Alkalinity at monitoring points GM-4, 5, 16,17 and 19 were observed at or near background.
    - Piper diagrams have been updated at GM-4, 5, 6, 7, 15, 16,17,18 and 19 (figures 6-14).
        - The Piper diagram depicted in figure 8 continues to illustrate that the data accrued for GM-6 coincides with the historical data from this monitoring point. The Piper diagram at GM-6 does not share a geochemical fingerprint as established by leachate.
        - The Piper diagrams for GM's 4 and 5 display random values where the lower right segment of the Piper diagram illustrate a greater concentration of chloride migrating to the area of the diagram occupied by leachate and the final data points falling within the area designated as groundwater and leachate mix on the Grosser diagram (figure 1). AGM-5 the shift in the lower left quadrant from 2017-2019 was likely due to increase values of sodium, and the shift in the lower right portion of the diagram from 2017-2019 was likely due to increase chloride.
        - The Piper diagram for GM-7 illustrates no easily decipherable pattern.
        - The Piper diagrams for the second row of monitoring points did not include any notable observations for June 2019. These diagrams at times include random shifts to their fingerprints. These shifts were noted on December 2013, 2015 and 2016 at GM-15, June 2016 and 2017 at GM-16 (elevated sodium and reduced value of calcium) and December 2018 and June 2019 at GM-19 (elevated chloride).
- Overall, the concentration of leachate indicators at GM's-4, 16, 17 and 19 continue to be reduced from pre-remedial values and are consistently observed at or near background values (note, location GM-19 observed elevated values for chloride for December 2018 and June 2019). Indicators at GM-6 had been exceeding their historical range since 2015 until June 2019, however it is noted that the Piper diagram for GM-6 has not shifted nor does the diagram share the leachate geochemical fingerprint (figure 1). Indicators at GM's 7 and 15 have been erratic displaying random elevated and background values.

Leakage rate values (appendix 2) from the SA, Cell 7 and ONU (west) are generally within their historical range. Leakage rates at the ONU east have increased since 2016 from the average values observed from 2005-2015. Leakage rates at the NNU facility have been consistently monitored. Since 2017 the leakage rate has been observed to exceed the prior average leakage rate by approximately 2 orders of magnitude. The cause was previously believed to be a check valve malfunction/failure that allowed leachate being pumped from the ONU pump station to backflow into the secondary liner of the NNU facility. This repair was made and ALR values have not decreased. The current condition warrants a need to take action which may entail procuring an engineering

Groundwater Network for Chloride-background 13 to 25 mg/l Wells at background in red.

	GM-3	GM-4	GM-5	GM-6	GM-7	GM-15	GM-16	GM-17	GM-18	GM-19
1991	70	190	75	160	95	190	230	24	135	20
2001		33	23	39	92	77	19	9	89	
Jan-03		45	45	110	55	135	35	40	135	
Aug-03		200	50	50	0	0	0	5	99	
Jan-04		22	20	**380**	85	**440**	6	18	140	
Sep-04		37	25	84	**312**	89	16	14	61	
Mar '05		26	22.5	86	196	90	14	11	56	
Sept ' 05		31	23	76	97	93	15	11	65	
Apr'06		30.5	23	51	130	109	15	12	19.3	
Oct '06		32	24	48	115	111	16	12	75	
May_07	2050	28	24	30	70.5	104	14	11	70	33
Oct_07	1240	32	17	37	85	94	18	9.5	70	38
May_08	1030	**515**	20.5	22.5	37	91	25	9.5	68	50
Oct_08	1170	37	23.5	25	91	87	48.5	7.5	39.5	38.4
June_09		**590**	21.5	47	57.5	97.5	40.5	10.5	171	21.5
Dec_09		215	27	43	34	87	33	14.5	21	19
June_10		35	20	34	40	77	22	12	63	17
Dec_10		24	20	40	55	76	16	12	64	18
Jun_11		39	65	75	40	73	23	14	100	26
DEC_11		32	24	58	31	280	18	11	80	27
Jun_12		36	180	38	31	78	30	18	58	26
Dec_12		36.9	33.8	78.9	55.6	40.4	22.7	10.9	60.9	17.4
June_13		38.9	34.8	77.7	32.2		15.3	11.4	79	17.7
13-Dec		30.4	33.5	96.9	53.5	93.2	15.8	39.6	105	16.6
Jun_14		32.7	34.3	111	126	46.8	16.4	44.8	78.5	20.9
Dec_14		41	NA	NA	44	45	16	40	105	20
June_15		40	58	14	189	78	40	26	119	24
Dec_15		40	**244**	182	**296**	**923**	49	26	118	27
Jun_16		38	104	161	34	142	17	25	184	32
Dec_16		44.5		157		**663**	39.6	24.6	163	36.1
Jun_17		49.7	29.6	143	13.4	138	16.8	19.1	87.2	41.7
Dec_17		49.7	**242**	**249**	**697**	148	16.2	17.9	95	-
Aug_18		47.3	**228**	**229**	20.5	137	25	16.3	96.5	48.6
18-Dec		48.9	239	280	23.3	194	40.4	24.3	135	136
19-Jun		183	221	106	5.8	177	35.4	23.7	172	107

Groundwater Network for TDS-Background 86 to 200 mg/l. Wells at background in red.

	GM-3	GM-4	GM-5	GM-6	GM-7	GM-15	GM-16	GM-17	GM-18	GM-19
1991	415	410	570	740	560	930	1150	120	390	125
2001		174	202	206	546	460	166	102	350	
Jan-03		162	200	730	354	490	144	116	428	
Aug-03		246	190	**1200**	410	812	212	116	505	
Mar-04		230	190	650	480	400	230	130	320	
Sep-04		140	120	530	620	400	180	88	290	
Mar '05		170	160	620	590	420	180	94	270	
Sept '05		160	150	590	420	480	190	120	300	
Apr'2006		150	180	396	750	646	222	116	408	
Oct '06		134	124	334	446	536	192	86	318	
May_07	5780	138	124	226	386	486	172	110	425	216
Oct_07	**3290**	202	162	354	518	538	218	88	322	216
May_08	**2400**	1190	166	206	722	460	224	104	292	210
Oct_08	**3120**	110	201	273	516	530	308	116	360	207
June_09		1740	200	399	408	610	293	120	644	153
Dec_09		590	184	373	409	492	253	167	649	584
10-Jun		180	160	260	330	460	230	120	300	140
DEC_10		180	200	380	730	530	260	130	310	190
Jun_11		240	270	430	630	520	240	140	410	220
DEC_11		170	170	390	730	720	140	110	270	86
Jun_12		220	490	270	320	530	250	140	340	150
Dec_12		148	184	371	298	240	212	105	302	92
Jun_13		150	195	433	532		163	150	194	140
Dec_13		159	196	414	465	218	170	157	402	105
Jun_14		166	190	484	467	235	148	162	325	122
Dec_14		158	NA	NA	491	974	137	140	370	101
Jun_15		138	388	105	**2690**	480	171	130	372	111
Dec_15		158	468	602	852	**1980**	208	188	433	140
Jun _16		141	271	590	818	534	182	116	548	118
Dec_16		157		898		1340	170	123	509	133
Jun_17		180	191	874	782	596	162	109	304	134
Dec_17		165	553	**1120**	**1580**	377	132	101	316	
Aug_18		173	431	784	704	568	130	112	326	171
Dec_18		125	394	832	526	586	121	96	294	244
19-Jun		175	472	456	570	6	259	118	408	324

Groundwater network for Alkalinity-Backgound in red (2 to 50 mg/l).

	GM-3	GM-4	GM-5	GM-6	GM-7	GM-15	GM-16	GM-17	GM-18	GM-19
Jan-91	8.0	78	190	540	430	705	920	25	100	14
Mar-91		68	230	520	400	690	840	18	110	
Jun-05		79	46	112	324	337	68	38	84	
Jan-03		60	40	540	210	440	20	4	120	
Aug-03		76	60	**808**	200	440	180	20	120	
Jan-04		69	44	**509**	113	372	129	18	109	
Sep-04		53	57	463	62	380	121	12	105	
Mar '05		71.7	66.7	**543**	135	356	131	14.1	104	
Sept '05		57.6	56.6	440	126	377	130	14.1	98	
Mar '06		51.5	58.6	288	257	408	138	15.2	123	
Oct '06		32.3	66.7	275	185	417	141	11.1	106	
May_07	3.0	61.6	64.6	177	219	486	142	17.2	84.8	10.1
Oct_07	10.1	59.6	69.7	272	306	421	137	25.2	108	10.1
May_08	4.04	68.7	97	136	320	458	154	14.1	125	10.6
Oct_08	5.05	49.5	54.5	145	335	408	144	14.1	110	10.1
Jun_09		56.6	91.9	295	280	483	152	15.2	109	10.1
Dec_09		62.6	92.9	301	183	501	170	17.7	116	12.1
June_10		38	76	170	180	340	140	20	120	16
DEC_2010		28	76	260	230	420	140	20	130	8
Jun_11		44	66	280	320	600	170	16	140	8
DEC_11		44	68	290	350	420	170	18	140	10
Jun_12		50	52	160	170	450	110	20	120	16
Dec_12		42.8	58.1	262	148	127	117	11.5	112	7.1
Jun_13		31.2	60.6	262	296		68.8	12.9	85.6	6.3
Dec_13		17.1	58.5	274	164	55.6	69.5	11	116	8.25
Jun_14		20.4	60.5	365	118	137	63.5	10.8	104	6.75
Dec_14		42.8	NA	NA	238	213	66.6	11.4	114	6.8
Jun_15		43	40	60	191	283	72	12	88	7
Dec_15		38	59	303	82	206	74	11	98	6
Jun_16		21	28	224	491	281	120	13	99	7
Dec_16		48.2		**734**		235	96	12.4	114	8.2
Jun_17		46.2	58.4	**849**	**521**	361	42.2	12.8	100	9.2
Dec_17		14	40	**855**	70.2	105	42.2	9.8	142	No sam
Aug_18		17.6	13.7	**549**	**517**	371	41.1	10.5	156	6.2
Dec_18		16.7	56.2	**758**	441	426	47.7	10.5	141	5.5
June_19		32.9	51.2	262	470	372	44.6	26.7	136	6.2

Groundwater network for TKN Wells at background in red (0 (< mdl) to 5.8 mg/l).

	GM-3	GM-4	GM-5	GM-6	GM-7	GM-15	GM-16	GM-17	GM-18	GM-19
Apr'1991	2.00	4.00	10.00	35.00	23.00	42.00	54.00	0.60	9.00	0.70
Dec'2001		0.26	0.00	0.00	10.00	26.00	1.40	0.43	1.20	
1/1/2003		2.70	3.50	25.00	10.00	31.00	4.70	3.20	4.30	
8/1/2003		0.00	0.41	**40.00**	1.60	34.50	2.94	0.00	8.01	
1/1/2004		0.58	1.80	30.00	2.90	36.00	5.90	1.60	3.20	
9/1/2004		0.50	0.80	18.00	1.99	34.00	2.40	0.00	2.15	
Mar '05		1.30	2.15	**37.40**	1.33	69.60	4.36	2.82	3.65	
Sept '05		1.40	1.45	29.80	1.94	46.00	3.64	0.00	3.84	
Apr'2006		1.40	1.76	2.07	0.85	1.52	2.17	0.00	2.34	
Oct '06		0.00	0.64	8.36	1.11	2.76	1.77	0.00	1.15	
May_07	4.14	0.50	0.40	5.20	1.11	24.60	1.70	0.00	0.60	0.00
Oct_07	1.15	0.63	0.44	7.1	4.06	11.90	1.25	0.22	0.70	0.16
May_08	1.18	2.68	0.60	3.35	2.02	21.20	1.65	0.00	0.80	0.00
Oct_08	2.02	0.70	0.54	5.08	24.20	20.30	1.24	0.00	0.44	0.00
Jun_09		2.42	0.60	8.3	17.00	38.00	1.39	0.00	0.65	0.00
Dec_09		3.24	0.70	13	3.71	57.30	1.21	0.40	1.26	0.40
June_10		0.60	1.00	5	4.40	24.00	1.40	4.40	1.60	0.60
DEC_10		0.60	0.40	1.8	9.60	24.00	1.20	0.40	4.80	0.40
Jun_11		0.40	0.80	9.8	1.60	25.00	1.20	0.80	1.80	0.40
DEC_11		1.00	2.20	9.4	2.4	27.00	1.40	0.60	5.40	0.00
Jun_12		1.00	1.00	4	1.2	26.00	1.20	0.20	2.20	0.20
Dec_12		0.51	0.53	12.9	1.83	11.40	0.84	0.10	1.14	0.10
Jun_13		0.41	0.42	13.5	1.59		1.83	0.1	0.68	0.10
Dec_13		0.35	0.63	12.9	2.05	0.27	0.99	<.1	1.62	0.39
Jun_14		<.1	0.42	16.8	1.58	7.85	1.64	<.1	0.81	<.1
Dec_2014		0.65	NA	NA	1.79	9.51	0.63	<.1	2.45	<.5
Jun_15		0.13	<.5	1.92	<.5	6.59	1.32	0.32	1.29	<.1
Dec_15		<.1	0.57	13.5	0.64	13.70	0.74	<.1	0.59	<.1
Jun_16		0.10	0.49	11	1.4	1.44	0.69	<0.1	1.39	<0.1
Dec_16		0.82		31.5		19.20	1.00	<.1	1.30	0.33
Jun_17		0.41	0.33	**50.6**	1.4	9.50	0.31	<.1	0.51	<.1
Dec_17		<.1	0.33	**53.5**	4	0.39	<.1	<.1	5.00	
Aug_18		<.1	4.8	**35.5**	1.8	9.60	0.56	0.12	4.00	<.1
Dec_18		<.1	0.77	**49.4**	1.9	23.20	0.47	<.1	2.90	<.1
June_19		0.86	0.46	9.6	1.9	25.80	2.10	1.7	3.10	0.91

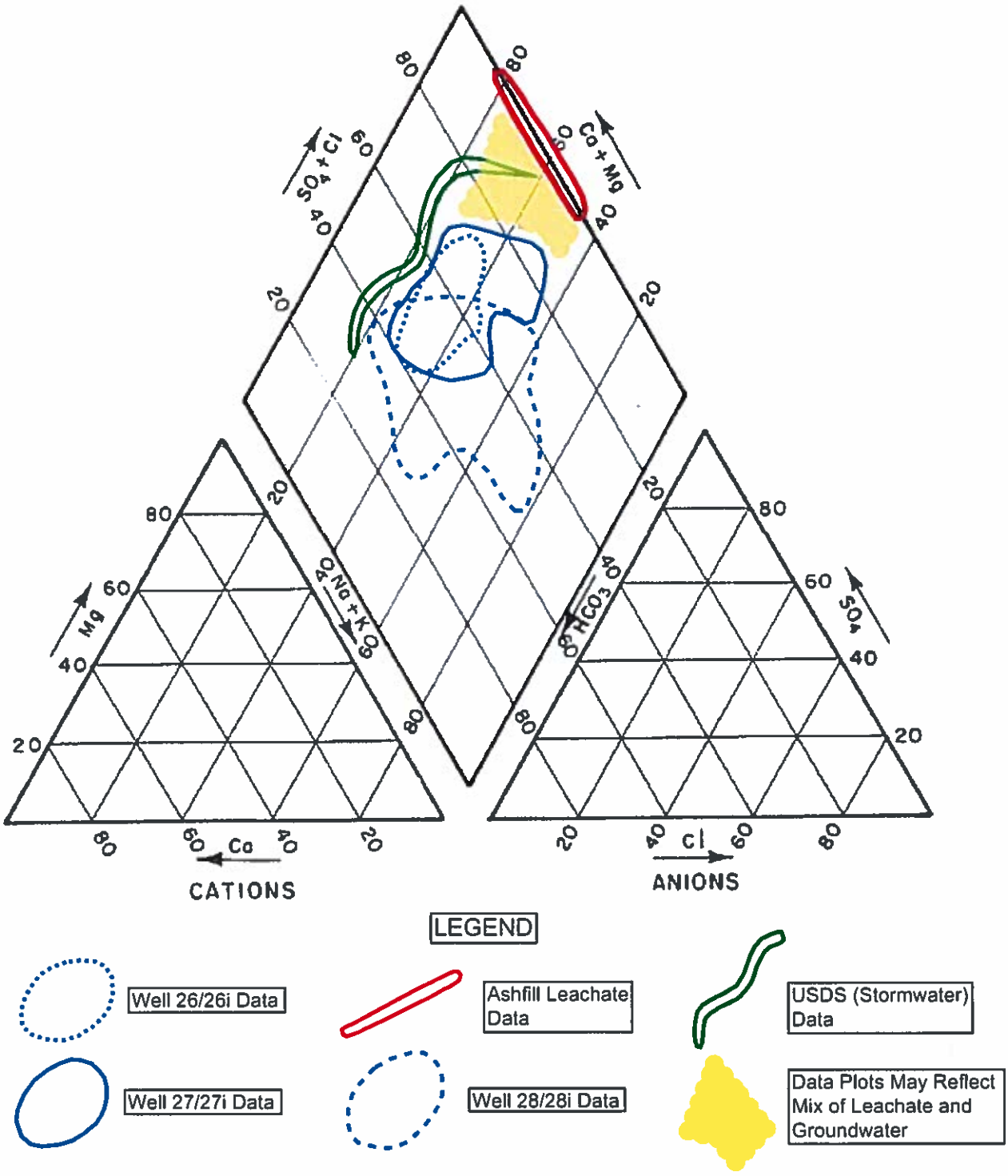
Ca Background 12-24 mg/l

	GM-4	GM-5	GM-6	GM-7	GM-15	GM-16	GM-17	GM-18	GM-19
Apr'1991	25	120	41	102	41	162	11.4	29	17
Dec'2001									
1/1/2003	18.6	21.6	127	96.5	32.5	16.2	9.4	49.5	
8/1/2003	19	23	**164**	76	39.2	36.9	8.33	50.4	
1/1/2004	17.5	20.2	57.9	114	32.6	37.9	10.5	47.60	
9/1/2004	19.3	22	103	119	37.3	39	10.6	46.2	
Mar '05	20	21.8	126	120	43.2	43.6	10.8	45.8	
Sept '05	17.4	21.1	106	64.3	42.6	43.9	11.3	51.1	
Apr'2006	15.7	20.3	70.8	97	48.8	42.9	10.2	59.6	
Oct '06	17.3	18	60.8	61.9	46.5	39.8	9.77	44.5	
May_07	16.1	20.7	50.5	85.3	54.4	46.1	11.6	53.8	20.5
Oct_07	19.7	21.5	65.3	54.3	52.1	48	12	54	21
May_08	103	20.4	35.7	112	47.4	47.2	11.8	51.7	23.3
Oct_08	18.1	24.4	44	57	50.1	56.1	11.4	52.3	21.9
Jun_09	101	19.9	60.5	55.7	55.8	46.7	9.59	70.2	16.6
Dec_09	47.8	19.4	61.3	71.8	72.6	44.9	20.3	81.9	18.6
June_10	21	20	49	62	63	35	11	47	15
DEC_10	16	22	66	170	79	44	11	45	14
Jun_11	21	23	74	130	87	43	12	59	15
DEC_11	17	22	74	170	110	44	12	48	15
Jun_12	17	32	51	68	93	46	14	43	15
Dec_12	16.9	24.9	78.9	66.8	44	43.3	13.1		12.4
Jun-13	16.2	24.6	80.1	129		31.9	12.3	60.7	12
Dec_13	19	25.8	80.8	101	25.2	31.7	14.6	68.6	13.2
Jun_14	18.2	25.6	104	66.7	39.6	29.3	15.3	62.7	12.9
Dec_2014	16.7	NA	NA	117	63.2	27.9	15.3	65.5	13.7
Jun_15	17	24	25	131	20	35	14	69	15
Dec_15	16.4	29.6	104	113	37	34	12	69	15
Jun_16	17.8	26.9	108	**240**	16.4	11.8	13.3	91.5	16.7
Dec_16	17.1		**180**		60.6	27.6	13.1	87.8	17.5
Jun_17	21.3	26.3	**189**	**199**	18.8	11.8	12.2	44.3	18.4
Dec_17	20.8	31.1	**222**	**201**	27.1	17.9	11.3	47.7	
Aug_18	17.8	27.6	**148**	**191**	33.1	18.7	10.5	53.4	18.6
Dec_18	18	23.6	**203**	**146**	58.4	17.1	10.7	51.9	31.9
June _19	18.7	22.1	92	**171**	57	18	12.1	52.4	30.1

Figure 1.

Piper Diagram Plots for Pre-Operational Groundwater, Ashfill Leachate, and Storm Water

Town of Babylon Southern Ashfill Expansion



Note: Data fields developed from TOBDEC data presented in Piper diagrams in December 2014 Groundwater Monitoring Program report (see following pages).

Source: "Addendum to Groundwater Monitoring Program for SA EXP, P.W. Grosser Consulting, Inc., 2015.

services firm to review the conditions at this facility and offer a course of action. Solutions may entail an interim or permanent cap at the NNU facility[2]. The leakage rates from Cell 7 have been observed at + /- ~0.2 – 4 g/a/d[3].

June 2019 sampling for the traditional GMP included 1,4 dioxane and PFAS/PFOA's. The results for 1,4 dioxane (appendix 1) and PFAS/PFOA's for GM's-2,4,5,6,7,15,16,17,18 and 19 are attached to this section of the report.

[2] Conversation with Tom Vetri, Deputy Commissioner TOBDEC, December 2019.
[3] Excludes data from April 2014 impacted by a broken valve.

GM-2

Analyte	Units	Jan-91	Apr-91	Dec-01	Jan-03	2003 Aug	Mar '04	Sept '04	Mar '05	Sept '05	APR' 06	Oct-06	May_07	Oct_07	May_08	Oct_08	June_09	Dec_09	Jun_10	Dec_10	Jun_11	
Chloride	mg/l	15	17	NS	25	18	20	13	16	16	16.5	17.50	18	14	18.5	16	16	17.0	18	17	23	
TKN	mg/l	1	0.6	NS	5.8	<.35	<.5	.249J	0.936	<.5	<.5	<.5	<.5	.162J	<.4	<.4	<.4	0.400	0.4	4	0.2	
Alkalinity	mg/l	18	12	NS	2	50	8.08	12.1	10.1	11.1	38.4	24.20	14.1	28.3	14.6	17.2	13.1	14.1	**46**	20	24	
TDS	mg/l	91	110	NS	114	188	140	110	100	140	150	106.00	86	140	112	150	143	119	180	170	200	
Spec. Cond.	umhos	140	141	NS	90	135	106	140	160	184	300	195.00	158	181	165	260	130		140	140	190	
pH									5.8	5.7	7.8	5.90	6.5	5.8	6	7.5	7.5	7.09	6.96	5.45	5.7	
Hardness	ppm	44	60	NS	50.1	56	53	56.8	54.7	57.9	65.3		56.3	57.3	54.5	69.6	54.1	52.6	76	54	56	
Aluminum	ppm	.069 B	<.1	NS	<.013	0.11	0.0427	0.065	0.0263	0.0423	0.164	0.60	0.0278	0.209	0.172	0.059	0.0928	0.230	**3.9**	0.08	0.2	
Mercury	ppm	0.0003	<.0002	NS	<.00002	<.00002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002		<.0002	0.000838	0.000200	<.00025	<.00025	<.0003	
Antimony	ppm	<.0006	<.04	NS	<.0065	<.002	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<0.025	<.025	<.025	0.0250	<.005	<0.025	<.025	
Arsenic	ppm	<.0022	<.0022	NS	<.0097	<.0034	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<0.025	<.025	<.025	0.0250	<.005	<0.025	<.025	
Barium	ppm	.083 B	.09 B	NS	<.0006	0.0053	0.011J	.016J	.013J	<.02	.0123J	0.03	0.0152	0.201	0.0206	0.0343	0.033	0.0420	0.019	<0.025	<.025	
Berylium	ppm	<.001	<.001	NS	<.0002	0.0003	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<0.02	<0.02	<0.02	0.0200	<.001	<0.005	<.005	
Boron																						
Cadmium	ppm	0.0056	<.005	NS	<.0007	<.0003	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<0.01	<0.01	<0.01	0.0100	<.005	<0.025	<.025	
Calcium	ppm	14.2	15.7	NS	<26	14	12.6	14.1	13.9	14.3	19.3	13.20	14.1	14.3	13.8	20	13.5	13.2	24	14		14
Chromium	ppm	<.006	<.006	NS	<.001	<.0016	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<0.02	<0.02	.0129J	0.0200	<.005	<0.025	<.025	
Cobalt	ppm	<.006	<.006	NS	<.0006	0.0006	<.02	<.02	<.02	<.02	<.02	0.10	<.02	<.02	<0.02	<0.02	<0.02	0.0200	<.005	<0.025	<.025	
Copper	ppm	<.002	<.003	NS	<.0031	<.0029	<.02	<.02	<.02	<.02	<.02	.00617J	<.02	<.02	0.00383	.0056J	.0069J	0.0558	<.01	<0.05	<.05	
Iron	ppm	.046 B	<.06	NS	<.012	1.17	0.966	1.05	1.05	1	1.11	1.72	0.934	0.911	0.981	0.855	1.07	1.37	**15**	0.84		1.1
Lead	ppm	<.0023	<.0022	NS	<.0024	0.0032	<.015	<.015	<.015	<.015	<.015	0.07	<.015	<.015	<0.015	<.015	<.015	0.00359	<.005	<.025	<.025	
Magnesium	ppm	3.13 B	3.52 B	NS	<.0055	5.11	5.28	5.25	4.84	5.37	4.14	3.93	5.11	5.26	4.85	4.81	4.97	4.78	4.3	4.4		5.2
Manganese	ppm	0.021	0.0206	NS	<.0006	0.07	0.073	0.067	0.0679	0.0712	0.0681	0.06	0.0678	0.685	0.0646	0.0711	0.0707	0.0692	0.07	0.07		0.07
Nickel	ppm	<.013	<.009	NS	<.0017	0.0014	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<0.02	<.02	<0.02	0.0153	<.01	<.05	<.05	
Potassium	ppb	6.97	4.290 B	NS	<28	1.08	1	1.19	0.942	0.947	2.35	3.12	1.34	1.26	1.47	4.11	0.983	0.932	2.6	2.7	<5	
Selenium	ppm	.0018 B	<.0022	NS	<.0034	<.0043	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<0.025	<0.025	<0.025	0.0250	<.01	<.05	<.05	
Silver	ppm	<.003	<.003	NS	<.0003	<.001	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<0.02	<0.02	<0.02	0.0200	<.005	<.025	<25	
Sodium	ppb	9.79	9.86	NS	<12	8.67	9.73	10.2	8.84	8.67	12.2	14.30	10.6	3.38	5.07	7.13	5.65	7.56	12	11		11
Thalium	ppm	<.0022	<.0033	NS	<.0044	0.013	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<0.015	<0.015	0.015	0.0150	<.005	<.025	<.025	
Vanadium	ppm	<.004	<.005	NS	<.0004	<.0005	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<0.02	<0.02	<0.02	0.0200	<.005	<.025	<.025	
Zinc	ppm	.012 BJ	.0086 B	NS	<.0058	0.0093	0.01	.009J	.0068J	<.02	.0085J	0.17	0.0149	0.0235	0.028	0.03	0.0228	0.0815	0.04	<.05	<.05	
Bromide	mg/l			NS	<.5	<1	0.67	<.1	<.1	0.13	.069J	0.26	0.124	<.1	<.5	<2	<2	2.00	<.5	1.5	<.5	
Ammonia	ppm	<.05	<.05	NS	1.74	<.11	<.05	<.05	0.0512	0.0604	<.05	<.05	0.293	<.05	<.05	<.05	<.05	0.0500	<.2	<.2	<.2	
BOD	ppm	<3	<3	NS	<2.41	11.7	<2.41	5.52	2.44	<2.41	14.1	<2	18.7	54.5	<2.41	<2		2.0	<3		<2	
COD	ppm	<40	<40	NS	<4.8	6.22	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<2	10.0	<40	<40	<40	
Nitrate	ppm	2.4	4.4	NS	0.034	0.043	<.1	<.1	<.1	0.199	<.1	<.1	<.1	<.1	<.1	<.1	<.1	0.100	<.5	<.5	<.5	
Phenols	ppm	<.001	<.001	NS	0.06	0.013	0.344	<.001	0.0058	<.01	<.01	0.03	0.0357	<.01	<.01	0.011	<.01	0.0163	<.001	<.001	<.001	

Analyte	Units	Jan-91	Apr-91	Dec-01	Jan-03	2003 Aug	Mar '04	Sept '04	Mar '05	Sept '05	APR' 06	Oct-06	May_07	Oct_07	May_08	Oct_08	June_09	Dec_09	Jun_10	Dec_10	Jun_11
Sulfate	ppm			NS	44.2	58.6	53.4	43.7	45.2	50.1	40.2	32.10	38.1	24.2	34.8	35.4	44.4	41.3	18	40	39
TDS	mg/l	91	110	NS	114	188	140	110	100	140	150	106.00	86	140	112	150	143	119	180	170	200
TOC	ppm			NS	3.81	13.2	1.29	<1	<1	<1	<1	2.10	<1	1.2	<.5	<1	<.5	0.5	4.7	3.7	0.8
DO																					
Turbidity																					
1,4 dioxane	ug/l																				
perfluorobutanoic acid PFBA	ng/l																				
perfluoropentanoic acid PFPeA	ng/l																				
perfluorohexanoic acid PFHxA	ng/l																				
perfluoroheptanoic acid PFHpA	ng/l																				
perfluorooctanoic acid PFOA	ng/l																				
perfluorononanoic acid PFNA	ng/l																				
perfluorodecanoic acid PFDA	ng/l																				
perfluoroundecanoic acid PFUnA	ng/l																				
perfluorododecanoic acid PFDoA	ng/l																				
perfluorotridecanoic acid PFTriA	ng/l																				
perfluorotetradecanoic acid PFTeA	ng/l																				
perfluorobutanesulfonic acid PFBS	ng/l																				
Perfluorohexanesulfonic acid PFHxS	ng/l																				
perfluoroheptanesulfonic acid PFHpS	ng/l																				
perfluorooctanesulfonic acid PFOS	ng/l																				
perfluorodecanesulfonic acid PFDS	ng/l																				
perfluorooctane Sulfonamide FOSA	ng/l																				
n-methyl perfluorooctanesulfonamidoacetic acid NMeFOSAA	ng/l																				
n-ethyl perfluorooctane sulfonamidoacetic acid NEtFOSAA	ng/l																				
6:2 FTS	ng/l																				
8:2 FTS	ng/l																				
total PFOA/PFAS																					

Source of 1991 data: Geraghty & Miller, Inc., 1992, Babylon Landfill RI/FS, Task 2E, Groundwater Sampling.
B- Concentration is greater than the instrument detection limit but less than contract required detection limit.
J- Estimated value.
NS- Not sampled.

Analyte	DEC_11	Jun_12	Dec_12	June_13	Dec_13	June_14	Dec_14	Jun_15	Dec_15	Jun_16	Dec_16	Jun_17	Dec_17	Aug_18	Dec_18	June_19
Chloride	20	18	17.8	17.8	17.4	17.5	18.1	16.1	17.4	16	15.3	14.5	16.1	16.3	22	16.4
TKN	0.2	0.6	0.16	0.22	0.24	0.11	<.1	0.34		0.4	<.1	0.14	<.1	0.23	0.21	0.34
Alkalinity	18	22	9.25	8.85	9.3	9.3	9.45	8.6		15.1	13.8	12.2	14.2	12	10.7	24.2
TDS	72	160	115	141	91	98	104	105		133	111	108	121	123	107	129
Spec. Cond.	200	220	347	184	139	152	170	139	199	169	193	188	184	**237**	**3470**	3290
pH	6.87	5.33	5.32	5.48	4.86	5.62	5.67	4.5	5.4	6.04	7.59	5.08	6.23	6.35	6.28	7.45
Hardness	56	57	58	59	52	60	80	56	60	57	60	74	56	52	46	60
Aluminum	0.23		0.278	0.133	0.226	0.0325	<.2	0.127	0.277	1.23				0.23	.0909 J	0.236
Mercury	<.0002		.0002 U	<.0001	<.0001	<.0001	<.0002	<.0001	<.0001	<.0002				<.0002	<.0002	<.0002
Antimony	<0.005		.060 U	.0033B	0.0037 B	<.0016	<.060	.0045 B	<.0006	0.0039				<.060	<.06	<.060
Arsenic	<0.005		.010 U	<.0028	.0012 B	<.0015	<.010	<.0013	<.0022	<.01				<.010	<.01	<.010
Barium	0.007		.200 U	.0049B	.0066 B	.0055 B	<.2	.0056 B	.0056 B	<.2				.0061J	.0057 J	<.200
Berylium	<0.001		.005 U	<.0001	<.00014	<.000091	<.005	<.00015	<.0002	<.005				<.005	<.005	<.005
Boron			.100 U													
Cadmium	<0.005	<.025	.005 U	<.0001	.0003 B	<.00014	<.005	<.00016	<.0001	<.0025	<.0025	<0.0025	<.0025	<.0025	.000072 J	<.0025
Calcium	15	14	14.8	14.3	15	14.4	14	14.6	14.7	16.4	15.6	14.8	14.2	15.4	14.5	20.8
Chromium	<0.005		.010 U	.0028B	.0038 B	<.00046	<.01	.0034 B	.003 B	0.0036				<.010	<.01	<.010
Cobalt	<0.005		.050 U	<.0004	.0005 B	.0003 B	<.050	<.00025	0.0003 B	<.05				<.050	<.05	<.050
Copper	<0.01		.025 U	<.0004	.0101 B	.0015 B	<.025	.00070 B	.0024 B	0.0113				<.025	<.025	<.025
Iron	1	0.93	1.29	1.04	1.3	0.844	0.906	0.816	1.53	3.48	1.41	0.991	0.906	0.947	1.07	1.02
Lead	<0.005	<.025	0.0054	0.0095	0.0111	0.0134	<.005	0.0094	.002 B	0.0032	<.005	<.005	<.005	<.005	.003 J	<.005
Magnesium	4.8	5.2	5.27	5.29	5.3	5.24	5.03	4.800 B	5.07	4.57	5.37	5.19	5.12	5.02	4.81	4.75
Manganese	0.07	0.07	0.0697	0.0703	0.0726	0.0735	.067.9	0.0691	0.0734	0.0791	0.712	0.0732	0.0647	0.0709	0.071	0.0717
Nickel	<0.01		.040 U	.0015B	.0006 B	.0008 B	<.040	.0021 B	.0011 B	<.04				<.040	<.04	<.040
Potassium	1.6	<5	5.000 U	2.82B	2.35 B	1.13 B	<5.000	2.430 B	<.210	1.32	<5	<5.000	1.16	1.560J	3.62	<5.000
Selenium	<0.01		.005 U	.003B	<.0011	<.0014	<.01	<.0027	<.0022	<.01				<.010	<.01	<.010
Silver	<0.005		.010 U	<.0002	<.00043	<.00037	<.01	<.00087	<.0005	<.01				<.010	<.01	<.010
Sodium	11	9.8	10.1	9.76	10.3	10.1	11	10.8	12.4	12.4	12.1	11.3	11.3	12	12	11.6
Thalium	<0.005		.010 U	<.0019	.0014 B	<.0035	<.01	<.001	<.0019	<.01				<.010	<.01	<.010
Vanadium	<0.005		.050 U	.0003B	<.00039	<.00022	<.05	<.00036	<.0028	<.05				<.050	<.05	<.050
Zinc	0.01		.020 U	.0185B	0.0309	.0044 B	<.02	.0143 B	.0038 B	0.0287				.0091J	.0056 J	<.020
Bromide	<.5	<.5	.5 U	<.5	<.5	<.0005	<.0005	<.5	<.5	<.5	<.5	<0.50	0.052	<.5	<.5	0.12
Ammonia	<.2	<.2	.1 U	<.1	<.1	<.1	<.1	0.32	<.1		<.1	<0.10	0.072	.02J	<.1	0.093
BOD	<2		2.0 U	<2	<2	<.002	<.002	<2	<2	<2	<2	<4.0 D	1	<2	<4	1.4
COD	50	90	2.0 U	<10	<10	<.01	<.01	<10	<10		10.9	<10.0	<10	11.4	14.1	<10
Nitrate	<.5	<.5	.1 U	<.1	<.1	<.1	<.1	<.1	<.1	0.13	0.079	<0.050	<.05	<.05	<.05	0.049
Phenols	<.001	<.001	.005 U	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	.0033J	<.005	<.01

Analyte	DEC_11	Jun_12	Dec_12	June_13	Dec_13	June_14	Dec_14	Jun_15	Dec_15	Jun_16	Dec_16	Jun_17	Dec_17	Aug_18	Dec_18	June_19
Sulfate	44	41	49.2	49.1	49.1	49.7	48	48.5	49.4	49.7	48.7	48.2	49.2	49.5	69.6	44.4
TDS	72	160	115	141	91	98	104	105	113	133		108	121	123	107	129
TOC	<.5	<.5	1.0 U	<1	3.4	<.001	3.4	<1	<.5	4.18	<1	<1.0	1.2	1.3	1.9	0.98
DO	0.5	1.1	0.59	1.49	0.48	0.79	1.06	3.27	3.55	3.15		4.28	1.02	3.73	0.17	2.55
Turbidity	4.9	16	1.0 U	1.8	<1	<.001	<1	3.6	3.4	27				10.3	2.7	3
1,4 dioxane														<.19	.2 J	0.13
perfluorobutanoic acid PFBA														2.2	2.7	2.8
perfluoropentanoic acid PFPeA														ND	ND	ND
perfluorohexanoic acid PFHxA														1	1.3	1.1
perfluoroheptanoic acid PFHpA														1.3	1.3	1.2
perfluorooctanoic acid PFOA														1.3	1	0.57
perfluorononanoic acid PFNA														ND	ND	ND
perfluorodecanoic acid PFDA														ND	ND	ND
perfluoroundecanoic acid PFUnA														ND	ND	ND
perfluorododecanoic acid PFDoA														ND	ND	ND
perfluorotridecanoic acid PFTriA														ND	ND	ND
perfluorotetradecanoic acid PFTeA														ND	0.3	ND
perfluorobutanesulfonic acid PFBS														1.1	1.1	0.77
Perfluorohexanesulfonic acid PFHxS														2.1	2.4	1.5
perfluoroheptanesulfonic acid PFHpS														ND	ND	ND
perfluorooctanesulfonic acid PFOS														ND	0.85	ND
perfluorodecanesulfonic acid PFDS														ND	ND	ND
perfluorooctane Sulfonamide FOSA														ND	ND	ND
n-methyl perfluorooctanesulfonamidoacetic acid NMeFOSAA														ND	ND	ND
n-ethyl perfluorooctane sulfonamidoacetic acid NEtFOSAA														ND	ND	ND
6:2 FTS														8.9	ND	ND
8:2 FTS														ND	ND	ND
total PFOA/PFAS														17.9	10.95	8.07

GM4

Analyte	Units	Jan-91	Apr-91	GM-4D 91	2001	Jan-03	Aug '03	Mar '04	Sept '04	9-04 dup	Mar '05	Sept '05	Apr'06	Oct_06	May_07	Oct_07	May_08	Oct_08
Well Depth	feet	60	60	91	91	91	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5		91.5	91.5
Chloride	mg/l	57	55	210	33.5	45	200	22	37	37	26	31	30.5	32	28	32	515	37
TKN	mg/l	0.8	1.4	4.2	0.26	2.67	<.35	0.58	0.53	.497J	1.3	1.4	1.43	<.5	0.503	0.63	2.68	0.7
Alkalinity	mg/l	72	64	88	78.9	60	76	68.7	53.5	53.5	71.7	57.6	51.5	32.3	61.6	59.6	68.7	49.5
TDS	mg/l	170	180	430	174	162	246	230	140	110	170	160	150	134	138	202	1190	110
Spec. Cond.	umhos/cm	280	300	710	337	150	165	103	125	125	220	320	260	275	225	345	1940	450
Hardness	ppm	100	100	100	NS	62.2	63.6	59.9	64.5	64.1	66.2	58.9	52.3		54.7	66.3	315	61
Aluminum	ppm	.098 B	<.1		NS	0.055	<.013	0.013J	0.022	0.021	<.02	<.02	.00951J	0.0564	0.00719	<.02	0.0238	.0096J
Mercury	ppm	.00043 J	<.0002	<.0002	NS	<.00002	<.00002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002		<.0002
Antimony	ppm	<.06	<.04	<mdl	NS	0.021	<.002	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025
Arsenic	ppm	0.0143	0.013	0.015	NS	0.012	0.0057	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025
Barium	ppm	.007 BJ	.02 B	0.04	NS	0.025	0.027	0.0379	0.051	0.05	0.0466	0.0369	0.0326	0.0345	0.0568	0.0848	0.263	0.0848
Berylium	ppm	<.001	<.001	<mdl	NS	0.0048	0.0004	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Boron																		
Cadmium	ppm	.0049 B	0.0051	<mdl	NS	0.0055	0.0015	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
Calcium	ppm	21.3	24	25.1	NS	18.6	19	17.5	19.3	19.3	20	17.4	15.7	17.3	16.1	19.7	103	18.1
Chromium	ppm	<.006	<.006	<mdl	NS	0.0071	0.0043	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Cobalt	ppm	<.006	<.006	<mdl	NS	0.012	0.004	<.02	0.046	<.02	0.0222	<.02	<.02	0.0983	<.02	<.02	<.02	<.02
Copper	ppm	<.005	.0092 B	<mdl	NS	<.0031	<.0029	<.02	<.02	<.02	<.02	<.02	<.02	.00693J	<.02	<.02	<.02	.0044J
Iron	ppm	28.5	38.3	34	NS	21.1	17.1	0.303	17.2	16.9	18.6	15.6	14.6	0.584	14.2	13.1	36.8	12.6
Lead	ppm	<.001 J	<.0022 J	<mdl	NS	<.0024	0.0032	<.015	<.015	<.015	<.015	<.015	<.015	0.0653	0.00628	<.015	0.00529	<.015
Magnesium	ppm	4.61 B	4.74 B	5.4	NS	3.82	5.11	3.96	3.95	3.87	3.93	3.76	3.21	3.47	3.41	4.17	14.2	3.82
Manganese	ppm	3.09	3.86	6	NS	9.11	10	9.37	8.93	8.79	7.8	6.24	5.09	0.287	5.27	5.26	11.5	5.02
Nickel	ppm	<.013	<.009	<mdl	NS	0.0074	0.0036	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	0.00866	<.02
Potassium	ppm	3.14 B	3.52 B	3.200 B	NS	3.68	3.76	4.04	3.75	3.68	3.63	3.84	3.29	4.01	4.01	4.85	9.93	4.14
Selenium	ppm	<.0011	<.0011	<mdl	NS	<.0034	<.0043	<.02	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025
Silver	ppm	<.003	<.003	<mdl	NS	0.07	<.001	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Sodium	ppm	17.3	21.7	125	NS	18.7	22.9	24.2	21.6	21.4	8.84	24.2	23.8	21.9	24.9	7.49	44.3	11.3
Thalium	ppm	<.0022	<.0033	<mdl	NS	<.0044	0.0094	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015
Vanadium	ppm	<.004	<.005	<mdl	NS	0.0053	<.0005	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Zinc	ppm	<.003	.0094 B	<mdl	NS	0.011	0.0095	<.02	.01J	<.02	.00786J	<.02	.00913J	0.175	0.0169	0.0254	0.0364	0.0376
Bromide	mg/l				NS	<.5	<1	0.68	<.1	<.1	<.1	<.1	<.1	0.28	<.1	<.1	5.63	<2
Ammonia	ppm	0.6	0.47	3.8	NS	1.98	<.11	<.05	0.507	0.498	0.552	0.56	0.538	<.05	0.44	0.506	2.26	0.555
BOD	mg/l	<10	<3	<mdl	NS	<2.41	<2.41	<2.41	11.8	4.56	<2.41	<2.41	<2.41	<2	<2.41	60.2	6.72	<2
COD	ppm	<40	<40	<mdl	NS	12.9	30.9	<10	<10	<10	<10	<10	4.06J	<10	<10	<10	<10	<10
Nitrate	ppm	<.5	<.5	<mdl	NS	0.072	0.77	0.482	0.295	0.302	0.251	2.02	0.952	2	0.623	0.88	0.478	0.352
Phenols	ppm	<.01	<.01	<mdl	NS	0.016	0.017	<.02	<.001	<.001	0.0044	<.01	0.0259	<.01	<.01	0.0319	<.01	0.0169
Sulfate	ppm	38	44	39	NS	39.1	69.7	37.5	33.6	31	33.4	32.3	34	26.7	29.7	25.8	42.7	31.7
TDS	mg/l	170	180	410	NS	162	246	230	140	110	170	160	188	134	138	202	1190	110
TOC	ppm				NS	<.51	16.4	13	1.27	1.1	<1	<1	1.2	<1	<1	8.6	5.63	<1

Geraghty & Miller, Inc., 1992, Babylon Landfill RI/FS, Task 2E, Groundwater Sampling.

reater than the instrument detection limit but less than contract required detection limit.

J- Estimated value.

NS- Not sampled.

GM-4D 91 averages 2 data sets.

		June_09	Dec_09	Jun_10	Dec_10	Jun_11	DEC_11	Jun_12	Dec_12	13-Jun	Dec_13	DEC_13 DUP	14-Jun	Dec_14	June_2015	Dec_15	Jun_16	Dec_16	Jun_17	Dec_17	Aug_18	Dec_18	June_19
Well Depth	feet	91.5	91.5																				
Chloride	mg/l	590	215	35	24	39	32	36	36.9	38.9	30.4	30.3	32.7	41.6	40	40.3	38.8	44.5	49.7	49.7	47.3	48.9	183
TKN	mg/l	2.42	3.24	0.6	0.6	0.4	1	1	.51 D	0.41	0.35	0.11	<.1	0.65	0.13	<.1	0.1	0.82	0.41	<.1	<.1	<.1	0.86
Alkalinity	mg/l	56.6	62.6	38	28	44	44	50	42.8	31.2	17.1	16.9	20.4	42.8	43.5	37.9	21.3	48.2	46.2	14	17.6	16.7	32.9
TDS	mg/l	1740	590	180	180	240	170	220	148	150	159	164	166	158	138	158	141	157	180	165	173	125	175
Spec. Cond.	umhos/cm	2400	463	290	170	270	280	330	478	278	165		206	264	275	294	212	315	363	279	340	3340	3120
pH			7.02	7.04	5.9	5.9	6.92	5.83f/6.2l	6.1	6.02	6.94		6.23	6.46	6.21	5.34	7.23	7.66	6.36	6.14	6.25	6.14	8
Ammonia	ppm	2.3	1.71	<.2	<.2	0.4	0.2	0.6	0.42	0.4	0.13	<.1	<.1	0.47	0.43	0.41	0.13	0.37	<1.0 D	0.059	.016 J	<.1	0.44
Bromide	ppm	<2	<1	<.5	1.1	<.5	<.5	<0.5	.5 U	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.028	<.5	0.067	.033 J	.29 J	2.5
COD	ppm	10.6	10.0	40	<40	<40	<40	<40	10 U	<10	<10	<10	<10	<10	<10	<10	22.5	25.5	15.1	<10	15.5	<10	38.9
Chloride	ppm	590	215	35	24	39	32	36	36.9	38.9	30.4	30.3	32.7	41.6	40	40.3	38.8	44.5	49.7	49.7	47.3	48.9	183
Hardness	ppm	309	154	67	55	67	56		60 D	56	76	110 D	60	190	60	78	57	68	78	62	56	52	50
Mercury	ppm	0.00159	0.000200	<.00025	<.00025	<.0003	<.0002	<.0002	.0002 U	.00012B	<.0001	<.0001	<.0001	<.0002	<.0001	<.0001	<.0002				<.0002	<.0002	<.0002
Nitrate	ppm	0.677	1.72	1.7	3.1	1.9	2.3	1.8	2.47 U	2.43	4.07	4.26 D	4.09 D	2.35	2.28	2.56	3.86	2.2	<.05	3.3	4.2	3.4	0.62
Phenolics	ppm	0.0316	0.0472	0.002	<.001	<.001	<.001	<.001	.005 U	<.0005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.00084	<.005	0.002	0.0059	<.005	<.01
Sulfate	ppm	20.8	40	28	29	31	33	33	30.2	29.8	28.9	28.8	31.5	35.4	28.1	29.3	27.3	29.8	28.2	27.1	30.8	41	36.7
Aluminum	ppm	0.0809	0.0571	0.13	<.05	0.08	0.02	<.05	.2 U	.0239B	.0846 B	.0544 B	0.241	<.2	.162 B	.0351 B	.0859 J				<.200	<.2	<.2
Antimony	ppm	<0.025	<.01	<.005	<.025	<.025	<0.005	<.025	.060 U	<.0012	.0025 B	<.0019	.0017 B	<.06	<.0018	.00072 B	.0066 J				<.060	<.06	<.060
Arsenic	ppm	<.025	<.01	0.006	<.025	<.025	<0.005	<.025	.010 U	.008B	.0024 B	.0022 B	.003 B	<.01	.0078 B	.004 B	<.010				<.01	<.01	<.010
Barium	ppm	0.376	0.212	0.05	0.073	0.067	0.057	0.058	.200 U	.06B	.0356 B	.032 B	.0326 B	<.2	.0618 B	.0649 B	.0579 J				.0530J	.0523 J	.0247J
Beryllium	ppm	<0.02	<.005	<.001	<.005	<.005	<0.001	<0.005	.005 U	<.0001	<.00014	<.00014	<.000091	<.005	<.0002	<.0002	<.0050				<.005	<.005	<.0050
Boron									.100 U														
Cadmium	ppm	<0.01	<.005	<.005	<.025	<.025	<0.005	<.025	.005 U	<.0001	.0002 B	.0002 B	<.00014	<.005	<.0004	<.0001	<.0025	<.000063	<0.0025	<.0025	<.0025	<.0025	<.0025
Calcium	ppm	101	47.8	21	16	21	17	17	16.9	16.2	18.5	19	18.2	16.7	16.9	16.4	17.8	17.1	21.3	20.8	17.8	18	18.7
Chromium	ppm	0.00631	<.005	<.005	<.025	<.025	<0.005	<.025	.010 U	.0036B	.0042 B	.0039 B	.0027 B	<.01	.005 B	.0029 B	<.01				<.010	<.01	<.0100
Cobalt	ppm	<0.02	<.005	<.005	<.025	<.025	<0.005	<.025	.050 U	.0013B	.0005 B	.0004 B	.0005 B	<.05	.00090 B	.0007 B	.001 J				<.050	<.05	<.050
Copper	ppm	<0.02	0.0259	<.01	<.05	<.05	<0.01	<.05	.025 U	<.0004	.0172 B	.0126 B	.0083 B	<.025	.0065 B	.0045 B	.0045 J				<.025	<.025	<.025
Iron	ppm	70.7	12.3	5.3	3.2	8.5	6.9	9.3	10.3	9.56	3.18	2.33	4.71	8.19	9.59	8.5	6.41	9.99	10.9	3.79	0.829	0.204	0.318
Lead	ppm	0.0168	0.006	<.005	<.025	<.025	<0.005	<.025	0.004	0.0047	0.0079	0.0073	0.0149	<.005	.0022 B	.0018 B	.0015 J	<.0013	<.005	<.005	<.005	<.005	<.005
Magnesium	ppm	14.2	8.47	3.7	3.4	3.8	3.3	3.4	5.000 U	3.36B	3.8	3.91 B	3.71 B	3.44	3.600 B	3.39	3.61	3.64	4.05	4.58	3.88	3.72	3.89
Manganese	ppm	23.6	6.16	1.1	1.3	26	1.9	2.4	2.34	2.2	0.333	0.23	0.531	1.87	2.03	1.78	0.824	1.78	2.13	0.374	0.285	0.017	0.112
Nickel	ppm	<0.015	0.0069	<.01	<.05	<.05	<0.01	<.05	.040 U	.0008B	.0004 B	<.00034	.0004 B	<.04	<.0006	<.0003	<.040				<.04	<.04	<.0400
Potassium	ppm	17.2	6	4.4	<5	<5	4.9	<5	5.000 U	3.42B	4.68 B	4.63 B	4.02 B	<5	3.840 B	1.280 B	3.770 J	<5	6.11	4.5	4.370J	6.1	4.930J
Selenium	ppm	0.0176	<.005	<.01	<.05	<.05	<0.01	<.1	.005 U	.0032B	<.0011	<.0011	<.0014	<.01	<.0029	<.0022	<.010				<.010	<.01	<.010
Silver	ppm	<0.02	<.005	<.	<.025	<.025	<0.005	<.025	.010 U	<.0002	<.00043	<.00043	.00045 B	<.01	.0021 B	<.0005	<.01				<.010	<.01	<.010
Sodium	ppm	48.7	28.7	18	14	25	24	26	25.9	24.9	17.2	17.6	20.3	28.5	26.8	24.8	20.6	26.8	33.7	26.7	27.9	22.1	22.7
Thallium	ppm	0.015	<.01	<.005	<.025	<.025	<0.005	0.035	.010 U	.0029B	<.0013	<.0013	<.0035	<.01	<.0023	.0067 B	<.010				<.010	<.01	<.010
Vanadium	ppm	<0.02	<.005	<.005	<.025	<.025	<0.005	<.025	.050 U	<.0003	.0008 B	<.00039	.0011 B	<.05	<.0005	<.0028	<.050				<.050	<.05	<.050
Zinc	ppm	0.0344	0.0632	0.04	<.05	<.05	0.01	<.05	.020 U	.0063B	0.0223	.0168 B	0.0328	<.02	0.0317	<.0016	.0061 J				.0093J	.0054 J	<.020

		June_09	Dec_09	Jun_10	Dec_10	Jun_11	DEC_11	Jun_12	Dec_12	13-Jun	Dec_13	DEC_13	14-Jun	Dec_14	June_2015	Dec_15	Jun_16	Dec_16	Jun_17	Dec_17	Aug_18	Dec_18	June_19
TDS	ppm	1740	590	180	180	240	170	220	148	150			166	158	138	158	141		180	165	173	125	175
TKN	ppm	2.42	3.24	0.6	0.6	0.4	1	1	.51 D	0.41		<.1		0.65	0.13	<.1	0.1	0.82	0.41	<.1	<.1	<.1	0.86
BOD	ppm	3.8	2.0	<2	<2	<2	<2	2	2 U	<2	<2	<2		6	<2	<2	<2	<1	<2	1	<2	<2	6.1
TOC	ppm	<0.5	<3	3.8	<.5	<.5	<.5	<.5	1 U	<1	5.6		1.3	12.8	0.795	0.537	3.8	<.11	<1	0.61	.76J	.95 J	12.6
DO							1.6	1.7	1.89	0.28	7.16		7.39	3.3	2.43	3.79	8.38		4.03	2.68	3.04	4.76	0.96
Turbidity	NTU						28	21	4.5	3.6	4		7.7	<1	2.2	1.3	23				1.3	3.1	4.6
1,4 dioxane	ug/l																				<.19	.24 J	.14 J
perfluorobutanoic acid PFBA	ng/l																				7	6.7	ND
perfluoropentanoic acid PFPeA	ng/l																				7.4	6.8	ND
perfluorohexanoic acid PFHxA	ng/l																				6.6	6.3	5 J
perfluoroheptanoic acid PFHpA	ng/l																				6	6.2	4 J
perfluorooctanoic acid PFOA	ng/l																				14	15	7.6
perfluorononanoic acid PFNA	ng/l																				2.1	2.4	ND
perfluorodecanoic acid PFDA	ng/l																				0.79	0.71	ND
perfluoroundecanoic acid PFUnA	ng/l																				ND	ND	ND
perfluorododecanoic acid PFDoA	ng/l																				ND	ND	ND
perfluorotridecanoic acid PFTriA	ng/l																				ND	ND	ND
perfluorotetradecanoic acid PFTeA	ng/l																				ND	0.37	ND
perfluorobutanesulfonic acid PFBS	ng/l																				.9.6	1.1	ND
Perfluorohexanesulfonic acid PFHxS	ng/l																				2.4	2.6	ND
perfluoroheptanesulfonic acid PFHpS	ng/l																				0.4	0.31	ND
perfluorooctanesulfonic acid PFOS	ng/l																				15	14	ND
perfluorodecanesulfonic acid PFDS	ng/l																				ND	ND	ND
perfluorooctane Sulfonamide FOSA	ng/l																				ND	ND	ND
n-methyl perfluorooctanesulfonamidoacetic acid NMeFOSAA	ng/l																				ND	ND	ND
n-ethyl perfluorooctane sulfonamidoacetic acid NEtFOSAA	ng/l																				ND	ND	ND
6:2 FTS	ng/l																				8.3	ND	ND
8:2 FTS	ng/l																				ND	ND	ND
total PFOA/PFAS																					69.99	62.49	7.6

Analyte	Units	Jan-91	GM-5 Apr-91	GM-5D 91	2001	Jan-03	Aug'03	Mar'04	3-04dup	Sept '04	Mar '05	dup	Sept '05	Apr'06	Oct_06	May_07	Oct_07	May_08	Oct_08	
Well Depth	feet	62	62	91	91	91	91.8	91.8		91.8	91.8		91.8	91.8	91.80	91.8		91.8	91.8	91.8
Chloride	mg/l	40	70	67	23.3	45	50	20	19	25	22.5	22.5	23	23	24.00	24	17	20.5	23.5	21.5
TKN	mg/l	8.2	16	14	bmdl	3.5	0.41	1.81	0.86	0.804	2.15	2.2	1.45	1.76J	0.64	0.445	0.443	0.636	0.537	0.604
Alkalinity	mg/l	130	240	230	46.4	40	60	44.4	56.6	57.6	66.7	68.7	56.6	58.6	66.70	64.6	69.7	97	54.5	91.9
TDS	mg/l	200	350	370	202	200	190	190	140	120	160	160	150	180	124.00	124	162	166	201	200
Specific Conductance	umhos/cm	400	650	650	288	150	185	125		130	275		340	320	300.00	250	292	256	550	240
Hardness	ppm	120	130	130	NS	75	79.4	71.1	74.3	75.2	72.3	79.4	71.1	67.5		69.2	72.4	68.1	78.1	0.579
Aluminum	ppm	.063 B	<.1	1.08	NS	0.1	<.013	.015J	0.0258	1.01	0.0609	0.0947	.0159J	.0124J	0.09	0.0111	<.02	0.0243	.011J	>2
Mercury	ppm	<.0002	0.00026	0.0005	NS	<.00002	<.00002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002		<.0002	>10
Antimony	ppm	<.060	<.04	<mdl	NS	<.0065	<.002	<.025	<.025	<.025	.0114J	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	21.5
Arsenic	ppm	0.019	0.0189	0.024	NS	0.013	0.014	<.025	<.025	<.025	0.0261	.0212 J	<.025	<.025	<.025	<.025	<.025	<.025	<.025	65.3
Barium	ppm	.077 B	.177 B	0.242	NS	0.033	0.044	0.0422	0.0508	0.06	0.0551	0.0502	0.0442	0.0384	0.06	0.0598	0.0654	0.0697	0.0772	0.00109
Berylium	ppm	<.001	<.001	<mdl	NS	<.00002	0.0004	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	0.109
Cadmium	ppm	0.0071	<.005	<mdl	NS	0.0008	0.0029	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	0.0246
Calcium	ppm	33.3	36.8	120	NS	21.6	23	20.2	21.4	22	21.8	20.8	21.1	20.3	18.00	20.7	21.5	20.4	24.4	65.6
Chromium	ppm	<.006	<.006	0.052	NS	<.001	<.0016	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	0.00505	<.02	<.02	<.02	0.112
Cobalt	ppm	<.006	<.0149	<mdl	NS	0.0011	<.0004	<.02	.015J	0.083	0.029	0.0663	<.02	<.02	0.09	<.02	<.02	<.02	<.02	>0.025
Copper	ppm	.0024 BJ	0.0048	0.0938	NS	<.0031	<.0029	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	0.00873	.0037J	>0.025
Iron	ppm	24.5	42.1	40	NS	32.7	33.5	15	31.2	31.4	30.2	29.3	30.4	28.9	25.00	30.1	32.4	29.6	31.6	0.0857
Lead	ppm	<.0011 J	<.0022	0.181	NS	<.0024	0.0067	<.015	<.015	<.015	.00731J	<.015	<.015	<.015	0.07	<.015	<.015	<.015	<.015	>0.02
Magnesium	ppm	6.85	10.6	20.7	NS	5.15	5.33	5.05	5.09	4.94	4.33	4.43	4.49	4.09	3.76	4.24	4.56	4.15	4.19	>0.01
Manganese	ppm	13.3 J	2.22	0.49	NS	3.57	4.26	4.3	4.64	4.45	4.59	4.61	4.82	4.6	4.14	4.97	5.29	4.89	5.27	19.9
Nickel	ppm	<.013	<.009	0.005	NS	<.0017	0.0017	<.02	<.02	<.02	<.02	.00512J	<.02	<.02	<.02	<.02	<.02	0.00586	<.02	0.0173J
Potassium	ppm	12.2	20.9	14.7	NS	3.85	3.48	3.74	3.96	3.69	3.32	3.29	3.34	3.2	3.24	3.93	4.12	4.63	5.38	>0.02
Selenium	ppm	<.011J	<.0022	<mdl	NS	<.0034	<.0043	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	0.00504J
Silver	ppm	<.003	<.003	<mdl	NS	<.0003	<.001	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	30.1
Sodium	ppm	32.1	63.3	59	NS	13.6	14.7	16.3	17	15.2	14.8	14.3	14.6	15.2	15.70	23.1	4.73	7.87	8.13	0.00727J
Thalium	ppm	<.0022 J	<.0033	<mdl	NS	<.0044	0.018	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	3.77
Vanadium	ppm	.0043 B	<.005	0.007	NS	0.0016	0.0015	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	4.81
Zinc	ppm	0.0047	.005 B	0.384	NS	0.0063	0.0097	<.02	.013J	.018J	0.00993	.0113 J	<.02	.00885J	0.17	0.0203	0.0254	0.0466	0.0461	0.00944J
Bromide	mg/l				NS	<.5	<1	0.72	1.02	<.1	<.1	<.1 J	<.1	<.1	<.1	<.1	<.1	<.5	<2	3.45
Ammonia	ppm	7.8	15	4	NS	2.19	<.11	0.903	0.763	0.801	0.686	0.771	0.679	0.701	0.57	0.624	0.667	0.672	0.556	>0.025
BOD	mg/l	<10	4	4	NS	<2.41	6.48	<2.41	<2.41	5.42	4.18	3.09	<2.41	<2.41	<3	35.4	74.6	9.96	<3	>0.02
COD	ppm	<40	50	60	NS	<4.8	33.1	<10	<10	<10	<10	<10	<10	7.55J	85.70	336	9	<10	<10	6.9
Nitrate	ppm	<.5	<.5	<mdl	NS	0.058	0.032	<.1	<.1	<.1	.022J	.02 J	0.213	0.131	.058J	<.1	0.331	<.1	<.1	>0.015
Phenols	ppm	<.001	<.001	<mdl	NS	0.014	0.017	<.02	<.02	<.001	0.0041	0.00421	<.01	<.01	0.12	<.01	0.0377	<.01	0.0292	>0.02
Sulfate	ppm	43	47	110	NS	41.3	112	44	42.5	35.8	31.3	29.1	33.8	33.6	25.00	27.6	17.6	35.6	33.4	0.0439
TDS	mg/l	200	350	370	NS	200	190	190	140	120	160	160	150	180	124.00	124	162	166	201	200
TOC	ppm				NS	<.51	15.6	12.7	12.4	1.6	1.12	1.15	1.4	1.7	<1	8.5	8	1.3	<1	0.604
																				>4
																				>0.5

Source of 1991 data: Geraghty & Miller, Inc., 1992, Babylon Landfill RI/FS, Task 2E, Groundwater Sampling.
B- Concentration is greater than the instrument detection limit but less than contract required detection limit.
J- Estimated value.
NS- Not sampled.
GM-5D 91 averages 2 data sets.

		June_09	Dec_09	Jun_10	Dec_10	Jun_11	DEC_11	Jun_12	Dec_12	June_13	Dec_13	June_14	Dec_14	June_15	Dec_15	Jun_16	16-Dec	Jun_17	Dec_17	Aug_18	Dec_18	June _19
Well Depth	feet	91.8	91.8										well				well					
Chloride	mg/l	21.5	27.0	20	20	65	24	**180**	33.8	34.8	33.5	34.3	broken	57.8	**244**	**104**	broken	29.6	**242**	228	239	221
TKN	mg/l	0.604	0.703	1	0.4	0.8	2.2	1	.53 D	0.42	0.63	0.42		<.5	0.57	0.49		0.33	0.33	4.8	0.77	0.46
Alkalinity	mg/l	91.9	92.9	76	76	66	68	52	58.1	60.6	58.5	60.5		39.9	59.8	28.2		58.4	40	13.7	56.2	51.2
TDS	mg/l	200	184	160	200	270	170	**490**	184	195	196	190		388	**468**	271		191	**553**	431	394	472
Spec. Cond.	umhos/cm	240	813	280	290	390	360	**920**	491	301	212	255		167	**967**	422		338	**1039**	940	1071	982
pH			7.49	7.1	6.7	6.69	6.71	f6.5/6.2l	6.24	5.95	6.97	6.24		7.07	6.21	7.14		6.32	7.09	6.41	7	7.3
Ammonia	ppm	0.579	0.703	0.6	<.2	0.6	0.6	0.6	0.34	0.31	0.34	0.34		<.1	0.5	0.2		0.32	0.34	0.031	0.31	0.072
Bromide	ppm	<2	2.00	<.5	<.5	<.5	<.5	1.3	.5 U	<.5	<.5	<.5		<.5	<.5	<.5		<.5	<.5	0.1	.13 J	0.23
COD	ppm	<10	10.0	<.5	<40	<40	<40	<40	10 U	<10	<10	<10		15.4	<10	<10		<10	34.7	25.7	41	21.2
Chloride	ppm	21.5	27.0	20	20	65	24	180	33.8	34.8	33.5	34.3		57.8	244	104		29.6	242	228	239	221
Hardness	ppm	65.3	63.2	66	73	75	72		106 D	108	100	100		72	110	80		108	104	72	136	80
Mercury	ppm	0.00109	0.000200	<.00025	<.00025	<.0003	<.0002	<.0002	.0002 U	<.0001	<.0001	<.0001		<.0001	<.0001	<.0002				<.0002	<.0002	<.2
Nitrate	ppm	0.109	0.100	<.05	<.5	<.5	<.5	<.5	.1 U	<.1	<.1	<.1		1.53	<.1	0.76		<0.050	0.03	0.57	0.076	0.1
Phenolics	ppm	0.0246	0.0436	<.001	<.001	<.001	<.001	<.001	.005 U	<.0005	<.005	<.005		<.005	<.005	0.0051		<.005	0.0038	<.005	<.005	<.01
Sulfate	ppm	65.6	27.2	35	32	<5	37	41	44.5	44.7	45.7	49.3		41.4	32.6	35.7		46.2	30	34.5	47.2	41.2
Aluminum	ppm	0.112	0.122	0.06	<.05	0.08	0.03	<.05	1.16	.0814B	.0416 B	.0695 B		0.327	.0561 B	0.287				0.223	0.0366	.037J
Antimony	ppm	<0.025	0.0250	<.005	<.025	<.025	<0.005	<.025	.060 U	<.0012	.0093 B	.0018 B		<0.0018	<.0006	.0054 J				<.060	<.06	.0137J
Arsenic	ppm	<0.025	0.0250	0.023	<.025	<.025	0.015	<.025	.010 U	<.0028	<.0011	<.0015		.0039 B	0.0167	0.0218				<.010	<.01	0.0154
Barium	ppm	0.0857	0.0939	0.047	0.055	0.056	0.051	0.12	.200 U	<.0037	.0037 B	.0029 B		.0161 B	.115 B	.0308 J				.0282J	.141 J	.0857J
Beryllium	ppm	<0.02	0.0200	<.001	<.005	<.005	<0.001	<.005	.005 U	<.0001	<.00014	<.000091		<.0002	<.0002	.0002 J				<.005		<.005
Boron									.100 U													
Cadmium	ppm	<0.01	0.0100	<.005	<.025	<.025	<0.005	<.025	.005 U	<.0001	<.00011	<.00014		.0037 B	<.0001	<.0025		<0.0025	<.0025	0.00057J	<.005	<.0025
Calcium	ppm	19.9	19.4	20	22	23	22	32	24.9	24.6	25.8	25.6		24.3	29.6	26.9		26.3	31.1	27.6	23.6	22.1
Chromium	ppm	0.0173J	0.0200	0.005	0.09	<.025	<0.005	<.025	.010 U	.0013B	.0037 B	.0006 B		.0051 B	0.012	<.01				.0021J	.002 J	<.010
Cobalt	ppm	<0.02	0.0200	<.005	<.025	<.025	<0.005	<.025	.050 U	<.0004	<.00019	<.00016		<.0002	<.0002	<.05				<.050	<.05	<.050
Copper	ppm	0.00504J	0.0577	<.01	<.05	<.05	<0.01	<.05	.025 U	.0025B	.0127 B	.0027 B		.0073 B	.0187 B	.0059 J				.0027J	<.025	.0156J
Iron	ppm	30.1	28.8	31	36	38	32	48	1.91	1.04	1.33	0.815		5.45	37.2	19.4		10.7	41.1	2.87	21.2	27
Lead	ppm	0.00727J	0.00623	<.005	<.025	<.025	<0.005	<.025	0.0103	0.0103	0.0101	0.0165		0.004	<.0013	.0025 J		<.005	0.0025	.0022J	.003 J	<.005
Magnesium	ppm	3.77	3.59	3.8	42	4.3	4.1	6.2	11.2	11.1	11.4	11.3		4.630 B	5.09	4.45		11.4	5.63	4.45	3.72	3.46
Manganese	ppm	4.81	4.81	5.4	6.4	7.1	6.6	9.6	0.164	0.144	0.173	0.16		1.28	8.46	1.36		0.148	<.01	0.659	15.2	8.06
Nickel	ppm	0.00944J	0.00507	<.01	<.05	<.05	<0.01	<.05	.040 U	.0011B	.0005 B	<.00029		.0015 B	<.0003	<.04				<.040	<.04	.005J
Potassium	ppm	3.45	3.18	4.6	<5	<5	4.8	7.3	5.000 U	1.46B	2.52	1.65 B		5.43	4.960 B	5.4		<5	7.49	7.44	8.07	6.8
Selenium	ppm	<0.025	0.0250	<.01	<.05	<.05	<0.01	<.1	.005 U	0.0023	<.0011	<.0014		<.0029	<.0022	<.01				<.010	<.01	<.010
Silver	ppm	<0.02	0.0200	<.005	<.025	<.025	<0.005	<.025	.010 U	<.0002	<.00043	<.00037		<.0018	<.0005	<.010				<.010	<.01	<.010
Sodium	ppm	6.9	9.97	15	14	17	16	83	18.6	18.7	18.8	18.5		28.1	**124**	55.8		17	**140**	89.6	112	112
Thallium	ppm	<0.015	0.0150	<.005	<.025	<.025	<0.005	<.025	.010 U	<.0019	<.0013	<.0035		<.0023	0.0376	<.010				<.010	0.0116	<.010
Vanadium	ppm	<0.02	0.0200	<.005	<.025	<.025	<0.005	<.025	.050 U	<.0003	.0006 B	.0005 B		<.0005	.0033 B	<.05				<.050	<.05	<.050
Zinc	ppm	0.0439	0.0795	0.01	<.05	<.05	0.01	<.05	.020 U	.0083B	.0134 B	.0036 B		0.037	<.0016	.0133 J				.0166J	.0122 J	.007J
TDS	ppm	200	184	160	200	270	170	490	184	195				388	468	271		191	553	431	394	472
TKN	ppm	0.604	0.703	1	0.4	0.8	2.2	1	.53 D	0.42				<.5	0.57	0.49		0.33	0.33	4.8	0.77	0.46
BOD	ppm	<4	2.0	<3		4.9	<3	8.5	2 U	<2	<2	<2		<2	<4	<4		<2	3.5	<2	2.3	2.4
TOC	ppm	<0.5	0.5	<.5	<.5	<.5	<.5	<.5	1 U	1.2	17.2	1.4		2.03	0.762	1.73		<1	0.78	1.3	1.9	5.9
DO							0.12	0.52	0.37	0.48	2.31	0.8		6.87	2.8	6.31		5.2	1.07	4.49	5.42	2.76
Turbidity	ntu						160	270	3.9	2.1	1	1.3		23	51	120				34	15.4	22

		June_09	Dec_09	Jun_10	Dec_10	Jun_11	DEC_11	Jun_12	Dec_12	June_13	Dec_13	June_14	Dec_14	June_15	Dec_15	Jun_16	16-Dec	Jun_17	Dec_17	Aug_18	Dec_18	June _19
1,4 dioxane	ug/l																			<.96	.17 J	.084 J
perfluorobutanoic acid PFBA	ng/l																			12	9.2	ND
perfluoropentanoic acid PFPeA	ng/l																			58	35	26
perfluorohexanoic acid PFHxA	ng/l																			27	19	16
perfluoroheptanoic acid PFHpA	ng/l																			16	13	10
perfluorooctanoic acid PFOA	ng/l																			23	24	16
perfluorononanoic acid PFNA	ng/l																			3.2	3.7	ND
perfluorodecanoic acid PFDA	ng/l																			0.59	0.85	ND
perfluoroundecanoic acid PFUnA	ng/l																			ND	ND	ND
perfluorododecanoic acid PFDoA	ng/l																			ND	ND	ND
perfluorotridecanoic acid PFTriA	ng/l																			ND	ND	ND
perfluorotetradecanoic acid PFTeA	ng/l																			0.3	0.43	ND
perfluorobutanesulfonic acid PFBS	ng/l																			1.1	1.1	ND
Perfluorohexanesulfonic acid PFHxS	ng/l																			2.7	2.4	ND
perfluoroheptanesulfonic acid PFHpS	ng/l																			0.42	0.2	ND
perfluorooctanesulfonic acid PFOS	ng/l																			12	12	7.4
perfluorodecanesulfonic acid PFDS	ng/l																			ND	ND	ND
perfluorooctane Sulfonamide FOSA	ng/l																			ND	ND	ND
n-methyl perfluorooctanesulfonamidoacetic acid NMeFOSAA	ng/l																			ND	ND	ND
n-ethyl perfluorooctane sulfonamidoacetic acid NEtFOSAA	ng/l																			ND	ND	ND
6:2 FTS	ng/l																			ND	23	18
8:2 FTS	ng/l																			ND	ND	ND
total PFOA/PFAS																				156.31	143.88	93.4

Analyte	Units	Jan-91	GM-6 Apr-91	GM-6D 91	2001	Jan-03	1-03 dup	2003-Aug	8-03 dup	Mar'04	Sept '04	Mar '05	Sept '05	Apr'06	Oct_06	May_07	Oct_07	May_08	Oct_08
Well depth	feet	60	60	92	92	93	93	93	93	93	93	93	93	93	93.00	93		93	93
Chloride	mg/l	90	140	160	39	110	170	50	115	**380**	84	86	76	51	48.00	30	37	22.5	25
TKN	mg/l	29	43	33	bmdl	25.5	24.9	40.9	37.2	30.4	18	37.4	29.8	2.07J	8.36	5.2	7.1	3.35	5.08
Alkalinity	mg/l	280	460	550	112	540	548	**808**	840	509	463	543	440	288	275.00	177	272	136	145
TDS	mg/l	370	640	740	206	730	838	1340	1150	650	530	620	590	396	334.00	226	354	206	273
Specific Conductance	umhos/cm	700	800	1200	409	195	NS	430	NS	270	225	900	1020	630	750.00	400	691	333	550
Hardness	ppm	80	120	165	NS	441	413	536	518	245	339	410	353	221		159	207	112	138
Aluminum	ppm	.096 B	<.1	<mdl	NS	0.066	0.056	<.013	0.051	0.022	0.022	0.0127J	.0127J	.012J	0.05	0.0097	<.02	0.0157	.016J
Mercury	ppm	<.0002	<.0002	<mdl	NS	<.00002	<.00002	<.00002	<.00003	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002		<.0002
Antimony	ppm	<.06	<.04	<mdl	NS	<.0065	<.0065	<.002	0.055	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025
Arsenic	ppm	0.0227	0.016	0.065	NS	0.064	0.059	0.04	0.11	<.025	<.025	0.0284	<.025	<.025	<.025	0.0331	0.0333	<.025	<.025
Barium	ppm	.175 B	.188 B	0.327	NS	0.45	0.41	0.54	0.52	0.192	0.307	0.377	0.275	0.162	0.20	0.127	0.215	0.083	0.115
Berylium	ppm	<.001	<.001	<mdl	NS	<.0002	<.0002	0.0006	0.0006	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Cadmium	ppm	<.003	<.005	<mdl	NS	<.0007	<.0007	0.002	<.0007	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
Calcium	ppm	18.8	24.4	41.1	NS	127	120	164	159	57.9	103	126	106	70.8	60.80	50.5	65.3	35.7	44
Chromium	ppm	<.006	<.006	<mdl	NS	<.001	<.001	<.0016	<.001	<.02	<.02	.00595J	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Cobalt	ppm	<.006	<.006	<mdl	NS	0.0023	0.0016	<.0004	0.0093	<.02	0.063	<.02	<.02	<.02	0.11	<.02	<.02	<.02	<.02
Copper	ppm	<.002 J	.0091 B	.002 J	NS	<.0031	<.0031	<.0029	<.0031	<.02	<.02	<.02	<.02	<.02	.0061J	<.02	<.02	<.02	<.02
Iron	ppm	13.7	12.7	15.1	NS	34.1	30.6	31.8	30.7	0.197	23.9	28.5	27.1	25.7	20.60	17.3	22.5	15.6	22.5
Lead	ppm	<.0011 J	.0041 B	.002 B	NS	<.0024	<.0024	0.0086	<.0024	<.015	<.015	<.015	<.015	<.015	0.07	<.015	<.015	<.015	<.015
Magnesium	ppm	7.41	11.4	17.5	NS	28.9	26.6	30.6	29.3	24.5	20	23.3	21.2	10.7	9.79	7.9	10.6	5.6	6.84
Manganese	ppm	.543 J	0.808	0.43	NS	0.45	0.43	0.27	0.26	0.0533	0.184	0.243	0.304	0.277	0.33	0.296	0.309	0.492	0.996
Nickel	ppm	<.013	<.0126	<mdl	NS	0.002	0.002	0.0045	0.0099	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Potassium	ppm	31	44.2	45.2	NS	46.1	44.6	39.6	36.3	41.1	27.4	35.4	34.9	18.9	16.10	13.1	20	8.57	9.15
Selenium	ppm	<.0011	<.0022	<mdl	NS	<.0034	<.00034	<.0043	<.0034	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025
Silver	ppm	<.003	<.003	<mdl	NS	<.0003	<.0003	<.001	0.071	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Sodium	ppm	84.4	118	212	NS	80.8	77.3	108	96.1	64.6	52.2	62.1	72.9	37.1	36.00	23.1	8.8	6.82	8.24
Thalium	ppm	<.0022	<.0033	<mdl	NS	<.0044	<.0044	0.054	<.0044	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015
Vanadium	ppm	.0076 B	<.005	<mdl	NS	0.0033	0.0026	0.0022	0.0022	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Zinc	ppm	.0057 B	.0104 B	.007 B	NS	<.0058	<.0058	0.011	0.011	<.02	<.02	.0131J	<.02	.00704J	0.18	0.0133	0.0358	0.0333	0.0317
Bromide	mg/l				NS	<.5	<.5	3.7	2.6	3.38	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.5	<2
Ammonia	ppm	27	40	33	NS	23.9	22.9	38.9	40.3	23	14.4	23	19.7	1.27	8.96	6.08	11	3.76	3.52
BOD	mg/l	29	9	50	NS	<2.41	3.67	9.55	17.4	<2.41	5.11	3.24	3.38	<2.41	<3	45	36.7	63.6	<3
COD	ppm	90	110	95	NS	68.9	64.5	105	95.8	54.1	43.7	36.3	47.1	25.7	<10	<10	28.6	<10	<10
Nitrate	ppm	<.5	<.5	0.6	NS	0.075	0.027	0.025	0.14	<.1	<.1	<.1	0.233	0.123	<.1	<.1	0.393	<.1	<.1
Phenols	ppm	<.001	<.001	<mdl	NS	0.0032	<.001	0.017	0.0098	0.482	0.0126	0.00539	0.0107	<.01	0.02	0.0112	0.0152	<.01	0.0251
Sulfate	ppm	18	16	10	NS	3.03	4.5	69.7	69.7	18.3	2.39	<1	3.62	7.36	5.13	24	4.87	30.2	20.9
TDS	mg/l	370	640	740	NS	730	838	1340	1150	650	530	620	590	396	334.00	226	354	206	273
TOC	ppm				NS	47.5	62.9	137	168	123	15.2	20.5	14	9.3	6.80	6.4	40	<1	1.8

Source of 1991 data: Geraghty & Miller, Inc., 1992, Babylon Landfill RI/FS, Task 2E, Groundwater Sampling.

B- Concentration is greater than the instrument detection limit but less than contract required detection limit.

J- Estimated value.

NS- Not sampled.

GM-6D averaged 2 data sets.

GM6		June_09	Dec_09	Jun_10	Dec_10	Jun_11	DEC_11	Jun_12	Dec_12	Jun_13	Dec_13	June_14	14-Dec	June_15	Dec_15	Jun_16	Dec_16	Jun_17	Dec_17	Aug_18	Dec_18	June_19
Well Depth	feet	93	93										unable to									
Chloride	mg/l	47	43.0	34	40	75	58	38	78.9 D	77.7	96.9	111	sample	13.5	182	161	157	143 D	**249**	**229**	280	106
TKN	mg/l	8.3	13.0	5	1.8	9.8	9.4	4	12.9 D	13.5	12.9	16.8	well	1.92	13.5	11.3	**31.5**	**50.6 D**	**53.5**	**35.5**	49.4	9.6
Alkalinity	mg/l	295	301	170	260	280	290	160	262 D	262	274	365	broken	59.5	303	224	**734**	**849**	**855**	549	758	262
TDS	mg/l	399	373	260	380	430	390	270	371	433	414	484		105	602	590	898	874	1120	784	832	456
Spec. Cond.	umhos/cm	325	658	420	550	730	790	370	1015	769	627	895		173	1167	782	**1866**	**1907**	**1773**	906	984	884
pH			7.81	7.1	6.7	6.61	7.37	6.45f/7.3l	6.69	6.77	7.31	6.58		7.38	6.59	7.09	7.82	6.28	7.07	7.88	7.37	7.79
Ammonia	ppm	8.6	12.0	4.4	0.8	9.2	9.2	3.4	8.16 D	11.2	10.2	15		0.22	15.5	10.9	**37.1**	**41.4 D**	**47.6**	**31.8**	48.2	8.1
Bromide	ppm	<2	2.00	<.5	5.7	<.5	0.59	<.5	0.94	0.59	1.26	1.2		<.5	<.5	1.45	2.1	<0.50	3.1	2.3	4	1.5
COD	ppm	10.3	10.2	<40	<40	<40	<40	<40	14.7	27.2	29.1	41.3		11	37.2	41.7	92.1	77.5	95.9	78.8	101	47.7
Chloride	ppm	47	43.0	34	40	75	58	38	78.9 D	77.7	96.9	111		13.5	182	161		143 D	249	229	280	106
Hardness	ppm	188	189	150	200	230	230		370 D	280	300	330		60	306	300	**660**	**640**	**500**	380	600	260
Mercury	ppm	0.00093	0.000200	<.00025	<.00025	<.0003	<.0002	<.0002	.0002 U	<.0001		<.0001		.00013 B	<.0001	0.000077				<.0002	<.0002	<.0002
Nitrate	ppm	0.166	0.100	<.5	<.5	<.5	<.5	0.5	0.13	<.1	,.0001	<.0001		1.52	<.1	2.18	<.005	<0.050	0.015	0.31	0.17	0.054
Phenolics	ppm	0.0205	0.0100	<.0001	<.001	<.001	<.001	<.001	5.0 U	<.0005	<.005	<.005		<.005	<.005	0.0076	<.00084	0.0126	0.0092	0.0084	0.0125	<.01
Sulfate	ppm	60.8	2.00	18	<5	5	<5	17	.005 U	<5	<5	<5		5.68	5.68	11.7	<.21	<5	<5	1.8	1.8 J	16
Aluminum	ppm	0.124	0.141	<.01	<.05	0.06	0.02	<.05	.200 U	.0398B	.0146 B	.0113 B		10.5	.0689 B	2.15				0.389	.0971 J	.105J
Antimony	ppm	<0.025	0.0250	<.005	<.025	<.025	<0.005	<.025	.060 U	.0049B	.0021 B	<.0016		.0064 B	.00075 B	.0084 J				<.060	<.06	<.060
Arsenic	ppm	<0.025	0.0250	0.026	0.028	0.029	0.027	<.025	0.03	0.032	0.0341	0.0362		0.024	0.033	.037.9				0.0482	0.0576	0.0328
Barium	ppm	0.217	0.222	0.085	0.15	0.17	0.17	0.078	.200 U	.182B	.178 B	0.254		.0896 B	0.244	0.262				0.491	0.728	.196J
Beryllium	ppm	<0.02	0.0200	<.001	<.005	<.005	<0.001	<.005	.005 U	<.0001	<.00014	<.000091		.0003 B	<.0002	<.005				<.0050	<.005	<.005
Boron									0.188													
Cadmium	ppm	<0.01	0.0100	<.005	<.025	<.025	<0.005	<.025	.005 U	<.0001	.0018 B	.0002 B		.002 B	<.0001	<.0025	0.0025	<0.0025	0.00014	<.0025	<.0025	<.0025
Calcium	ppm	60.5	61.3	49	66	74	74	51	78.9	80.1	80.8	104		25.3	104	108	**180**	**189**	**222**	148	203	92.1
Chromium	ppm	0.0176J	0.0200	<.005	<.025	<.025	<0.005	<.025	.010 U	0.0109	.0072 B	.0088 B		0.091	0.0149	.0045 J				<.010	0.0046	<.010
Cobalt	ppm	<0.02	0.0200	<.005	<.025	<.025	<0.005	<.025	.050 U	<.0004	.0003 B	<.00016		.0065 B	<.0002	.0012 J				<.050	<.05	<.050
Copper	ppm	0.00568J	0.0366	<.01	<.05	<.05	<0.01	<.05	.025 U	<.0004	0.0941	.0072 B		0.102	.0178 B	.0239 J				.0081J	<.025	<.025
Iron	ppm	24.1	20.1	18	24	25	24	31	25.3	27.3	26.6	35		21.2	34.5	41.7	28.9	31.4	36.6	34	40.9	17.3
Lead	ppm	<0.015	0.00495	<.005	<.025	<.025	<0.005	<.025	0.005	.0011B	<.0019	0.0144		0.073	.0027 B	0.0173	<.0013	<.005	0.0022	.0043J	.0045 J	.0045J
Magnesium	ppm	9.05	8.81	6.8	8.6	10	10	6.2	10.7	10.5	11.4	17.9		3.370 B	17.2	16.4	24.6	23.8	26.6	22.7	25.2	10.4
Manganese	ppm	0.896	0.398	0.63	0.48	0.32	0.33	1.4	0.425	0.28	0.258	0.379		0.514	0.37	0.478	0.195	0.2	0.141	0.807	0.423	0.279
Nickel	ppm	0.0162J	0.0200	<.01	<.05	<.05	<0.01	<.05	.040 U	.0017B	<.00034	<.00029		0.04	<.0003	<.040				<.040	<.04	<.040
Potassium	ppm	12.6	10.5	11	12	15	16	17	15.2	13.5	15.4	16.3		13.6	16.6	17.3	36.4	41.4	50.1	39.6	46.6	16.7
Selenium	ppm	<0.025	0.0250	<.01	<.05	<.05	<0.01	<.1	.005 U	<.0023	.0051 B	.0018 B		<.0029	.0033 B	<.010				<.010	<.01	<.010
Silver	ppm	<0.02	0.0200	<.005	<.025	<.025	<0.005	<.025	.010 U	<.0002	<.00043	.004 B		.0034 B	<.0005	<.010				<.010	<.01	<.010
Sodium	ppm	13.9	16.5	22	29	35	42	27	36.3	37.7	41.9	58.7		9.89	68.9	61.2	**123**	**116**	**126**	101	127	44.1
Thallium	ppm	<0.015	0.0150	<.005	<.025	<.025	<0.005	<.025	.010 U	<.0019	<.0013	<.0035		<.0023	<.0019	<.010				<.010	<.01	<.010
Vanadium	ppm	<.02	0.0200	<.005	<.025	<.025	<0.005	<.025	.050 U	.0004B	.0004 B	.0014 B		.0239 B	.0086 B	.0071 J				.0017J	<.05	<.050
Zinc	ppm	0.628	0.0669	0.03	<.05	<.05	0.02	<.05	.020 U	.0069B	.0073 B	.0051 B		0.265	.0021 B	0.0617				0.0376	.0085 J	<.020
TDS	ppm	399	373	260	380	430	390	270	371	433		484			602	590		874	1120	784	832	456
TKN	ppm	8.3	13.0	5	1.8	9.8	9.4	4	12.9 D	13.5		16.8			13.5	11.3		50.6 D	53.5	35.5	49.4	9.6
BOD	ppm	<4	2.5	<3		6.7	5.2	13	2 U	<13	4	9			6	7	<3.3	7.8 D	2.5	13.9	10.6	22.2
TOC	ppm	7.0	7.2	4.2	1.9	7.7	6.9	<.5	6.8	3.4	12.5	13.8			8.01	13.2	22.2	22.9	24.9	22.1	28.3	15.1
DO							0.1	0.44	2.57	0.65	1.15	0.06			2.26	0.43	0.8	7.36	2.67	2.3	3.06	3.36
Turbidity							200	360	15	36	25	73			72	140				219	270	17.1
Eh								-50	-102.9	-117	-95	-92.8			-144.4							

GM6		June_09	Dec_09	Jun_10	Dec_10	Jun_11	DEC_11	Jun_12	Dec_12	Jun_13	Dec_13	June_14	14-Dec	June_15	Dec_15	Jun_16	Dec_16	Jun_17	Dec_17	Aug_18	Dec_18	June_19
1,4 dioxane	ug/l																			19	28.6	5
perfluorobutanoic acid PFBA	ng/l																			81	85	33
perfluoropentanoic acid PFPeA	ng/l																			29	40	ND
perfluorohexanoic acid PFHxA	ng/l																			83	97	30
perfluoroheptanoic acid PFHpA	ng/l																			19	27	12
perfluorooctanoic acid PFOA	ng/l																			130	150	42
perfluorononanoic acid PFNA	ng/l																			53	52	8.5
perfluorodecanoic acid PFDA	ng/l																			1.3	1.3	ND
perfluoroundecanoic acid PFUnA	ng/l																			ND	ND	ND
perfluorododecanoic acid PFDoA	ng/l																			ND	ND	ND
perfluorotridecanoic acid PFTriA	ng/l																			ND	ND	ND
perfluorotetradecanoic acid PFTeA	ng/l																			ND	0.31	ND
perfluorobutanesulfonic acid PFBS	ng/l																			5	8.3	6.1
Perfluorohexanesulfonic acid PFHxS	ng/l																			13	15	6
perfluoroheptanesulfonic acid PFHpS	ng/l																			0.59	ND	ND
perfluorooctanesulfonic acid PFOS	ng/l																			24	19	7.9
perfluorodecanesulfonic acid PFDS	ng/l																			ND	ND	ND
perfluorooctane Sulfonamide FOSA	ng/l																			0.75	ND	ND
n-methyl perfluorooctanesulfonamidoacetic acid NMeFOSAA	ng/l																			ND	ND	ND
n-ethyl perfluorooctane sulfonamidoacetic acid NEtFOSAA	ng/l																			20	13	ND
6:2 FTS	ng/l																			3.4	ND	ND
8:2 FTS	ng/l																			ND	ND	ND
total PFOA/PFAS																				482.04	536.51	150.5

GM-7

Analyte	Units	Jan_91	Apr_91	GM7D91	2001	Jan_03	Aug_03	Mar_04	Sept_04	Mar_05	Sept_05	SeptD	Apr_06	AprD	Oct_06	May_07	Oct_07	May_08	Oct_08
Well_Depth	feet	59	59	91	91	86	85.5	85.5	85.5	85.5	85.5		85.5		85.5	85.5		85.5	85.5
Chloride	mg/l	170	110	80	91.5	55	<18.3	**950**	**312**	**196**	97	101	130	135	115	70.5	85	37	91
TKN	mg/l	47	34	20	10	10.3	1.6	2.89	1.99	1.33	1.94	2.28	0.852	0.75	1.11	1.11	4.06	2.02	24.2
Alkalinity	mg/l	600	450	400	324	210	200	113	62.6	135	126	125	257	267	185	219	306	320	335
TDS	mg/l	750	600	540	546	354	410	480	620	590	420	420	750	682	446	386	518	722	516
Spec_Cond	umhos/cm	1300	1150	950	988	275	280	170	300	880	700		940		855	700	972	831	1350
Hardness	ppm	290	240	295	NS	136	232	342	345	341	188	191	303	304		250	160	405	187
Aluminum	ppm	.08 B	<.1	0.2	NS	29.2	5.6	0.0296	13.7	7.1	5.85	6.23	9.02	9.01	3.41	0.191	0.394	0.0305	0.489
Mercury	ppm	0.00025	0.0011	0.00022	NS	<.00002	0.000069	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002		<.0002
Antimony	ppm	<.06	<.04	<mdl	NS	<.016	<.002	<.025	<.025	.0172J	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025
Arsenic	ppm	0.0787	0.0342	0.05	NS	0.071	0.034	<.025	<.025	0.0364	0.0388	<.025	<.025	<.025	<.025	0.056	0.0321	<.025	<.025
Barium	ppm	0.245	.103 B	0.32	NS	0.29	0.091	0.114	0.346	0.285	0.193	0.199	0.123	0.126	0.235	0.152	0.26	0.0754	0.207
Berylium	ppm	<.001	<.001	<mdl	NS	<.0005	0.0002	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Cadmium	ppm	0.0065	0.0056	0.035	NS	0.0043	0.0033	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
Calcium	ppm	98.6	67.2	102	NS	96.5	76	114	119	120	64.3	65.2	97	97.6	61.9	85.3	54.3	112	57
Chromium	ppm	<.006	<.006	<mdl	NS	0.099	0.019	<.02	0.022	0.0213	.00759J	<.02	0.0214	0.0243	.0163J	0.00836	<.02	<.02	<.02
Cobalt	ppm	.0068 B	<.006	<mdl	NS	0.023	0.0041	<.02	0.19	0.0455	<.02	<.02	<.02	<.02	0.295	<.02	<.02	<.02	<.02
Copper	ppm	<.002 J	.0085 B	.007 BJ	NS	0.063	0.012	<.02	0.027	0.0324	.0105J	<.02	0.0267	0.0271	.0117J	0.00264	<.02	0.0116	.0133J
Iron	ppm	58.6	28.2 J	42J	NS	86.6	40.6	0.279	15.3	49.3	39.3	39.6	42.3	42.7	27.4	23.8	26.4	0.625	14.4
Lead	ppm	.0015 B	.0029 B	.005B	NS	0.32	0.058	<.015	0.174	0.0867	0.0602	0.0548	0.0648	0.0632	0.157	0.00595	<.015	<.015	.0083J
Magnesium	ppm	17.1	11.5	15	NS	24.3	10.3	13.7	11.5	10.3	6.55	6.69	14.7	14.8	6.44	8.89	6.03	30.1	10.9
Manganese	ppm	.292 J	0.199	0.16	NS	1.22	1.01	2.81	7.35	4.92	5.48	5.54	3.34	3.36	4.74	5.43	4.06	0.0477	1.63
Nickel	ppm	<.013	<.009	<mdl	NS	0.07	0.046	<.02	0.023	.00935J	.0128J	.00876 J	.0198J	.0198J	.0174J	<.02	<.02	<.02	.0061J
Potassium	ppm	50	34.9	31	NS	76.4	8.14	17.1	28.6	47.2	29.7	30.9	19.9	20.1	24.4	26.8	36.8	25.6	27.7
Selenium	ppm	<.0011 J	<.0022	<mdl	NS	<.0085	<.0043	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025
Silver	ppm	<.003	<.003	<mdl	NS	<.00075	<.001	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Sodium	ppm	137	86	76	NS	9.86	12.5	43.9	56.6	71.2	47.5	49.8	33.3	33.3	59.2	35.2	14.3	11.2	17.8
Thalium	ppm	<.0022	<.0033	<mdl	NS	<.011	0.038	<.015	<.015	<.015	.015U	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015
Vanadium	ppm	0.0062	<.005	.007B	NS	<.0004	0.016	<.02	0.038	.017J	<.02	<.02	0.024	0.0246	<.02	<.02	<.02	<.02	<.02
Zinc	ppm	.0109 B	.0114 B	.01 B	NS	<.0058	0.057	<.02	0.145	0.0936	0.0472	0.0495	0.0755	0.0758	0.479	0.0198	0.0292	0.0344	0.054
Bromide	mg/l				NS	<.5	<1	5.45	<.1	.0272J	<.1	<.1	0.74	0.723	<.1	0.635	<.1	<.5	<2
Ammonia	ppm	45	32	20	NS	30.1	<.11	1.24	1.35	0.969	1.06	1.04	0.312	0.351	0.599	0.618	8.21	0.528	22.2
BOD	mg/l	49	4	8	NS	<2.41	<2.41	<2.41	6.05	4.56	<2.41	<2.41	<2.41	125	<3	57.6	65.3	6.12	<5
COD	ppm	130	90	40	NS	62.2	62.2	<10	39.2	<10	12.4	11	32	30.3	47.4	66.2	42.9	46.5	26.5
Nitrate	ppm	0.5	<.5	<mdl	NS	0.12	0.074	<.1	<.1	.0306 J	0.318	0.212	0.236	0.2	0.106	<.1	0.347	7.93	<.1
Phenols	ppm	0.02	<.001	0.015	NS	<.002	<.011	0.448	<.001	0.00483	<.01	<.01	<.01	<.01	<.01	0.204	0.016	<.01	<.01
Sulfate	ppm	<5	6	<mdl	NS	61.9	122	140	31.3	30.6	43.3	38.8	63.6	63	7.03	29.4	6.41	140	16
TDS	mg/l	750	600	540	NS	354	410	480	620	590	420	420	750	682	446	386	518	722	516
TOC	ppm				NS	13.3	35.9	26.6	5.41	6.44	4.7	3	15	14	7.5	7.6	48	22	15

Source of 1991 data: Geraghty & Miller, Inc., 1992, Babylon Landfill RI/FS, Task 2E, Groundwater Sampling.
B- Concentration is greater than the instrument detection limit but less than contract required detection limit.
J- Estimated value. NS-not sampled

GM7

	Units	June_09	Dec_09	Jun_10	Dec_10	Jun_11	DEC_11	Jun_12	Dec_12	Jun_13	Dec_13	14-Jun	Dec_14	Jun_15	Dec_15	Jun_16	Dec_16	Jun_17	Dec_17	Aug_18	Dec_18	June)19
Well Depth	feet	85.5	85.5														well					
Chloride	mg/l	57.5	34.0	40	55	40	31	31	55.6 D	32.2	53.5	126	44.8	**189**	**296**	34.8	broken	13.4	**697**	20.5	23.3	5.8
TKN	mg/l	**17**	3.71	4.4	9.6	1.6	2.4	1.2	1.83 D	1.59	2.05	1.58	1.79	<.5	0.64	1.42		1.4	4	1.8	1.9	1.9
Alkalinity	mg/l	280	183	180	230	320	350	170	148 D	296	164	118	238	191	82.5	491		521	70.2	517	441	470
TDS	mg/l	408	409	330	730	630	730	320	298	532	465	467	491	**2690**	852	818		782	1580	704	526	570
Spec. Cond.	umhos/cm	800	1410	450	870	910	1100	870	894	766	484	577	653	1025	1250	1109		982	2010	952	986	896
pH			7.27	7.1	7.4	7.2	7.07	6.32	6.58	7.22	7.93	6.66	7.87	6.86	6.71	7.42		5.28	6.8	8	8.52	8.42
Ammonia	ppm	17.2	2.46	3.4	7.2	0.4	0.2	0.6	.82 D	0.11	0.27	1.24	0.19	0.34	0.4	0.34		<.1	1.1	0.035	.046 J	0.12
Bromide	ppm	<2	2.00	<.5	<.5	<.5	<.5		.5 U	<.5	<.5	0.8	<.0005	1.67	3.12	<.5		<0.50	7.3	0.05	.057 J	0.075
COD	ppm	15.1	21.4	60	60	60	70	80	10 U	58.8	31	16.5	47.7	20.4	25.4	80.2		77.5	62.1	89	69.9	72
Chloride	ppm	57.5	34.0	40	55	40	31	31	55.6 D	32.2	53.5	126	44.8	189	296	34.8		13.4	697	20.5	23.3	5.8
Hardness	ppm	177	225	180	540	400	540	190	240 D	500	300	220	650	340	300	670		660	440	340	460	450
Mercury	ppm	0.00078	0.000200	<.00025	<.00025	<.0003	<.0002		.0002 D	<.0001	<.0001	<.0001	<.0001	.00011 B	0.00028	<.0002				<.0002	<.0002	<.0002

GM7		June_09	Dec_09	Jun_10	Dec_10	Jun_11	DEC_11	Jun_12	Dec_12	Jun_13	Dec_13	14-Jun	Dec_14	Jun_15	Dec_15	Jun_16	Dec_16	Jun_17	Dec_17	Aug_18	Dec_18	June)19
Nitrate	ppm	0.121	9.04	<.5	13	<.5	22	<.5	.1 U	<.1	15.2	0.33	7.4	0.81	<.1	1.09		1.5 D	0.02	0.21	1.8	0.13
Phenolics	ppm	0.0185	0.0112	0.008	<.001	<.001	0.003	<.001	.005 U	<.0005	<.005	<.005	<.005	<.005	<.005	<.005		<.005	<.005	0.0074	0.0084	0.016
Sulfate	ppm	35.5	83.5	31	220	100	160	39	40.6	61	54.8	37.4	64.1	49.8	21.8	204		126	25.9	133	107	49.9
Aluminum	ppm	0.846	0.550	2.1	0.12	0.47	0.14		3.06	0.208	0.439	0.0921	3.15	9.11	22.1	0.426				0.438	0.469	0.892
Antimony	ppm	<0.025	0.0250	<.005	<.025	<.025	<0.005		.060 U	.0032B	.003 B	<.0016	<.003	<.0018	.0038 B	<.06				<.06	<.06	<.060
Arsenic	ppm	<0.025	0.0250	0.066	<.025	<.025	<0.005		0.037	.0045B	0.0071	0.0106	0.0135	0.0114	0.0228	<.010				<.01	<.01	.0069J
Barium	ppm	0.164	0.103	0.16	0.06	0.063	0.056		.200 U	0.0616B	.0517 B	0.137	.064 B	0.212	0.389	.0632 J				0.154	.106 J	.136J
Beryllium	ppm	<0.02	0.0200	<.001	<.005	<.005	<0.001		.005 U	<.0001	<.00014	<.000091	.0004B	0.0006	.0007 B	<.005				<.005	<.005	<.005
Boron									.100 U													
Cadmium	ppm	<0.01	0.0100	<.005	<.025	<.025	<0.005	<.025	.005 U	<.0001	.0007 B	.0002 B	.0016 B	.0025 B	.00090 B	<.0025		<0.0025	0.00062	.000086J	.00026 J	<.0025
Calcium	ppm	55.7	71.8	62	170	130	170	68	66.8	129	101	66.7	117	131	113	**240**		**199**	**201**	191	146	171
Chromium	ppm	0.0148J	0.00712	0.007	<.025	<.025	<0.005		0.0142	.0065B	.0052 B	.0062 B	0.0121	0.0259	0.0553	<.010				<.010	.0028 J	<.010
Cobalt	ppm	<0.02	0.0200	0.006	<.025	<.025	<0.005		.050 U	.0007B	.0006 B	.0004 B	.0018 B	.0125 B	.0148 B	<.05				.0034J	.0024 J	.0038J
Copper	ppm	0.00921J	0.101	0.03	<.05	<.05	0.02		.025 U	.0224B	0.0363	.0053 B	.0241 B	0.0608	0.111	.0165 J				0.0337	0.0271	0.0362
Iron	ppm	11.2	9.40	48	5.3	8.3	2.5	32	34.3	4.19	6.14	23.2	9.24	31.8	80.3	1.81		3.1	58.7	4.83	2.76	5.23
Lead	ppm	0.00788J	0.0144	0.019	<.025	<.025	<0.005	<.025	0.0307	0.0136	0.0085	0.0121	0.0191	0.154	0.196	.0031 J		<.005	0.0445	0.0057	0.0056	0.013
Magnesium	ppm	9.34	11.2	4.8	28	21	29	5.6	5.000 U	19.9	14.6	4.79	18.6	16.8	14.9	42.4		32.9	12.1	33.4	25	26.6
Manganese	ppm	1.03	0.628	3.1	0.25	0.46	0.07	0.37	4.17	0.649	1.34	6.1	0.772	9.26	13.6	0.0578		0.439	<.01	2.46	1.48	2.22
Nickel	ppm	0.0118J	0.00756	<.01	<.05	<.05	<0.01		.040 U	.0049B	.0019 B	<.00029	.0057 B	.0086 B	.0171 B	<.04				.0046J	.0033 J	.0056J
Potassium	ppm	23.6	10.5	14	15	14	11	15	22.8	11.7	13.3	19.7	9.69	20	23.7	11.6		13.7	56.3	13.6	9.38	9.72
Selenium	ppm	<0.025	0.0250	<.01	<.05	<.05	<0.01		.005 U	0.0061	.0014 B	<.0014	<.0038	<.0029	.004 B	<.010				<.010	<.01	<.010
Silver	ppm	<0.02	0.0200	<.005	<.025	<.025	<0.005		.010 U	<.0002	<.00043	.0028 B	<.0022	.0067 B	<.0005	<.010				<.010	<.01	<.010
Sodium	ppm	15.2	8.83	25	23	14	24	14	22.5	17.4	21.4	41.3	17.4	48.4	75.1	29.5		20.6	**148**	22.2	17	10.1
Thallium	ppm	<0.015	0.0150	<.005	<.025	<.025	<0.005		.010 U	<.0019	<.0013	0.0146	<.0038	.0032 B	0.0543	<.01				<.010	<.01	<.010
Vanadium	ppm	<0.02	0.0200	0.021	<.025	<.025	<0.005		.050 U	.0038B	.0023 B	.0005 B	.009 B	.0224 B	0.0687	.0038 J				.0079J	.0059 J	.0109J
Zinc	ppm	0.0436	0.177	0.04	<.05	<.05	0.02		0.0354	.013B	.0161 B	.0089 B	0.0289	0.138	0.206	<.020 U				0.032	.0175 J	0.0274
TDS	ppm	408	409	330	730	630	730	320	298	532		467	491		852	818		782	1580	704	526	570
TKN	ppm	17	3.71	4.4	9.6	1.6	2.4	1.2	1.83 D	1.59		1.58	1.79		0.64	1.42		1.4	4	1.8	1.9	1.9
BOD	ppm	5.1	4.1	<3		<2	<3		2 U	<13	<.002	<4	<.004		<4	<4		<2	3.7	<2	<4	1.2
TOC	ppm	9.7	14	11	13	19	22	1.9	1 U	24.6	0.0598	2.5	30		36.6	25.8		24.4	5.3	24.7	22.2	15.9
DO							6.8	0.86	2.94	1.22	7.04	0.09	8.07		0.63	750		7.03	0.88	<2	6.93	5.77
Turbidity	ntu						20		9	14	19	27	37		950	19				54	30.4	9.4
1,4 dioxane	ug/l																			<.95	.25 J	<.25
perfluorobutanoic acid PFBA	ng/l																			24	11	18
perfluoropentanoic acid PFPeA	ng/l																			37	5.5	38
perfluorohexanoic acid PFHxA	ng/l																			34	6.8	41
perfluoroheptanoic acid PFHpA	ng/l																			38	8.1	35
perfluorooctanoic acid PFOA	ng/l																			140	37	110
perfluorononanoic acid PFNA	ng/l																			26	8.1	20
perfluorodecanoic acid PFDA	ng/l																			2.4	1.3	1.7
perfluoroundecanoic acid PFUnA	ng/l																			ND	ND	ND
perfluorododecanoic acid PFDoA	ng/l																			ND	ND	ND
perfluorotridecanoic acid PFTriA	ng/l																			ND	ND	ND
perfluorotetradecanoic acid PFTeA	ng/l																			ND	ND	ND
perfluorobutanesulfonic acid PFBS	ng/l																			4.3	6.2	4.9
Perfluorohexanesulfonic acid PFHxS	ng/l																			39	19	27
perfluoroheptanesulfonic acid PFHpS	ng/l																			3	1	2.2
perfluorooctanesulfonic acid PFOS	ng/l																			140	60	110
perfluorodecanesulfonic acid PFDS	ng/l																			ND	ND	ND
perfluorooctane Sulfonamide FOSA	ng/l																			ND	ND	ND
n-methyl perfluorooctanesulfonamidoacetic acid NMeFOSAA	ng/l																			ND	ND	ND
n-ethyl perfluorooctane sulfonamidoacetic acid NEtFOSAA	ng/l																			15J	ND	ND
6:2 FTS	ng/l																			8.1J	ND	ND
8:2 FTS	ng/l																			ND	ND	ND
total PFOA/PFAS																				487.7	164	407.8

GM-15

Analyte	Units	Jan_91	Apr_91	Apr-91	2001	Jan_03	Aug_03	Mar_04	Sept_04	Mar_05	Sept_05	Apr_06	Oct_06	May_07	Oct_07	Oct_07D	May_08	Oct_08
Well_Depth	feet	52	52	84	84	84	83	83	83.3	83.3	83.3	**83.3**	83.3	83.3			83.3	83.3
Chloride	mg_l	130	130	200	77	135	<18.3	440	89	90	93	109	111	104	98	94	91	87
TKN	mg_l	38	41	38	26	31.3	34.5	35.6	34	69.6	46	1.52	2.76	24.6	12.4	11.9	21.2	20.3
Alkalinity	mg_l	410	430	720	337	440	440	372	380	356	377	408	417	415	421	421	458	408
TDS	mg_l	570	580	970	460	490	812	400	400	420	480	646	536	486	540	538	460	530
Spec_Cond	umhos_cr	950	1050	1450	976	390	335	230	265	870	1000	950	1125	920	1180	1170	540	1100
Hardness	ppm	110	120	270	NS	138	159	141	147	162	172	109		200	194	193	177	185
Aluminum	ppm	.053 B	<.1	0.15	NS	0.028	<.013	.018J	0.13	<.02	0.0235	0.0963	0.0631	0.0469	<.02	<.02	0.0163	.0134J0
Mercury	ppm	.00039 J	0.0014	0.0008	NS	<.00002	<.00002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002		<.0002
Antimony	ppm	<.06	<.04	<mdl	NS	<.0065	0.013	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025
Arsenic	ppm	<.01	.008 B	<mdl	NS	<.0097	0.0077	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025
Barium	ppm	.34 J	0.328	0.3	NS	0.14	0.16	0.161	0.215	0.224	0.212	0.174	0.3	0.313	0.3	0.303	0.294	0.291
Berylium	ppm	<.001	<.001	<mdl	NS	<.0002	0.0006	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Cadmium	ppm	.0045 B	0.0073	<mdl	NS	<.0007	0.0014	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
Calcium	ppm	30.2	26	41	NS	32.5	39.2	32.6	37.3	43.2	42.6	48.8	46.5	54.4	52.1	52.1	47.4	50.1
Chromium	ppm	<.06	<.06	<mdl	NS	<.001	<.0016	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Cobalt	ppm	0.0179	0.0113	.01 B	NS	0.0049	0.007	<.02	0.046	0.027	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Copper	ppm	<.0033	<.0031	0.0038	NS	<.0031	<.0029	<.02	<.02	<.02	<.02	<.02	.0057J	<.02	<.02	<.02	0.00302	<.02
Iron	ppm	29.6	29.8 J	22	NS	13	15.1	0.166	15.3	18.9	18.9	24.6	25.2	35.4	36.3	36.1	33.2	32.1
Lead	ppm	0.0018	<.0022	<mdl B	NS	<.0024	0.0068	<.015	<.015	<.015	.0139J	<.015	0.0763	0.00918	<.015	<.015	<.015	<.015
Magnesium	ppm	9.75	8.96	14	NS	13.9	14.8	14.6	13.2	13.1	16	14.1	14.2	15.5	15.4	15.4	14.1	14.4
Manganese	ppm	1.06	0.979	4	NS	1.16	1.22	0.247	1.05	1.19	0.946	0.947	0.813	1.02	1.06	1.07	0.846	0.758
Nickel	ppm	<.013	<.009	<m	NS	0.0041	0.0071	<.02	<.02	<.02	<.02	<.02	.00946J	0.0116	<.02	<.02	0.0118	.0086J
Potassium	ppm	43.8	41.6	55	NS	12	44.4	64.4	52.5	58.9	75	50.2	43	47.8	53.8	54	49.3	45.7
Selenium	ppm	<.0015 J	<.0022	<mdl	NS	<.0034	<.0043	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025
Silver	ppm	<.003	<.003	<mdl	NS	<.0003	<.001	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Sodium	ppm	134	117	213	NS	84	114	77.5	64.6	68.2	94.4	74.4	88.5	102	22.8	23.2	28.5	27.6
Thalium	ppm	<.0022	<.0033	<mdl	NS	<.0044	0.025	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015
Vanadium	ppm	<.004	<.005	<mdl	NS	<.0004	0.001	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Zinc	ppm	<.0033	.0075 B	<mdl	NS	<.0058	0.0099	<.02	<.02	.00653 J	<.02	.0125J	0.204	0.0203	0.0276	0.0293	0.0325	0.034
Bromide	mg_l				NS	<.5	2.4	2.59	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	1.2	<2
Ammonia	ppm	36	40	39	NS	30.1	33.4	33.2	25	51.8	44.1	1.69	15.1	29.8	34.5	33.5	42	34.2
BOD	mg_l	<10	3	6	NS	<2.41	11.5	<2.41	30	5.12	<2.41	5.7	<3	67.9	72.1	56.7	<2.41	<3
COD	ppm	90	80	125	NS	62.2	66.7	34.1	11.4	31.1	43.7	47	38.6	47.9	75.5	74.2	17.3	30.7
Nitrate	ppm	<.5	<.5	<mdl	NS	0.069	0.016	<.1	.0229J	<.1	0.286	0.109	.0517J	0.204	0.375	0.35	<.1	<.1
Phenols	ppm	<.001	<.001	<mdl	NS	<.001	0.014	0.0672	<.001	0.00708	<.01	<.01	0.0208	<.01	0.0219	0.0275	0.159	0.0399
Sulfate	ppm	25	21	6	NS	4.5	69.7	6.5	2.83	5.7	3.96	3	2.93	14.6	<1	<1	14	5.01
TDS	mg_l	570	580	970	NS	490	812	400	400	420	480	646	536	486	540	538	460	530
TOC	ppm				NS	22.4	70.2	89.8	2.23	16.5	16	18	16	17	49	69	11	16

		June_09	Dec_09	June_10	Dec_10	Jun_11	DEC_11	Jun '12	Dec_12	Jun_13	DEC_13	Jun_14	Dec_14	Jun_15	Jun_15	Dec_15	Jun_16	Dec_16	Jun_17	Dec_17	Aug_18	Dec_18
Well_Depth	ft	83.3	83.3							obstruct					DUP							
Chloride	ppm	97.5	87.0	77	76	73	280	78	40.4		93.2	46.8	45	84.2	78.2	**923**	142	**663**	138 D	148	137	194
TKN	ppm	38	57.3	24	24	25	27	26	11.4 D		0.27	7.85	9.51	5.89	6.59	13.7	1.44	19.2	9.5 D	0.39	9.6	23.2
Alkalinity	ppm	483	501	340	420	600	420	450	127 D		55.6	137	213	277	283	206	281	235	361	105	371	426
TDS	ppm	610	492	460	530	520	720	530	240			235	974	457	480	**1980**	534	**1340**	596	377	568	586
Spec_Cond	umhos_cr	940	1170	890	820	1100	1800	1000	668		426	443	1650	576		**3395**	918	**2526**	1161	673	1017	1088
pH			7.91	7.16	6.96	6.9/7.3	6.96	7.19f/7.4l	7.15		6.94	7.07	7.02	6.85		7.86	4.91	6.96	6.73	6.6	7.55	7.79
Ammonia as N	ppm	33.4	48.0	23	23	24	26	25	7.59 D		.1U	7.43	11.2	6.44	6.94	15.5	0.98	19.9	9.4 D	0.24	9.8	21.7
Bromide	ppm	<2	<2.00	<.5	5.9	<.5	0.89	1.1	.5 U		.5U	<.5	<.5	0.54	0.53	<.5	0.72	0.57	1.1	1.3	0.35	1.6
COD	ppm	37.2	14.8	50	80	<40	50	50	14.7		10U	19.1	23.5	27.3	31.7	35.7	26.8	240	42.1	26.2	52.2	74
Chloride	ppm	97.5	87.0	77	76	73	280	78	40.4			46.8	45	84.2	78.2	923	142	663	138 D	148	137	194
Hardness	ppm	200	252	210	260	230	340		160 D		120D	150	**1600**	72	68	126	55	192	70	108	96	160
Mercury	ppm	0.00055	<.000200	<.00025	<.00025	<.00025	<.0002	<.0002	.0002 D		.0001U	<.0001	<.0001	<.0001	<.0001	<.0001	<.0002			<.0002	<.0002	<.0002
Nitrate	ppm	0.0874J	<0.100	1.4	<.5	<.5	<.5	0.7	.1 U		0.26	<.1	<.0001	0.17	0.14	<.1	3.03	<.05	<.05	<.05	0.28	0.18
Phenolics	ppm	0.03	0.0168	<.001	<.001	<.001	<.001	<.001	.005 U		.005U	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.002	0.0095	<.005
Sulfate	ppm	15.2	<2.00	<5	<5	4	<5	<5	43.7		13.5	30.2	13.9	<5	<5	8.03	6.85	<5	<5	2	1.8	1.6 J
Aluminum	ppm	0.0619	0.00965	0.55	<.05	0.23	0.09	<.05	.200 U		0.234	.127 B	.135 B	0.324	0.486	.126 B	0.656			0.113	0.358	816
Antimony	ppm	<0.025	<0.0250	<.005	<.025	<.025	<0.005	<.025	.060 U		.002U	<.0016	<.003	<.0023	<.0023	<.0006	.0056 J			0.0043	<.06	<.06
Arsenic	ppm	<0.025	<0.0250	<.005	<.025	0.026	0.007	<.025	.010 U		.001U	.0085 B	.004 B	.0075 B	.0089 B	.0061 B	.0044 J			<.01	<.01	<.01
Barium	ppm	0.31	0.346	0.11	0.17	0.18	0.25	0.2	.200 U		.0073B	0.0927	0.258	.072 B	.0728 B	0.272	.0464 J			0.0044	.106J	0.251
Beryllium	ppm	<0.02	<0.0200	<.001	<.005	<.005	<0.001	<.005	.005 U		.00016U	<.000091	<.001	<.0001	<.00015	<.0002	<.005			<.005	<.005	<.005
Boron									0.232											0.0096		
Cadmium	ppm	<0.01	<0.0100	<.005	<.025	<.025	<0.005	<.025	.005 U		.0007B	.0003 B	.0045B	.0023 B	.0024 B	<.0001	<.0025	2.9	<.0025	<.0025	<.0025	<.0025
Calcium	ppm	55.8	72.6	63	79	87	**110**	93	44		25.2	39.6	63.2	19.4	19.6	37.7	16.4	60.6	18.8	27.1	33.1	58.4
Chromium	ppm	0.00561J	<0.0200	<.005	<.025	<.025	<0.005	<.025	.010 U		.0027B	.009 B	.0067B	.0064 B	.0064 B	0.0107	<.01			0.002	<.010	.0037 J
Cobalt	ppm	<0.02	<0.0200	0.008	<.025	<.025	0.007	<.025	.050 U		.00027U	.0062 B	.0125B	.005 B	.0051 B	.0052 B	.0022 J			<.05	.0042J	.0093 J
Copper	ppm	<0.02	<.0200	<.01	<.05	<.05	<0.01	<.05	.025 U		.004B	.0052 B	.0052B	.0057 B	.0067 B	.0113 B	.0062 J			<.025	<.025	<.025
Iron	ppm	31.1	31.1	3.6	24	25	29	32	19.1		0.351	34.8	39.6	11.2	11.3	23.3	8.73	33.7	17.7	1.19	13.5	25.6
Lead	ppm	0.00654J	0.00347	<.005	<.025	<.025	<0.005	<.025	0.005		0.014	0.0071	.0023B	.0019 B	.0012 B	<.0013	.0015 J	<.005	<.005	<.005	<.005	.0046 J
Magnesium	ppm	14.6	17.1	14	15	16	18	15	8.07		9.84	8.16	10.4	2.910 B	2.980 B	5.81	2.72	9.25	3.02	11.4	5.82	9.31
Manganese	ppm	0.664	0.654	0.75	0.4	0.38	0.6	0.44	0.397		0.0372	1.18	2.01	0.669	0.67	0.938	0.21	0.826	0.45	0.134	0.496	0.642
Nickel	ppm	0.0112J	0.00796	<.01	<.05	<.05	<0.01	<.05	.040 U		.0007B	<.00029	<.0006	.0061 B	.0061 B	.00030 B	.0034 J			0.0022	.0031J	.0028 J
Potassium	ppm	33.2	32.7	33	33	34	47	41	16.4		4.16B	10.6	18.8	12.5	12.2	23.9	7.68	21.4	10.3	2.05	14.5	24.2
Selenium	ppm	<0.025	<0.0250	<.01	<.05	<.05	<0.01	<.1	.005 U		.0017U	<.0014	0.0038	<.0027	<.0027	.0031 B	<.01			<.01	<.010	<.01
Silver	ppm	<0.02	<0.0200	<.005	<.025	<.025	<0.005	<.025	.010 U		.0016U	.0038 B	<.0022	<.0008	<.00087	<.0005	<.010			<.01	<.010	<.01
Sodium	ppm	26.1	28.3	58	61	67	150	67	24.8		45.7	29.1	301	162	161	**683**	189	**433**	222	89	175	129
Thallium	ppm	<0.015	<0.0150	<.005	<.025	<.025	<0.005	<.025	.010 U		.00096B	<.0035	<.0038	<.001	<.001	.0037 B	<.01			<.01	<.010	<.01
Vanadium	ppm	<0.02	<0.0200	<.005	<.025	<.025	<0.005	<.025	.050 U		.0004B	.0011 B	<.0007	<.0003	<.00036	.0048 B	<.050			0.0014	<.050	<.05
Zinc	ppm	0.0288	0.0413	0.05	<.05	<.05	0.02	<.05	.020 U		0.0302	.0076 B	.0138B	0.022	0.0306	.0044 B	0.0378			0.0055	.015J	0.0246
TDS	ppm	610	492	460	530	520	720	530	240		218D	235	235	457	480	1980	534		596	377	568	586
TKN	ppm	38	57.3	24	24	25	27	26	11.4 D		0.27	7.85	9.51	5.89	6.59	13.7	1.44		9.5 D	0.39	9.6	23.2
BOD	ppm	<4	2.0	3	<2	<3		16	2 U		2U	<2	<4	5	7	<4	2	<4	3.5	4.6	2.8	5.1
TOC	ppm	7.8	6.7	34	7.6	12	13	<.5	2.3			4.5	47.3B	9.1	9.1	8.52	8.05	8.2	9.7	3.7	10.1	18.5
DO							0.78	0.49	0.54		8.38	0.79	1.06	3.04		0.93	4.14	0.64	1.93	4.16	0.34	0.99

		June_09	Dec_09	June_10	Dec_10	Jun_11	DEC_11	Jun '12	Dec_12	Jun_13	DEC_13	Jun_14	Dec_14	Jun_15	Jun_15	Dec_15	Jun_16	Dec_16	Jun_17	Dec_17	Aug_18	Dec_18
Tubidity							280	570	37			58	58	75	68	230	65				144	122
Eh								-100	-142.8		-75	-147.8	-78.7			-136.7		-119				
1,4 dioxane	ug/l																				16	19.2
perfluorobutanoic acid PFBA	ng/l																				45	40
perfluoropentanoic acid PFPeA	ng/l																				24	28
perfluorohexanoic acid PFHxA	ng/l																				51	46
perfluoroheptanoic acid PFHpA	ng/l																				18	22
perfluorooctanoic acid PFOA	ng/l																				100	99
perfluorononanoic acid PFNA	ng/l																				110	110
perfluorodecanoic acid PFDA	ng/l																				0.76	0.96
perfluoroundecanoic acid PFUnA	ng/l																				ND	ND
perfluorododecanoic acid PFDoA	ng/l																				ND	ND
perfluorotridecanoic acid PFTriA	ng/l																				ND	ND
perfluorotetradecanoic acid PFTeA	ng/l																				ND	0.3
perfluorobutanesulfonic acid PFBS	ng/l																				4.7	5.6
Perfluorohexanesulfonic acid PFHxS	ng/l																				14	12
perfluoroheptanesulfonic acid PFHpS	ng/l																				1	ND
perfluorooctanesulfonic acid PFOS	ng/l																				38	29
perfluorodecanesulfonic acid PFDS	ng/l																				ND	ND
perfluorooctane Sulfonamide FOSA	ng/l																				ND	ND
n-methyl perfluorooctanesulfonamidoacetic acid NMeFOSAA	ng/l																				ND	ND
n-ethyl perfluorooctane sulfonamidoacetic acid NEtFOSAA	ng/l																				6.3	9.4
6:2 FTS	ng/l																				14J	ND
8:2 FTS	ng/l																				ND	ND
total PFOA/PFAS																					428.76	421.46

	Jun_19
Well_Depth	
Chloride	177
TKN	25.8
Alkalinity	372
TDS	6
Spec_Cond	1123
pH	7.62
Ammonia as N	22
Bromide	3
COD	123
Chloride	177
Hardness	100
Mercury	<.0002
Nitrate	0.044
Phenolics	<.01
Sulfate	<5
Aluminum	0.429
Antimony	<.060
Arsenic	0.0115
Barium	0.23
Beryllium	<.005
Boron	
Cadmium	<.0025
Calcium	57
Chromium	.0053J
Cobalt	.0075J
Copper	<.025
Iron	21.2
Lead	<.005
Magnesium	9.18
Manganese	0.578
Nickel	.0033J
Potassium	22.9
Selenium	<.010
Silver	<.010
Sodium	141
Thallium	<.010
Vanadium	<.050
Zinc	.0155J
TDS	6
TKN	25.8
BOD	19.9
TOC	33.6
DO	3.29

	Jun_19
Tubidity	144
Eh	
1,4 dioxane	16.2
perfluorobutanoic acid PFBA	48
perfluoropentanoic acid PFPeA	26
perfluorohexanoic acid PFHxA	52
perfluoroheptanoic acid PFHpA	16
perfluorooctanoic acid PFOA	84
perfluorononanoic acid PFNA	70
perfluorodecanoic acid PFDA	ND
perfluoroundecanoic acid PFUnA	ND
perfluorododecanoic acid PFDoA	ND
perfluorotridecanoic acid PFTriA	ND
perfluorotetradecanoic acid PFTeA	ND
perfluorobutanesulfonic acid PFBS	5.7
Perfluorohexanesulfonic acid PFHxS	5.7
perfluoroheptanesulfonic acid PFHpS	ND
perfluorooctanesulfonic acid PFOS	9
perfluorodecanesulfonic acid PFDS	ND
perfluorooctane Sulfonamide FOSA	ND
n-methyl perfluorooctanesulfonamidoacetic acid NMeFOSAA	2
n-ethyl perfluorooctane sulfonamidoacetic acid NEtFOSAA	6.8
6:2 FTS	1.9
8:2 FTS	ND
total PFOA/PFAS	343.3

GM-16

Analyte	Units	Jan_91	Apr_91	Apr_91	2001	Jan_03	Aug_03	Mar_04	Sept_04	Mar_05	Sept_05	Apr_06	Oct_06	Oct06Dup	May_07	May07_du	Oct_07	May_08	Oct_08	Oct_08D
Well_Depth	feet	52	52	77	77	51	77.5	77.5	77.5	77.48	77.48	77.48	77.48	77.48	77.48	77.48		77.48	77.48	77.48
Chloride	mg_l	130	31	210	18.8	35	<18.3	6	16	14	15	15	16	16.5	14.5	14	18	25.5	48.5	49.5
TKN	mg_l	11	10	49	1.39	4.73	2.94	5.87	2.4	4.36	3.64	2.17	1.77	1.94	1.51	1.7	1.25	1.65	1.24	1.15
Alkalinity	mg_l	290	230	840	68	20	180	129	121	131	130	138	141	142	143	142	137	154	144	143
TDS	mg_l	300	290	1100	166	144	212	230	180	180	190	222	192	196	188	172	218	224	308	303
Spec_Cond	umhos_cm	465	445	1850	259	200	160	225	145	310	363	340	460	377	340	330	410	335	410	
Hardness	ppm	200	180	535	NS	52	124	129	127	147	141	135			153	145	151	73	174	171
Aluminum	ppm	<.05	<.1	0.255	NS	0.1	0.047	.019J	0.026	.0116 J	0.15	0.0426	0.0438	0.0456	0.0295	0.0304	<.02	0.106	.0183J	.0186J
Mercury	ppm	<.0002	<.0002	<mdl	NS	<.00002	<.00002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002		<.0002		<.0002	<.0002
Antimony	ppm	<.06	<.04	0.064	NS	<.0065	0.0069	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025
Arsenic	ppm	0.0119	.0089 B	0.023	NS	<.0097	0.0068	<.025	<.025	.012 J	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025
Barium	ppm	1.91 J	.142 B	1.3	NS	0.029	0.097	0.0943	0.097	0.113	0.1	0.0944	0.102	0.102	0.114	0.115	0.128	0.129	0.149	0.147
Berylium	ppm	<.001	<.001	<mdl	NS	<.0002	0.0004	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Cadmium	ppm	0.0067	0.005	0.005	NS	0.0011	0.0032	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
Calcium	ppm	68.6	58.3	162	NS	16.2	36.9	37.9	39	43.6	43.9	42.9	39.8	39.7	48.8	46.1	48	47.2	56.1	55.1
Chromium	ppm	<.006	<.006	.075 B	NS	<.001	<.0016	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	.0098J	<.02	<.02
Cobalt	ppm	.0116 B	.0108 B	.035 B	NS	0.011	0.004	<.02	0.032	.0146 J	<.02	<.02	0.149	0.148	<.02	<.02	<.02	<.02	<.02	<.02
Copper	ppm	<.0041	.0062 B	0.006	NS	<.0031	<.0029	<.02	<.02	<.02	<.02	<.02	.00534J	0.005	<.02	<.02	<.02	.0106J	.0045J	.0046J
Iron	ppm	26.5	22.6 J	74 J	NS	30.6	11.3	0.331	9.92	12.1	11.2	11	9.39	9.43	11.8	10.6	12	12.4	15.5	15.2
Lead	ppm	<.0025	<.0022	.0036 B	NS	<.0024	0.006	<.015	<.015	<.015	<.015	<.015	0.0885	0.0862	<.015	<.015	<.015	<.015	<.015	<.015
Magnesium	ppm	11.1	8.5	41	NS	2.85	7.64	8.38	7.38	9.21	7.67	6.79	6.5	6.56	7.57	7.17	7.59	7.32	8.19	8.08
Manganese	ppm	0.465	0.437	1.28	NS	1.57	0.59	0.495	0.645	0.745	0.716	0.653	0.598	0.6	0.749	0.67	0.755	0.763	0.998	0.98
Nickel	ppm	<.013	<.009	0.03	NS	0.0019	0.006	<.02	<.02	<.02	.00301 J	<.02	<.02	<.02	<.02	<.02	<.02	.0145J	<.02	<.02
Potassium	ppm	23.2	20.1	98	NS	3.97	14.3	16.9	12.6	12.6	11.8	11.8	10.1	10.2	12.6	12.7	13	12.9	12.6	12.5
Selenium	ppm	<.0011	<.0022	<mdl	NS	<.0034	<.0043	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.02	<.02	<.025	<.025	<.025
Silver	ppm	<.003	<.003	<mdl	NS	<.0003	<.001	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.025	<.025	<.02	<.02	<.02
Sodium	ppm	20.9	19.1	210	NS	6.17	14.2	16.4	10	10	8.1	8.5	10.7	10.7	12.8	12.5	4.54	6.66	6.96	6.96
Thalium	ppm	<.0022 J	<.0033	<mdl	NS	<.0044	0.025	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015
Vanadium	ppm	<.004	<.005	.005 B	NS	0.0017	0.0008	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Zinc	ppm	.0199 B	0.037	.015 B	NS	0.014	0.025	<.02	<.01	.0089 J	0.0213	.0122J	0.23	0.228	0.0719	0.0154	0.0299	0.0577	0.0433	0.036
Bromide	mg_l				NS	2	<1	1.09	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.5	<2	<2
Ammonia	ppm	36	40	51	NS	2.39	1.8	2.82	2.66	2.48	2.84	1.94	1.64	1.65	1.58	1.61	1.53	1.44	1.61	1.38
BOD	mg_l	<10	3	25	NS	6.17	3.26	3.6	38.4	<2.41	<2.41	13.2	<3	<3	**90.8**	<2.41	65.6	<2.41	<3	<3
COD	ppm	90	80	160	NS	<4.8	33.1	<10	48.9	<10	<10	5.81J	<10	<10	<10	<10	<10	<10	<10	<10
Nitrate	ppm	<.5	<.5	<mdl	NS	0.13	0.066	<.1	<.1	.0178 J	0.273	0.108	.0609J	0.0601	<.1	<.1	<.1	<.1	<.1	<01
Phenols	ppm	<.001	<.001	0.001	NS	0.0096	0.015	0.0508	<.001	0.0043	<.01	<.01	0.0302	0.0268	<.01	0.336	0.0459	0.0218	0.0204	0.0208
Sulfate	ppm	25	21	5	NS	29.5	69.7	36.2	21.3	24.4	23.3	21	7.03	5.27	29.4	29.7	22.8	23.4	22.7	21.5
TDS	mg_l	570	580	1100	NS	144	212	230	180	180	190	222	192	196	188		218	224	308	303
TOC	ppm				NS	4.43	28.4	29.3	15.5	2.43	2	2.8	2.5	1.9	<1	<1	5.5	5.3	1.3	1.5

Analyte		June_09	Dec_09	Jun_10	Dec_10	Jun_11	DEC_11	Jun_12	Dec_12	Jun_13	Dec_13	Jun_14	Dec_14	Jun_15	Dec_15	Jun_16	Dec_16	Jun_17	Dec_17	Aug_18	Dec_18	June_19
Well_Depth	feet	77.48	77.48								14-Mar											
Chloride	mg_l	40.5	33.0	22	16	23	18	30	22.7	15.3	15.8	16.4	15.9	40	49.7	17.4	39.6	16.8	16.2	25	40.4	35.4
TKN	mg_l	1.39	1.21	1.4	1.2	1.2	1.4	1.2	0.84	1.83	0.99	1.64	0.63	1.32	0.74	0.69	1	0.31	<.1	0.56	0.47	2.1
Alkalinity	mg_l	152	170	140	140	170	170	110	117 D	68.8	69.5	63.5	66.6	72	74.5	120	96	42.2	42.2	41.1	47.7	44.6
TDS	mg_l	293	253	230	260	240	140	250	212	163	170	148	137	171	208	182	170	162	132	130	121	259
Spec_Cond	umhos_cm	360	485	340	340	440	440	480	585	432	178	245	291	288	443	320		346	274	277	3090	2950
pH			7.71	7.13	6.9	6.7	7.11	6.85f/7.1l	6.87	6.86	7.05	7.04	7.15	5.07	7.47	5.82		5.95	6.69	6.88	6.95	7.3
Ammonia as N	ppm	1.22	1.26	0.8	0.8	0.8	1.2	0.8	0.55	0.48	0.11	0.49	0.6	0.7	0.56	0.42	0.35	<.1	0.11	0.47	0.16	0.37
Bromide	ppm	<2	2.00	<.5	<.5	<.5	<.5	<.5	.5 U	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	0.042	<.5	.039 J	0.83
COD	ppm	<10	10.0	<40	<40	40	<40	<40	10.7	16.3	<10	13.3	<10	13.5	<10	<10	21.3	<10	17.8	23.6	24.4	52.1
Chloride	ppm	40.5	33.0	22	16	23	18	30	22.7	15.3	15.8	16.4	15.9	40	49.7	17.4	39.6	16.8	16.2	25	40.4	35.1
Hardness	ppm	144	138	110	130	130	130		150 D	88	110	140	170	100	94	46	100	80	60	48	54	60
Mercury	ppm	0.0005	0.000200	0.0004	<.00025	<.00025	<.0002	<.0002	.0002 U	0.0003	.00012B	<.0001	<.0001	<.0001	<.0001	.00008 J			<.0002	<.0002	<.0002	<.0002
Nitrate	ppm	0.0747J	0.100	<.5	<.5	<.5	<.5	<.5	0.11	0.13	0.18	<.0001	<.0001	0.32	<.1	<.1	0.064	<.05	0.17	<.05	0.061	0.046
Phenolics	ppm	0.019	0.0237	0.0004	<.001	<.001	<.001	<.001	.005 U	<.0005	<.005	<.005	<.005	<.005	<.005	0.0205	<.005	<.005	0.0025	0.0038	0.0054	0.012
Sulfate	ppm	39.8	25.2	26	26	26	29	26	29.1	26.2	24.1	25.9	22.1	26.3	26.3	18	26	9.5	19.8	20.1	30.5	22.6
Aluminum	ppm	0.102	0.0114	1.8	0.1	1	0.1	0.35	.200 U	2.95	0.538	.0313 B	0.36	1.26	0.21	1.29			0.264	0.913	0.661	0.338
Antimony	ppm	<0.025	0.0250	<.0005	<.025	0.046	<0.005	<.025	.060 U	.0072B	<.0019	<.0016	<.003	<.0023	<.0006	.005 J			<.06	<.060	<.06	<.060
Arsenic	ppm	<0.025	0.0250	0.012	<.025	0.032	0.016	<.025	.010 U	0.0164	.0073B	.009 B	.0061B	0.015	.0071 E	0.02			<.01	0.027	<.01	<.010
Barium	ppm	0.154	0.210	0.1	0.11	0.12	0.11	0.11	.200 U	.112B	.0809B	.0917 B	.104 B	.129 B	.119 B	.0797 J			0.0454	.0674J	.076 J	.0799J
Beryllium	ppm	<0.02	0.0200	<.001	<.005	<.005	<0.001	<.005	.005 U	<.0001	<.00014	<.000091	<.0001	<.0001!	<.0002	<.005			<.005	<.005	<.005	<.005
Boron									.100 U										0.0298			
Cadmium	ppm	<0.01	0.0100	<.005	<.025	<.025	<0.005	<.025	.005 U	.0013B	.0024B	.0002B	.0045B	0.009	<.0001	<.0025	2.9	<.0025	0.00014	<.0025	0.0035	<.0025
Calcium	ppm	46.7	44.9	35	44	43	44	46	43.3	31.9	31.7	29.3	27.9	35	34.6	11.8	27.6	11.8	17.9	18.7	17.1	18
Chromium	ppm	<0.02	0.0200	<.005	<.025	0.053	<0.005	<.025	.010 U	0.0159	.0071B	.0072B	0.019	0.021	0.013	0.043			0.0125	<.010	0.0038	<.010
Cobalt	ppm	<0.02	0.0200	0.006	<.025	<.025	0.007	<.025	.050 U	.0102 B	.0065B	.0098B	.0124B	.0123 E	.0129 E	.0064 J			0.0156	.0128J	0.0298	.0268J
Copper	ppm	<0.02	0.00534	0.02	<.05	<.05	<0.01	<.05	.025 U	0.0296	0.0697	.0045B	.0073B	0.034	.0211 E	.017 J			0.0079	.0046J	<.025	<.0250
Iron	ppm	15.3	16.5	13	23	26	22	34	30.9	25.1	14.6	30.7	35.2	43.3	44.7	19.6	36.5	2.35	36.3	51.9	27.8	24.1
Lead	ppm	0.00701J	0.0150	0.02	<.025	<.025	<0.005	<.025	0.005	0.0631	0.0078	0.0097	0.005	0.005	.0034 E	0.024	0.0069	<.005	0.0018	.0037J	0.0062	.0041J
Magnesium	ppm	6.74	6.31	4.8	5.6	5.4	5.6	5.7	5.06	4.12 B	4B	3.33	3.260 E	4.080 E	4.5	1.45	3.5	1.53	2.82	2.98	2.74	3.07
Manganese	ppm	0.966	1.04	0.8	1.4	1.4	1.3	1.7	1.46	1.51	1.21	1.53	1.9	1.75	2.13	0.86	1.84	0.266	3.65	2.93	5.92	4.69
Nickel	ppm	0.00659J	0.00601	<.01	<.05	<.05	<0.01	<.05	.040 U	.0108 B	.0056 B	.0017B	.0065B	.0105 E	.0013 E	.0235 J			<.04	<.040	.0031 J	<.040
Potassium	ppm	9.22	10.7	9.4	8.7	9	11	12	8.13	6.15	7.6	5.79	6	7.95	5.94	4.710 J	6.4	<5	4.17	4.200J	4.5 J	4.490J
Selenium	ppm	<0.025	0.0250	<.01	<.05	<.05	<0.01	<.01	.005 U	<.0023	.0026 B	<.0014	<.0038	<.0027	.0042 E	<.01			<.01	<.010	<.01	<.010
Silver	ppm	<0.02	0.0200	<.005	<.025	<.025	<0.005	<.025	.010 U	<0002	<.00043	.0037B	<.0022	<.0008	<.0005	<.01			0.0098	<.010	<.01	<.010
Sodium	ppm	8.5	18.5	30	20	24	18	15	13.7	8.53	9.44	8.76	9.12	21.7	19.6	**57.4**	23.9	**54**	8.41	11.5	13.1	15.9
Thallium	ppm	<0.015	0.0150	<.005	<.025	<.025	<0.005	<.025	.010 U	.0061 B	<.0013	<.0035	<.0038	.0016 E	.0079 E	<.01			0.0079	<.010	.006 J	.0064J
Vanadium	ppm	<0.02	0.0200	<.005	<.025	<.025	<0.005	<.025	.050 U	.0073 B	.0007 B	.0008B	<.0007	<.0003	.0081 E	<.05			<.05	<.050	<.05	<.050
Zinc	ppm	0.0251	0.0430	0.12	<.05	0.09	0.03	<.05	.020 U	0.148	0.0494	.0067B	0.034	0.04	.0054 E	0.078			0.0597	0.143	0.268	0.126
TDS	ppm	293	253	230	260	240	140	250	212	163		148	291	171	208	182			132	130	121	259
TKN	ppm	1.39	1.21	1.4	1.2	1.2	1.4	1.2	0.84	1.83		1.64	0.63	1.32	0.74	0.69			<.1	0.56	0.47	2.1
BOD	ppm	<3	2.0	<3		<2	<3	7.9	2 U	<2	<2	<2	<4	2	<4	<2	<4	<4	1.5	<2	<4	5.6

Analyte		June_09	Dec_09	Jun_10	Dec_10	Jun_11	DEC_11	Jun_12	Dec_12	Jun_13	Dec_13	Jun_14	Dec_14	Jun_15	Dec_15	Jun_16	Dec_16	Jun_17	Dec_17	Aug_18	Dec_18	June_19
TOC	ppm	1.2	5.1	4.9	<.5	1.4	<.5	<40	1 U	1.2	20.7	1.6	15.8	2.2	1.73	4.75	<1	<1	0.88	1.1	2.3	12.5

Analyte		June_09	Dec_09	Jun_10	Dec_10	Jun_11	DEC_11	Jun_12	Dec_12	Jun_13	Dec_13	Jun_14	Dec_14	Jun_15	Dec_15	Jun_16	Dec_16	Jun_17	Dec_17	Aug_18	Dec_18	June_19
DO							0.46	0.85	0.53	0.92	3.65	0.78	1.12	3.77	0.56	2.17		1.86	1.2	2.75	4.38	4.39
Turbidity							170	380	37 D	54	20	84	69	47	240	140				351	58.5	18.4
Eh								-100	-124	113.5	12.5	-128.8	-109.9		-63.4							
1,4 dioxane	ug/l																			<.19	0.22	0.087
perfluorobutanoic acid PFBA	ng/l																			6.7	6.8	ND
perfluoropentanoic acid PFPeA	ng/l																			10	9.8	ND
perfluorohexanoic acid PFHxA	ng/l																			7.7	7.3	6.8
perfluoroheptanoic acid PFHpA	ng/l																			6.3	7.1	5.1
perfluorooctanoic acid PFOA	ng/l																			12	14	8.8
perfluorononanoic acid PFNA	ng/l																			13	13	5.2
perfluorodecanoic acid PFDA	ng/l																			0.7	0.9	ND
perfluoroundecanoic acid PFUnA	ng/l																			ND	ND	ND
perfluorododecanoic acid PFDoA	ng/l																			ND	ND	ND
perfluorotridecanoic acid PFTriA	ng/l																			ND	ND	ND
perfluorotetradecanoic acid PFTeA	ng/l																			ND	0.33	ND
perfluorobutanesulfonic acid PFBS	ng/l																			1.5	1.6	ND
Perfluorohexanesulfonic acid PFHxS	ng/l																			2.5	2.7	ND
perfluoroheptanesulfonic acid PFHpS	ng/l																			0.31	ND	ND
perfluorooctanesulfonic acid PFOS	ng/l																			8.7	8.3	
perfluorodecanesulfonic acid PFDS	ng/l																			ND	ND	ND
perfluorooctane Sulfonamide FOSA	ng/l																			ND	ND	ND
n-methyl perfluorooctanesulfonamidoacetic acid NMeFOSAA	ng/l																			ND	ND	ND
n-ethyl perfluorooctane sulfonamidoacetic acid NEtFOSAA	ng/l																			ND	ND	ND
6:2 FTS	ng/l																			ND	ND	ND
8:2 FTS	ng/l																			ND	ND	ND
total PFOA/PFAS																				69.41	72.05	25.987

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Analyte	Units	Jan_91	Apr_91	2001	Jan_03	Aug_03	Mar_04	Sept_04	Mar_05	Sept_05	apr_06	Oct_06	May_07	Oct_07	May_08	Oct_08
Well_Depth	feet	87	87	87	87	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6		86.6	86.6
Chloride	mg_l	26	22	NS	40	5	18	14	11	11	12	12	11	9.5	9.5	7.5
TKN	mg_l	0.8	0.4	NS	3.21	<.35	1.61	<.5	2.82	<.5	<.05	<.5	<.5	.217J	<.4	<.4
Alkalinity	mg_l	36	18	NS	4	20	18.2	12.1	14.1	14.1	15.2	11.1	17.2	25.2	14.1	14.1
TDS	mg_l	99	120	NS	116	116	130	88	94	120	116	86	86	88	104	116
Spec_Cond	umhos_cr	195	155	NS	135	145	97.5	75	133	162	155	150	110	166	128	151
Hardness	ppm	58	70	NS	46.9	41.8	54.5	52.6	58.1	56.6	50.4		57.4	58.5	55	55.3
Aluminum	ppm	.12 B	<.1	NS	0.018	0.16	0.0281	<.02	.0104 J	.0142 J	0.0577	0.0802	0.0103	<.02	.0144J	.0115J
Mercury	ppm	<.0002	<.0002	NS	<.00002	<.00002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002		<.0002
Antimony	ppm	<.06	<.06	NS	<.0065	0.0032	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025
Arsenic	ppm	<.0022	<.0022	NS	<.0097	<.0034	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025
Barium	ppm	.02 BJ	.017 B	NS	0.012	0.019	0.025	0.024	0.0226	0.0207	.016J	0.0311	0.0273	0.032	0.0321	0.0345
Berylium	ppm	<.001	<.001	NS	<.0002	0.0003	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Cadmium	ppm	.0047 B	<.005	NS	<.0007	0.0004	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
Calcium	ppm	12.7	11.4	NS	9.4	8.33	10.5	10.6	10.8	11.3	10.2	9.77	11.6	12	11.8	11.4
Chromium	ppm	<.006	<.006	NS	<.001	0.0021	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Cobalt	ppm	<.006	<.006	NS	<.0006	0.0004	<.02	<.02	<.02	<.02	<.02	0.168	<.02	<.02	<.02	<.02
Copper	ppm	<.0027	.004 B	NS	<.0031	<.0029	<.02	<.02	<.02	<.02	<.02	.00691J	<.02	<.02	.00536J	.0061J
Iron	ppm	0.479	<.176 J	NS	0.084	0.21	0.019J	0.063	<.02	0.0254	0.0385	0.0952	0.0144	0.0209	0.0256	0.0264
Lead	ppm	<.0026	.0022 B	NS	<.0024	0.0029	<.015	<.015	<.015	<.015	<.015	0.0964	<.015	<.015	<.015	<.015
Magnesium	ppm	6.29	5.87	NS	5.7	5.1	6.9	6.36	6.62	6.91	6.1	5.86	6.69	6.95	6.2	6.53
Manganese	ppm	0.0257	0.0174	NS	0.0031	0.013	.019J	<.02	<.02	<.02	.00495J	.0062J	<.02	<.02	<.02	<.02
Nickel	ppm	<.013	<.009	NS	<.0017	0.001	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Potassium	ppm	.834 B	.975 B	NS	0.92	1	1.14	0.904	0.822	0.798	0.87	1	1.08	1.19	1.32	1.11
Selenium	ppm	<.0011	<.0022	NS	<.0034	<.0043	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025
Silver	ppm	<.003	<.003	NS	<.0003	<.001	<.025	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Sodium	ppm	13.8	11.8	NS	6.25	9.26	8.58	6.65	6.21	5.55	6.42	8.33	7.01	2.49	4.04	3.78
Thalium	ppm	<.0022	<.0033	NS	<.00044	0.0076	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015
Vanadium	ppm	<.004	<.005	NS	<.0004	<.0005	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Zinc	ppm	<.0066	.0077 B	NS	<.0058	0.015	0.011	0.022	.0084 J	<.02	.00714J	0.261	0.0186	0.0222	0.0658	0.0402
Bromide	mg_l			NS	2.1	<1	1.56	<.1	.669 J	0.12	<.1	<.1	0.25	<.1	<.5	<2
Ammonia	ppm	<.05	<.05	NS	1.86	<.11	0.114	<.05	<.05	<.05	.0407J	0.0804	0.035	<.05	<.05	<.05
BOD	mg_l	<3	<3	NS	<2.41	<2.41	<2.41	36.6	<2.41	<2.41	5.58	<2	<2.41	63.9	<2.41	<2
COD	ppm	<40	<40	NS	<4.8	28.6	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nitrate	ppm	3.2	4.8	NS	4.04	4.06	3.5	3.77	1.81	<.1	0.397	5.63	5.23	5.5	5.81	5.07
Phenols	ppm	<.001	<.001	NS	0.011	0.011	0.21	<.001	0.0044	<.01	<.01	0.0919	0.0337	0.0419	<.01	0.0568
Sulfate	ppm	27	26	NS	20	28	33	20.4	21.8	22.7	19.4	31.2	20.3	12.2	19.3	21.3
TDS	mg_l	99	120	NS	116	116	130	88	94	120	116	86	86	88	104	116
TOC	ppm			NS	<.51	12.8	4.4	<1	<1	<1	<1	<1	<1	6.6	<1	<1

		June_09	Dec_09	Jun_10	Dec_10	Jun_11	DEC_11	Jun_12	Dec_12	Jun_13	Dec_13	Jun_14	Dec_14	Jun_15	Dec_15	Jun_16	Dec_16	Jun_17	Dec_17	Aug_18	Dec_18
Well_Depth	feet	86.6	86.6								mar_14										
Chloride	mg_l	10.5	14.5	12	12	14	11	18	10.9	11.4	39.6	44.8	40.5	26.3	25.8	25.8	24.6	19.1	17.9	16.3	24.3
TKN	mg_l	<.4	0.400	0.6	0.4	0.8	0.6	0.2	.1 U	<.1	<.1	<.1	<.1	0.32	<.1	<.1	<.1	<0.10	<.1	0.12	<.1
Alkalinity	mg_l	15.2	17.7	20	20	16	18	20	11.5	12.9	11	10.8	11.4	12.4	11.2	13.2	12.4	12.8	9.8	10.5	10.5
TDS	mg_l	120	167	120	130	140	110	140	105	150	157	162	140	130	188	116	123	109	101	112	96
Spec_Cond	umhos_cr	100	414	120	120	170	180	200	311	169	157	174	204	150	228	209	195	206	193	226	2300
pH			7.01	6.88	5.6	**4.09/6.4**	6.85	5.42f/6.2l	5.51	5.09	5.43	5.45	5.82	5.2	5.62	3.51	5.61	5.28	6.07	6.51	7.38
Ammonia as N	ppm	<0.05	0.0500	<.2	<.2	0.4	<.2	<.2	.1 U	<.1	<.1	<.1	<.1	<.1	<.1	<.1	0.11	<0.10	0.053	0.051	<.1
Bromide	ppm	<2	2.00	<.5	<.5	<.5	<.5	<.5	.5 U	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<0.50	0.07	0.03	.098 J
COD	ppm	<10	10.0	<40	<40	<40	<40	<40	10 U	<10	4.9	<10	<10	<10	10.4	<10	15.1	<10.0	11.4	<10	16.2
Chloride	ppm	10.5	14.5	12	12	14	11	18	10.9	11.4	39.6	44.8	40.5	26.3	25.8	25.8	24.6	19.1	17.9	16.3	24.3
Hardness	ppm	46.8	78.4	52	54	48	57		60	58	60	68	110	60	48	70	60	56	42	44	50
Mercury	ppm	0.0007	0.000200	<.00025	<.00025	<.00025	<.0002	<.0002	.0002 U	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0002			<.0002	<.0002	<.0002
Nitrate	ppm	4.71	4.40	4.1	3.4	3.54	3.9	3.4	4.51 D	4.68	3.23	3.22	3.17	4.59	4.16	4.36	3.9	3.5 D	3.1	2.4	2.5
Phenolics	ppm	0.0382	0.0682	<.001	<.001	<.001	0.003	<.001	.005 U	<.0005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0043	.0038 J
Sulfate	ppm	23.2	22.8	22	23	30	31	37	36.8	31.1	19.5	20.4	19.4	35.8	35.5	36.3	34.2	34	38	37.2	45.4
Aluminum	ppm	0.0826	0.0180	0.68	<.05	0.19	0.16	<.05	.200 U	0.212	0.0315	.0619B	.0697B	.116 B	0.271	.0808 J			0.0262	.0703J	0.0856
Antimony	ppm	<0.025	0.0250	<.005	<.025	<.025	<0.005	<.025	.060 U	.0022 B	<.0019	<.0016	<.003	<.0023	<.0006	<.060			<.06	<.060	<.06
Arsenic	ppm	<0.025	0.0250	<.005	<.025	<.025	<0.005	<.025	.010 U	<.0028	<.0011	<.0015	<.0033	<.0013	<.0022	<.010			<.01	<.010	<.01
Barium	ppm	0.0446	0.0736	0.023	<.025	<.025	0.022	0.025	.200 U	<.0232 B	.031 B	.0341B	.0318B	.0306 B	.0312 B	.0307 J			0.0264	.0228J	0.0229
Beryllium	ppm	<0.02	0.0200	<.001	<.005	<.005	<0.001	<.005	.005 U	<.0001	<.00014	<.000091	<.0001	.0002 B	<.0002	<.005			<.005	<.005	<.005
Boron									.100 U										0.0214		
Cadmium	ppm	<0.01	0.0100	<.005	<.025	<.025	<0.005	<.025	.005 U	<.0001	<.00011	<.00014	<.0002	<.00016	.0001 B	<.0025	<.0025	<0.0025	<.0025	<.0025	<.0025
Calcium	ppm	9.59	20.3	11	11	12	12	14	13.1	12.3	14.6	15.3	15.3	13.9	12.9	13.3	13.1	12.2	11.3	10.5	10.7
Chromium	ppm	0.00537J	0.0200	<.005	<.025	<.025	<0.005	<.025	.010 U	.0023 B	.0034 B	.001B	.003 B	.0042 B	.0096 B	<.010			<.01	<.010	<.01
Cobalt	ppm	<0.02	0.0200	<.005	<.005	<.025	<0.005	<.025	.050 U	<.0004	<.00019	<.00016	<.0006	<.00025	.0002 B	<.050			<.05	<.050	<.05
Copper	ppm	0.00945J	0.00744	<.01	<.05	<.05	<0.01	<.05	.025 U	.0012 B	.005 B	.0008B	.0007B	.00060 E	.0012 B	.0005 J			<.025	<.025	<.025
Iron	ppm	0.179	0.0582	0.71	0.12	0.47	0.22	0.09	0.111	0.253	.0351 B	.0616B	.0681B	0.223	0.445	0.149	<.1	0.23	0.0454	0.0672	0.1
Lead	ppm	<0.015	0.0150	<.005	<.025	<.025	<0.005	<.025	0.006	0.0111	0.0115	0.0152	.0023B	0.01	.0031 B	.0025 J	<.005	<.005	<.005	<.005	.0019 J
Magnesium	ppm	5.54	6.73	5.8	6.4	6.8	6.7	7.3	7	6.55	8	8.39	8.3	7.55	7.78	7.04	7.38	6.53	6.22	5.91	5.66
Manganese	ppm	0.00962J	0.00725	0.05	<.05	<.05	0.02	<.05	.015 U	0.0312	0.0063	.0059B	.008B	.0125 B	0.0151	.0099 J	<.01	0.0168	0.0056	.0038J	.0034 J
Nickel	ppm	<0.02	0.0200	<.01	<.05	<.05	<0.01	<.05	.040 U	.0016 B	.0013 B	.0004B	.0009 B	.0018 B	.0015 B	<.040			<.04	<.0400	<.04
Potassium	ppm	0.815	4.43	1.3	<5	<5	1.2	<5	5.000 U	1.06 B	2.17 B	1.5B	1.230 B	2.660 B	<.210 U	.920 J	<5	<5	1.22	1.530J	1.81
Selenium	ppm	<0.025	0.0250	<.01	<.05	<.05	<0.01	<.1	.005 U	<.0023	<.0011	.0016B	<.0038	<.0027	<.0022	<.010			<.01	<.010	<.01
Silver	ppm	<0.02	0.0200	<.005	<.025	<.025	<0.005	<.025	.01U	<.0002	<.00043	<.00037	<.0022	<.00087	<.0005	<.010			<.01	<.010	<.01
Sodium	ppm	3.82	10.6	7.5	6.6	8.2	7.6	13	7.64	7.25	12.2	11.6	11.9	12.9	18.3	13.6	11.3	12.3	14.1	13.4	11.2
Thallium	ppm	<0.015	0.0150	<.005	<.025	<.025	<0.005	<.025	.010 U	<.0019	<.0013	<.0035	<.0038	<.001	.002 B	<.010			<.01	<.010	<.01
Vanadium	ppm	<0.02	0.0200	<.005	<.025	<.025	<0.005	<.025	.050 U	.0004 B	.0004 B	.0007B	<.0007	<.00036	<.0028	<.050			<.05	0.00084J	<.05
Zinc	ppm	0.0334	0.0448	**0.11**	<.05	<.05	0.04	<.05	.020 U	.0189 B	.0144 B	.0061B	.0106B	0.0316	.0192 B	.0122 J			0.0031	.0128J	.0137 J
TDS	ppm	120	167	120	130	140	110	140	105	150		162	140	130	188	116		109	101	112	96
TKN	ppm	<0.4	0.400	0.6	0.4	0.8	0.6	0.2	.1 U	<.1		<.1	<.1	0.32	<.1	<.1		<.1	<.1	0.12	<.1
BOD	ppm	<3	2.0	<2		<2	<2	3.3	2 U	<2	<2	<2	<2	<2	<2	<2	<2	<2	1	<2	<2

		June_09	Dec_09	Jun_10	Dec_10	Jun_11	DEC_11	Jun_12	Dec_12	Jun_13	Dec_13	Jun_14	Dec_14	Jun_15	Dec_15	Jun_16	Dec_16	Jun_17	Dec_17	Aug_18	Dec_18
TOC	ppm	<0.5	0.5	2.1	<.5	<.5	<.5	<.5	1 U	<1	4.9	<1	3.3	0.5	1.22	<1	<1	<1	0.46	1.3	2.1

		June_09	Dec_09	Jun_10	Dec_10	Jun_11	DEC_11	Jun_12	Dec_12	Jun_13	Dec_13	Jun_14	Dec_14	Jun_15	Dec_15	Jun_16	Dec_16	Jun_17	Dec_17	Aug_18	Dec_18
DO							1.9	0.92	2.99	2.11	2.85	2.58	2.7	4.51	3.26	4.7	2.74	6.34	2.49	4.09	6.35
Turbidity							3.7	2	1.2	1.9	<1	<1	<1	<1	2.6	1.6				1.4	1.2
Eh								130	76.2	81.6	101.1	178.5	204		12.6		195				
1,4 dioxane	ug/l																			<.19	0.16
perfluorobutanoic acid PFBA	ng/l																			6	6.5
perfluoropentanoic acid PFPeA	ng/l																			7.9	7.5
perfluorohexanoic acid PFHxA	ng/l																			7.3	7.5
perfluoroheptanoic acid PFHpA	ng/l																			6.3	6.7
perfluorooctanoic acid PFOA	ng/l																			15	16
perfluorononanoic acid PFNA	ng/l																			2.2	3
perfluorodecanoic acid PFDA	ng/l																			1.2J	1.3
perfluoroundecanoic acid PFUnA	ng/l																			ND	ND
perfluorododecanoic acid PFDoA	ng/l																			ND	ND
perfluorotridecanoic acid PFTriA	ng/l																			ND	ND
perfluorotetradecanoic acid PFTeA	ng/l																			ND	ND
perfluorobutanesulfonic acid PFBS	ng/l																			1.6J	1.8 J
Perfluorohexanesulfonic acid PFHxS	ng/l																			2.6	2.4
perfluoroheptanesulfonic acid PFHpS	ng/l																			0.25	ND
perfluorooctanesulfonic acid PFOS	ng/l																			9.6	8.1
perfluorodecanesulfonic acid PFDS	ng/l																			ND	ND
perfluorooctane Sulfonamide FOSA	ng/l																			ND	ND
n-methyl perfluorooctanesulfonamidoacetic acid NMeFOSAA	ng/l																			ND	ND
n-ethyl perfluorooctane sulfonamidoacetic acid NEtFOSAA	ng/l																			ND	ND
6:2 FTS	ng/l																			ND	ND
8:2 FTS	ng/l																			ND	ND
total PFOA/PFAS																				57.15	59.16

	June_19
Well_Depth	
Chloride	23.7
TKN	1.7
Alkalinity	26.7
TDS	118
Spec_Cond	2340
pH	7.23
Ammonia as N	0.87
Bromide	1.1
COD	30
Chloride	23.7
Hardness	40
Mercury	<.0002
Nitrate	0.028
Phenolics	<.01
Sulfate	36.2
Aluminum	<.200
Antimony	<.060
Arsenic	<.010
Barium	.256J
Beryllium	<.005
Boron	
Cadmium	<.0025
Calcium	12.1
Chromium	<.010
Cobalt	<.050
Copper	<.025
Iron	0.249
Lead	.0031J
Magnesium	6.44
Manganese	0.0265
Nickel	<.040
Potassium	<5.000
Selenium	<.010
Silver	<.010
Sodium	11.5
Thallium	.0041J
Vanadium	<.050
Zinc	.0189J
TDS	118
TKN	1.7
BOD	1

TOC 10

	June_19
DO	2.05
Turbidity	1.2
Eh	
1,4 dioxane	0.077
perfluorobutanoic acid PFBA	5.9
perfluoropentanoic acid PFPeA	6.4
perfluorohexanoic acid PFHxA	5.4
perfluoroheptanoic acid PFHpA	3.4
perfluorooctanoic acid PFOA	6.9
perfluorononanoic acid PFNA	0.82
perfluorodecanoic acid PFDA	ND
perfluoroundecanoic acid PFUnA	ND
perfluorododecanoic acid PFDoA	ND
perfluorotridecanoic acid PFTriA	ND
perfluorotetradecanoic acid PFTeA	ND
perfluorobutanesulfonic acid PFBS	0.66
Perfluorohexanesulfonic acid PFHxS	0.57
perfluoroheptanesulfonic acid PFHpS	ND
perfluorooctanesulfonic acid PFOS	2
perfluorodecanesulfonic acid PFDS	ND
perfluorooctane Sulfonamide FOSA	ND
n-methyl perfluorooctanesulfonamidoacetic acid NMeFOSAA	ND
n-ethyl perfluorooctane sulfonamidoacetic acid NEtFOSAA	ND
6:2 FTS	31
8:2 FTS	ND
total PFOA/PFAS	63.127

GM-18

Analyte	Units	Jan_91	Apr_91	Apr-91	2001	Jan_03	Aug_03	Mar_04	Sept_04	Mar_05	Sept_05	Apr_06	Oct_06	May_07	Oct_07	May_08	Oct_08
Well_Depth	feet	54	54	87	87	87	87.4	87.4	87.4	87.4	87.4	87.4	87.4	87.4		87.4	87.4
Chloride	mg_l	120	140	140	88.7	135	99	140	61	56	65	19.3	75	70	70	68	39.5
TKN	mg_l	3.2	3.6	9	1.2	4.36	8.01	3.16	2.15	3.65	3.54	2.34	1.15	0.652	0.701	0.818	0.443
Alkalinity	mg_l	128	160	100	84.2	120	120	109	105	104	98	123	106	84.8	108	125	110
TDS	mg_l	390	470	390	350	428	505	320	290	270	300	408	318	394	322	292	360
Spec_Cond	umhos_cr	480	650	555	564	290	250	152.5	140	415	480	465	510	425	568	468	475
Hardness	ppm	140	28	105	NS	140	142	136	130	138	145	170		156	158	151	152
Aluminum	ppm	<..5	0.264	.125 B	NS	0.031	0.023	0.0208	0.161	.0148 J	.0149 J	0.0339	0.0639	0.039	0.0434	0.0209	.0169J
Mercury	ppm	<.0002	0.0012	0.0013	NS	<.00002	<.00003	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002		<.0002
Antimony	ppm	<.06	<.04	<mdl	NS	<.0065	0.0078	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025
Arsenic	ppm	<.0022	<.0022	<mdl	NS	0.01	0.02	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025
Barium	ppm	.056 B	.056 B	.052 B	NS	0.053	0.057	0.0868	0.083	0.0705	0.0776	0.0732	0.106	0.107	0.114	0.119	0.112
Berylium	ppm	<.001	<.001	<mdl	NS	<.0002	0.0003	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Cadmium	ppm	<.003	<.005	0.0047	NS	<.0007	<.0007	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
Calcium	ppm	36.5	48.5	29.2	NS	49.5	50.4	47.6	46.2	45.8	51.1	59.6	44.5	53.8	54	51.7	52.3
Chromium	ppm	.0063 B	<.006	<mdl	NS	<.001	0.0027	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Cobalt	ppm	.0065 B	<.006	.0075 B	NS	<.0006	0.0035	<.02	<.02	<.02	<.02	<.02	0.163	<.02	<.02	<.02	<.02
Copper	ppm	<.002 J	<.0064	<mdl	NS	<.0031	<.0031	<	<.02	<.02	<.02	<.02	.00743J	<.02	<.02	0.00499	.0083J
Iron	ppm	<.035	<.319 J	.17 J	NS	0.065	0.021	0.02	0.079	<.02	.0181 J	0.0265	0.0583	0.0134	0.035	0.0228	0.047
Lead	ppm	<.0018	<.0022	0.01	NS	<.0024	<.0024	<.015	<.015	<.015	<.015	<.015	0.0909	<.015	<.015	<.015	<.015
Magnesium	ppm	5.15	7.17	5.3	NS	3.99	3.84	4.28	3.69	3.64	4.15	5.26	4.3	5.15	5.7	5.31	5.24
Manganese	ppm	7.59 J	12.6	4.2 J	NS	3.42	3.38	3.28	3.05	2.71	2.91	3.3	2.47	3.23	3.69	3.84	4.22
Nickel	ppm	<.013	<.009	<mdl	NS	<.0017	0.0028	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Potassium	ppm	6.37	6.61	11	NS	49.5	32	54.5	41.4	38.8	42.6	34.2	24.6	27.2	29.7	28	26.4
Selenium	ppm	<.0011	<.0022	<mdl	NS	<.0034	<.0034	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025	<.025
Silver	ppm	<.003	<.003	<mdl	NS	<.0003	0.0037	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Sodium	ppm	77.6	88	92	NS	35.6	34.5	33.6	25.6	22.1	26.2	31	26	23.3	7.9	11.8	12.3
Thalium	ppm	0.0023 B	<.0033	<mdl	NS	<.0044	<.0044	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015	<.015
Vanadium	ppm	<.004	.0058 B	<mdl	NS	<.0004	<.0004	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Zinc	ppm	.0072 B	.0165 B	.0099 B	NS	<.0058	0.01	.0097J	.009J	.00671 J	<.02	.00674J	0.252	0.0154	.0198J	.0181J	0.0291
Bromide	mg_l				NS	1.4	1.6	1.4	<.1	<.1	<.1	<.1	<.1	<.1	<.1	0.82	<2
Ammonia	ppm	2.7	3.4	8.8	NS	3.83	1.96	2.49	2.04	1.82	1.7	1.45	1.28	0.677	0.616	0.498	0.341
BOD	mg_l	3	9	5	NS	<2.41	21.6	<2.41	10.3	<2.41	<2.41	<2.41	<2	<2.41	62.3	<2.41	<2
COD	ppm	<40	<40	<mdl	NS	<4.8	17.4	<10	12.4	<10	<10	<10	<10	<10	<10	<10	<10
Nitrate	ppm	<.5	<.5	<mdl	NS	0.038	<.025	<.1	<.1	.017 J	0.13	0.258	0.791	0.544	0.3	<.1	<.1
Phenols	ppm	<.001	<.001	<mdl	NS	0.01	<.011	0.101	<.001	0.00487	<.01	<.01	0.0172	0.0217	0.034	<.01	0.0455
Sulfate	ppm	41	40	46	NS	53.1	83.9	92.1	52.4	51	47.9	41.7	24.5	34.8	37.9	38.5	20.8
TDS	mg_l	390	470	390	NS	428	505	320	290	270	300	408	318	394	322	292	360
TOC	ppm				NS	5.53	22.1	24.4	2.82	2.59	2	4.1	1.9	1.6	15	1.3	2.1

		June_09	Dec_09	Jun_10	Dec_10	Jun_11	DEC_11	Jun_12	Dec_12	Jun_13	Dec_13	Jun_14	Dec_14	Jun_15	Dec_15	Jun_16	Jun_16X	Dec_16	Jun_17
Well_Depth	feet	87.4	87.4								mar_14								
Chloride	mg_l	**171**	21.0	63	64	100	80	58	60.9 D	79 D	105	78.5	105	119	118	184	182	163	87.2 D
TKN	mg_l	0.651	1.26	1.6	4.8	1.8	5.4	2.2	1.14	0.68	1.62	0.81	2.45	1.29	0.59	1.39	1.56	1.3	0.51
Alkalinity	mg_l	109	116	120	130	140	140	120	112 D	85.6 D	116	104	114	88.2	98.3	99.6	97.6	114	100
TDS	mg_l	644	649	300	310	410	270	340	302	394	402	325	370	372	433	548	532	509	304
Spec_Cond	umhos_cr	610	724	410	390	650	590	600	701	592	392	428	581	405	648	751		676	563
pH			7.29	7.01	7	6.45/7.0	7.25	6.68f/7.3l	6.82	6.53	7.07	6.95	7.12	6.55	7.1	4.51		6.72	6.94
Ammonia as N	ppm	0.409	0.559	1	4.4	1.4	5	1.6	0.82	0.32	0.99	0.46	2.42	0.67	0.58	1.09	1.02	1.2	0.34
Bromide	ppm	>2	2.00	<.5	5.5	<.5	0.67	<.5	.5 U	0.71	0.97	0.69	0.95	1.14	0.89	1.6	1.67	1.7	0.61
COD	ppm	>10	10.0	<40	<40	<40	50	40	13.4	11.8	10.2	15.3	14.6	11	<10	22.5	28.9	31.7	
Chloride	ppm	171	21.0	63	64	100	80	58	60.9 D	79 D	105	78.5	105	119	118	184	182	163	87.2 D
Hardness	ppm	204	238	140	130	170	140		188 D	180 D	180	180	650	190	176	250	124	240	132
Mercury	ppm	0.00098	0.000200	<.00025	<.00025	<.00025	<.0002	<.0002	.0002 U	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0002	<.0002		
Nitrate	ppm	>0.1	0.100	1	<.5	<.5	<.5	<.5	.1 U	0.5	0.68	0.25	<.1	0.39	0.89	0.18	0.12	0.14	2.6 D
Phenolics	ppm	0.0288	0.0100	<.001	<.001	<.001	<.001	<.0001	.005 U	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0093	<.005	<.005
Sulfate	ppm	13.8	19.1	16	21	33	26	47	61.3 D	54.1 D	24.5	43	33	37	36.5	33	33.7	31.4	14.8
Aluminum	ppm	0.0662	0.0228	**1.1**	0.21	1.4	0.19	<.05	.200 U	.111 B	0.323	0.261	0.286	1.04	.0657 B	2.44	0.721		
Antimony	ppm	>0.025	0.0250	<.005	<.025	<.025	<0.005	<.025	.060 U	.0046 B	.0024 B	<.0016	<.003	<.0023	<.0006	<.060	<.060		
Arsenic	ppm	<0.025	0.0250	<.005	<.025	<.025	<0.005	<.025	0.016	<.0028	<.0011	<.0015	<.0033	<.0013	<.0022	<.010	<.010		
Barium	ppm	0.18	0.234	0.055	0.11	0.09	0.11	<.064	**9.62**	.0476 B	.0928 B	.0541B	0.112	.0763 E	.0562 B	.0871 J	.0771 J		
Beryllium	ppm	>0.02	0.0200	<.001	<.005	<.005	<0.001	<.005	.005 U	<.0001	<.00014	<.000091	<.0001	<.0001	<.0002	<.005	<.005		
Boron									1.87										
Cadmium	ppm	>0.01	0.0100	<.005	<.025	<.025	<0.005	<.025	.005 U	<.0001	.0012 B	<.00014	.0004B	.0002 E	.0001 B	.0002 J	<.0025	<.0025	<0.0025
Calcium	ppm	70.2	81.9	47	45	59	48	43	**15500 D**	60.7	68.6	62.7	65.5	68.8	69.8	91.5	88.6	87.8	44.3
Chromium	ppm	<0.02	0.0200	<.005	<.025	<.025	0.006	<.025	0.013	.0061 B	.005 B	.0018B	0.031	0.072	.0098 B	.0082 J	.004 J		
Cobalt	ppm	<0.02	0.0200	<.005	<.025	<.025	<0.005	<.025	.05 U	.0019 B	.001 B	.0017B	.0009B	.0063 E	.0017 B	.0035 J	.0024 J		
Copper	ppm	0.00548J	0.00517	<.01	<.05	<.05	<0.01	<.05	.025 U	.0008 B	.0112 B	.0034B	.0061B	.0068 E	.001 B	.0168 J	.0055 J		
Iron	ppm	0.081	0.0730	1.4	0.35	1.5	0.27	0.82	0.715	0.126	0.365	0.215	0.463	1.28	.0501 B	2.66	0.746	0.177	0.374
Lead	ppm	>0.015	0.0150	0.006	<.025	<25	<0.005	<.025	0.03	.0025 B	.0035 B	0.0073	0.003	0.004	<.0013	0.0172	0.0054	<.005	<.005
Magnesium	ppm	7.09	8.08	4.5	3.9	6.4	4	4.4	6.5	5.37	5.1	5.31	5.02	5.84	5.92	7.23	6.68	6.68	3.91
Manganese	ppm	6.96	10.2	0.65	3.8	<.05	6	5.8	1.52	3.52	3.16	4.01	4.19	4.96	4.38	5.88	5.64	4.66	0.574
Nickel	ppm	<0.02	0.0200	<.01	<.05	<.05	<0.01	<.05	.040 U	.0039 B	.0018 B	.001B	.0149 E	.0353 E	.0047 B	.0056 J	.0038 J		
Potassium	ppm	24.6	27.3	15	19	24	21	17	**7050 D**	13.8	15.8	14.2	15.8	16.9	16.9	17.5	16.9	19.3	20
Selenium	ppm	<0.025	0.0250	<.01	<.05	<.05	<0.01	0.1	0.009	0.0065	<.0011	<.0014	<.0038	<.0027	<.0022	<.010	<.010		
Silver	ppm	<0.02	0.0200	<.005	<.025	<.025	<0.005	<.025	.010 U	.00026 B	<.00043	.00051B	<.0022	<.0008	<.0005	<.010	<.010		
Sodium	ppm	14.3	24.1	29	30	39	38	29	**13200 D**	28.5	28.6	33.2	41.7	33.6	37.9	41.1	39.3	43	42.7
Thallium	ppm	<0.015	0.0150	<.005	<.025	<.025	<0.005	<.025	.010 U	0.0081	<.0013	0.0149	<.0038	<.001	0.0182	<.010	<.010		
Vanadium	ppm	<0.02	0.0200	<.005	<.025	<.025	<0.005	<.025	.050 U	<.0003	<.00039	.0003B	<.0007	.0016 E	<.0028	<.050	<.050		
Zinc	ppm	0.0418	0.0342	0.2	0.06	0.31	0.04	0.09	.020 U	0.0318	0.122	0.0639	0.028	0.174	.0067 B	0.366	0.126		
TDS	ppm	644	649	300	310	410	270	340	302	394		325	370	372	433	548			304
TKN	ppm	0.651	1.26	1.6	4.8	1.8	5.4	2.2	1.14	0.68		0.81	2.45	1.29	0.59	1.39			0.51
BOD	ppm	<2	2.0	3		<2	<2	9.2	2 U	<2	<2	<2	3	4	<2	<2		<.002	<2

		June_09	Dec_09	Jun_10	Dec_10	Jun_11	DEC_11	Jun_12	Dec_12	Jun_13	Dec_13	Jun_14	Dec_14	Jun_15	Dec_15	Jun_16	Jun_16X	Dec_16	Jun_17
TOC	ppm	1.5	0.78	6.9	2	4	1.3	<.5	2.5	2.7	33.5	3.1	30.3	2.89	1.95	2.2		2.6	2.5
DO							0.22	0.5	0.5	1.68	2.34	0.65	1.3	3.48	0.64	2		3.45	1.95
Turbidity (NTU)							3.8	3.9	1 U	1	<.001	<1	2.2	6.4	<1	8.1			
Eh								110	-39.9	90.6	32.8	30.4	136.9		-3.6			143.1	
1,4 dioxane	ug/l																		
perfluorobutanoic acid PFBA	ng/l																		
perfluoropentanoic acid PFPeA	ng/l																		
perfluorohexanoic acid PFHxA	ng/l																		
perfluoroheptanoic acid PFHpA	ng/l																		
perfluorooctanoic acid PFOA	ng/l																		
perfluorononanoic acid PFNA	ng/l																		
perfluorodecanoic acid PFDA	ng/l																		
perfluoroundecanoic acid PFUnA	ng/l																		
perfluorododecanoic acid PFDoA	ng/l																		
perfluorotridecanoic acid PFTriA	ng/l																		
perfluorotetradecanoic acid PFTeA	ng/l																		
perfluorobutanesulfonic acid PFBS	ng/l																		
Perfluorohexanesulfonic acid PFHxS	ng/l																		
perfluoroheptanesulfonic acid PFHpS	ng/l																		
perfluorooctanesulfonic acid PFOS	ng/l																		
perfluorodecanesulfonic acid PFDS	ng/l																		
perfluorooctane Sulfonamide FOSA	ng/l																		
n-methyl perfluorooctanesulfonamidoacetic acid NMeFOSAA	ng/l																		
n-ethyl perfluorooctane sulfonamidoacetic acid NEtFOSAA	ng/l																		
6:2 FTS	ng/l																		
8:2 FTS	ng/l																		
total PFOA/PFAS																			

	Dec_17	Aug_18	Dec_18	Jun_19
Well_Depth				
Chloride	95	96.5	135	172
TKN	5	4	2.9	3.1
Alkalinity	142	156	141	136
TDS	316	326	294	408
Spec_Cond	598	924	1061	1130
pH	6.93	7.21	7.78	7.47
Ammonia as N	4.1	3.5	1.7	2.5
Bromide	0.61	0.52	0.76	1.1
COD	24.1	25.7	20.3	16.8
Chloride	95	96.5	135	172
Hardness	140	107	150	140
Mercury	<.0002	<.0002	<.0002	<.0002
Nitrate	<.05	<.05	<.05	0.032
Phenolics	0.0011	0.0033	.0043 J	0.013
Sulfate	25.6	25.9	24.5	10.3
Aluminum	0.061	314	.166 J	.137J
Antimony	<.06	<.060	<.06	<.060
Arsenic	<.01	<.010	<.01	<.010
Barium	0.136	.147J	.13 J	.136J
Beryllium	<.005	<.005.0	<.005	<.005
Boron	0.0709			
Cadmium	<.0025	0.000085J	.00017 J	<.0025
Calcium	47.7	53.4	51.9	52.4
Chromium	<.01	.002J	.0018 J	<.010
Cobalt	<.05	.0012J	<.05	<.050
Copper	0.0035	.0049J	.0042 J	.0127J
Iron	0.081	0.345	0.179	0.213
Lead	0.0014	.0015J	<.005	<.005
Magnesium	4.29	5.19	4.72	4.67
Manganese	3.93	3.76	3.2	3.35
Nickel	0.0013	<.040	<.04	<.040.0
Potassium	25.4	25.9	25.8	25.4
Selenium	<.01	<.010	<.01	<.010.0
Silver	<.01	<.010	<.01	<.010.0
Sodium	50.6	46.7	51.5	67.3
Thallium	0.0099	<.010	.0043 J	.0091J
Vanadium	<.05	.001J	<.05	<.050
Zinc	0.0051	0.0515	.0118 J	0.0379
TDS	316	326	294	408
TKN	5	4	2.9	3.1
BOD	1	<2	<2	5.8

	Dec_17	Aug_18	Dec_18	Jun_19
TOC	3.3	3.2	2.9	4
DO	1	2.71	3.7	2.91
Turbidity (NTU)		9.3	2.8	1.6
Eh				
1,4 dioxane		<.19	0.19	.15 J
perfluorobutanoic acid PFBA		27	30	27
perfluoropentanoic acid PFPeA		70	62	29
perfluorohexanoic acid PFHxA		50	44	25
perfluoroheptanoic acid PFHpA		19	18	17
perfluorooctanoic acid PFOA		26	34	33
perfluorononanoic acid PFNA		5.1	6.1	10
perfluorodecanoic acid PFDA		1.3	1.7	3.6
perfluoroundecanoic acid PFUnA		1.6J	1.9	2.8
perfluorododecanoic acid PFDoA		ND	ND	ND
perfluorotridecanoic acid PFTriA		ND	ND	ND
perfluorotetradecanoic acid PFTeA		ND	ND	ND
perfluorobutanesulfonic acid PFBS		2.5	2.7	5.8
Perfluorohexanesulfonic acid PFHxS		6.3	7.3	11
perfluoroheptanesulfonic acid PFHpS		0.48	0.35	0.58
perfluorooctanesulfonic acid PFOS		22	24	31
perfluorodecanesulfonic acid PFDS		ND	ND	ND
perfluorooctane Sulfonamide FOSA		0.38	0.7	1.3
n-methyl perfluorooctanesulfonamidoacetic acid NMeFOSAA		ND	ND	ND
n-ethyl perfluorooctane sulfonamidoacetic acid NEtFOSAA		ND	ND	2.6
6:2 FTS		58	40	6.2
8:2 FTS		ND	ND	ND
total PFOA/PFAS		288.06	272.94	205.88

GM-19

Analyte	Units	Jan_91	Apr_91	May_07	Oct_07	May_08	Oct_08	June_09
Well Depth	feet	87.4	87.4	88.56		88.56	88.56	88.56
Chloride	mg/l	19	27	33	38	50.5	38.4	21.5
TKN	mg/l	0.8	0.6	<.5	.155J	<.4	<.4	<.4
Alkalinity	mg/l	14	14	10.1	10.1	10.6	10.1	10.1
TDS	mg/l	130	120	216	216	210	207	153
Spec. Cond.	umhos/cm	140	155	200	306	248	225	145
Hardness	ppm	88	64	70.2	70.9	79.3	74.1	
Aluminum	ppm	0.07	0.927	0.424	0.389	0.0476	.0196J	
Mercury	ppm	<.0002	0.0013	<.0002	<.0002		<.0002	
Antimony	ppm	<.06	<.04	<.025	<.025	<.025	<.025	
Arsenic	ppm	<.0022	<.0022	<.025	<.025	<.025	<.025	
Barium	ppm	0.027	0.031	0.0673	0.0637	0.0733	0.0706	
Berylium	ppm	<.001	<.001	<.02	<.02	<.02	<.02	
Cadmium	ppm	<.03	<.005	<.01	<.01	<.01	<.01	
Calcium	ppm	17.7	15.3	20.5	21	23.3	21.9	
Chromium	ppm	<.006	<.006	<.02	<.02	<.02	<.02	
Cobalt	ppm	<.006	<.006	<.02	<.02	<.02	<.02	
Copper	ppm	<.002	<.0071	<.02	<.02	.00424J	.0053J	
Iron	ppm	0.07	1.4	0.391	0.596	0.0571	0.0333	
Lead	ppm	<.0015	0.0032	<.015	<.015	<.015	<.015	
Magnesium	ppm	3.65	3.54	4.62	4.46	5.14	4.72	
Manganese	ppm	0.0038	0.0388	0.0145	<.02	.00615J	.0051J	
Nickel	ppm	<.013	<.009	<.02	<.02	<.02	<.02	
Potassium	ppm	1.48	1.69	3.07	2.76	3.51	3	
Selenium	ppm	<.0011	<.0022	<.025	<.025	<.025	<.025	
Silver	ppm	<.003	<.003	<.02	<.02	<.02	<.02	
Sodium	ppm	10.9	10.2	18.9	4.73	7.79	7.02	
Thalium	ppm	<.0022	<.0033	<.015	<.015	<.015	<.015	
Vanadium	ppm	<.004	<.005	<.02	<.02	<.02	<.02	
Zinc	ppm	0.0084	0.0043	0.0178	0.0587	.0179J	0.0415	
Bromide	mg/l			<.1	<.1	<.5	<2	
Ammonia	ppm	<.05	<.05	0.143	<.05	0.0648	<.05	
BOD	mg/l	<3	<3	12.6	57.4	<2.41	<2	
COD	ppm	<40	<40	<10	3.55J	<10	<10	
Nitrate	ppm	4.4	4.9	4.71	4.34	6.61	4.14	
Phenols	ppm	<.001	<.01	<.01	0.059	<.01	0.0812	
Sulfate	ppm	31	26	31	24.8	27.5	36.2	
TDS	mg/l			216	216	210	207	
TOC	ppm			<1	0.88	<1	<1	

		June_09	Dec_09	Jun-10	Dec_10	June_11	DEC_11	Jun_12	Dec_12	Jun_13	Dec_13	Jun_14	Dec_14	Jun_15	Dec_15	Jun_16	Dec_16	Jun_17	17-Dec
Well_Depth	feet	88.56	88.56																Not
Chloride	mg_l	21.5	19.0	17	18	26	27	26	17.4	17.7	16.6	20.8	20.4	23.7	27.6	32.3	36.1	41.7	sample
TKN	mg_l	<.4	0.400	0.6	0.4	0.4	<.2	0.2	.1 U	<.1	0.39	<.1	<.5	<.1	<.1	<.1	0.33	<0.10	
Alkalinity	mg_l	10.1	12.1	16	8	8	10	16	7.1	6.3	8.25	6.75	6.8	7.1	6.25	7.1	8.2	9.2	
TDS	mg_l	153	134	140	190	220	86	150	92	140		127	101	111	140	118	133	134	
Spec_Cond	umhos_cm	145	584	140	140	190	210	220	301	169	180	131	150	125	194	189	175	238	
pH			6.22	6.95	**5.6**	5.58	6.9	5.45f/6.0l	5.92	5.35	6.84	5.71	6.03	5.38	7.1	4.17	5.57	5.13	
Ammonia as N	ppm	<0.05	0.0500	<.2	<.2	<.2	<.2	<.2	0.11	<.1	0.1	<.1	<.1	<.1	<.1	0.24	<.1	<.1	
Bromide	ppm	<2	2.00	<.5	1.5	<.5	<.5	<.5	.5 U	<.5	.5U	<.5	<.5	<.5	<.5	<.5	<.5	<.5	
COD	ppm	<10	10.0	<40	40	<40	<40	<40	10 U	<10	10U	<10	<10	<10	<10	<10	17.2	<10	
Chloride	ppm	21.5	19.0	17	18	26	27	26	17.4	17.7		20.8	20.4	23.7	27.6	32.3	36.1	41.7	
Hardness	ppm	56.7	62.8	53	49	52	52		37	39	38D	36	44	52	41	40	50	60	
Mercury	ppm	0.0009	0.000200	<.00025	<.00025	<.0003	<.0002	<.0002	.0002 U	<.0001	.0001U	<.0001	<.0001	<.0001	<.0001	<.0002			
Nitrate	ppm	4.9	5.00	4.8	4.7	4.9	5.4	4.6	4.3 D	3.78 D	2.86	3.65	3.53	4.12	4.25	4.66	4.4	<.05	
Phenolics	ppm	>0.01	0.0100	<.001	<.001	<.001	<.001	<.001	.005 U	<.005	.005U	<.005	<.005	<.005	<.005	<.005	<.005	<.005	
Sulfate	ppm	35.7	2.00	12	25	28	27	30	27.6	29	27.2	25.6	21.3	21.7	20.5	21.7	20.4		
Aluminum	ppm	0.1	0.0139	**3.9**	0.13	0.44	0.25	<.05	.200 U	.093 B	.085B	68.4	.0266B	.0994 B	.0433 B	0.21			
Antimony	ppm	<0.025	0.0250	<.005	<.025	<.025	<0.005	<.025	.060 U	.0017 B	.0021U	.0018 B	<.003	.0025 B	<.0006	<.060			
Arsenic	ppm	<0.025	0.0250	<.005	<.025	<.025	<0.005	<.025	.010 U	<.0028	.001U	<.0015	<.0033	<.0013	<.0022	<.010			
Barium	ppm	0.0815	0.0844	0.057	0.032	0.035	0.033	0.032	.200 U	.0284 B	.0309B	.0319B	.0295B	.0312 B	.0342 B	.035 J			
Beryllium	ppm	<0.02	0.0200	<.001	<.005	<.005	<0.001	<.005	.005 U	<.0001	.00016U	<.000091	<.0001	<.00015	<.0002	<.005			
Boron									.100 U										
Cadmium	ppm	<0.01	0.0100	<.005	<.025	<.025	<0.005	<.025	.005 U	<.0001	.0003B	<.00014	<.0002	<.00016	<.0001	.0002 J	<.0025	<0.0025	
Calcium	ppm	16.6	18.6	15	14	15	15	15	12.4	12	13.2	12.9	13.7	14.8	15	16.7	17.5	18.4	
Chromium	ppm	0.00703J	0.0200	0.008	<.025	<.025	<0.005	<.025	.010 U	.0013 B	.0059B	.0009B	.0029 B	.0024 B	.0032 B	<.010			
Cobalt	ppm	<0.02	0.0200	<.005	<.025	<.025	<0.005	<.025	.050 U	.0009 B	.0008B	.0005B	<.0006	.0011 B	.0006 B	<.050			
Copper	ppm	0.00553J	0.00536	<.01	<.05	<.05	<0.01	<.05	.025 U	<.0004	.0147B	.0028B	.0005 B	0.0608	<.0005	.0056 J			
Iron	ppm	0.153	0.0386	4.6	0.28	0.7	0.29	0.27	0.17	0.115	0.112	.0747B	.0224 B	.0764 B	.0547 B	0.292	0.247	0.308	
Lead	ppm	<0.015	0.0150	<.005	<.025	<.025	<0.005	<.025	0.0045	0.0065	0.0093	0.0095	.0022 B	0.0068	.0014 B	.0024 J	<.005	<.005	
Magnesium	ppm	3.71	3.97	4	3.1	3.4	3.3	3.2	5.000 U	2.36 B	2.17B	2.4B	2.470 B	2.710 B	3.06	3.09	3.28	3.47	
Manganese	ppm	0.0119J	0.00881	0.12	<.05	<.05	<0.01	<.05	0.0169	.0064 B	.01B	.0046B	.0042 B	.0066 B	.0036 B	.0115 J	0.0295	<.01	
Nickel	ppm	0.00584J	0.0200	<.01	<.05	<.05	<0.01	<.05	.040 U	.0009 B	.0009B	<.00029	<.0006	0.0594	.0009 B	<.040			
Potassium	ppm	1.99	2.88	3.5	3	<5	2.9	<5	5.000 U	2.36 B	4.04B	2.76B	2.690 B	4.050 B	1.510 B	2.420 J	<5	<5	
Selenium	ppm	<0.025	0.0250	<.01	<.05	<.05	<0.01	<.1	.005 U	<.0023	.0017U	.002B	<.0038	<.0027	<.0022	<.010			
Silver	ppm	<0.02	0.0200	<.005	<.025	<.025	<0.005	<.025	.010 U	<.0002	.0016U	<.00037	<.0022	<.00087	<.0005	<.010			
Sodium	ppm	5.86	10.4	11	11	13	13	17	11.7	13.6	13	12.3	11.2	11.1	15	12.9	13.8	16.5	
Thallium	ppm	<0.015	0.0150	<.005	<.025	<.025	0.007	<.025	.010 U	<.0019	.00084U	<.0035	<.0038	<.0010	<.0019	<.010			
Vanadium	ppm	<0.02	0.0200	0.008	<.025	<.025	<0.005	<.025	.050 U	<.0003	.00027U	.0008B	<.00007	<.00036	<.0028	<.050			
Zinc	ppm	0.0326	0.0325	0.03	<.05	<.05	0.01	<.05	.020 U	.0079 B	0.0495	.0053B	.0116 B	.0167 B	.0031 B	0.0375			
TDS	ppm	153	134	140	190		86	150	92	140	105	127	101	111	140	118			134
TKN	ppm	<0.4	0.400	0.6	0.4	0.4	<.2	0.2	.1 U	<.1	0.39	<.1	<.5	<.1	<.1	<.1		<.1	
BOD	ppm	<2	2.0	<2		<2	<2	4.5	2 U	<2	3	<2	<2	<2	<2	<2	<2	<2	
TOC	ppm	<0.5	0.05	4.2	<.5	<.5	<.5	<.5	1 U	<1	1.9	<1	2.3	<1	<.5	<1	1.9		1.4
DO								5.2	6.5	7.46	8.15	9.1	1.29	7.71	10.11	7.26	7.39	8.47	6.8
Turbidity								5.2	4	2	1.5	1.7	<1	<1	<1	<.1	4.3		
Eh									120	-26.7	181.7	114.9	130.8	143.8		64.6		249.1	
1,4 dioxane	ug/l																		
perfluorobutanoic acid PFBA	ng/l																		
perfluoropentanoic acid PFPeA	ng/l																		
perfluorohexanoic acid PFHxA	ng/l																		
perfluoroheptanoic acid PFHpA	ng/l																		

	Aug_18	Dec_18	June_19
Well_Depth			
Chloride	48.6	136	107
TKN	<.1	<.1	0.91
Alkalinity	6.2	5.5	6.2
TDS	171	244	324
Spec_Cond	914	1580	1420
pH	6.11	6.52	6.13
Ammonia as N	0.06	2	0.065
Bromide	0.21	0.79	1.3
COD	<10	24.4	12.4
Chloride	48.6	136	107
Hardness	54	100	80
Mercury	<.0002	<.0002	<.0002
Nitrate	3.3	2.7	3.2
Phenolics	0.0033	.0038 J	<.01
Sulfate	23.3	25.3	26.9
Aluminum	0.209	.0944 J	0.22
Antimony	<.060	<.06	<.060
Arsenic	<.010	<.01	<.010
Barium	.0407J	.0827 J	.0761J
Beryllium	<.005	<.005	<.005
Boron			
Cadmium	0.00032J	.00025 J	<.0025
Calcium	18.6	31.9	30.1
Chromium	<.010	<.01	<.010
Cobalt	0.00076J	<.05	<.050
Copper	<.025	<.025	<.025
Iron	0.242	0.0832	0.248
Lead	<.005	.0014 J	<.005
Magnesium	3.76	6.11	4.49
Manganese	.0091J	.0064 J	0.0125
Nickel	<.040	.0018 J	<.040
Potassium	3.660J	5.61	5.37
Selenium	<.010	<.01	<.010
Silver	<.010	<.01	<.010
Sodium	17.4	32.2	32.6
Thallium	<.010	<.01	.0039J
Vanadium	<.050	<.05	<.050
Zinc	0.0295	.0078 J	.0130J
TDS	171	244	324
TKN	<01	<.1	0.91
BOD	<2	<2	1.7
TOC	0.52	5.8	2.6
DO	4.16	4.64	4.57
Turbidity	1.9	<1	2
Eh			
1,4 dioxane	0.16	0.14	0.16
perfluorobutanoic acid PFBA	7.1	11 B	8.3
perfluoropentanoic acid PFPeA	11	30	15
perfluorohexanoic acid PFHxA	13	23	14
perfluoroheptanoic acid PFHpA	11	14	12

	Aug_18	Dec_18	June_19
perfluorooctanoic acid PFOA	64	48	61
perfluorononanoic acid PFNA	3.5	3.9	4.1
perfluorodecanoic acid PFDA	1.3	1.3	1.2
perfluoroundecanoic acid PFUnA	ND	ND	ND
perfluorododecanoic acid PFDoA	ND	ND	ND
perfluorotridecanoic acid PFTriA	ND	ND	ND
perfluorotetradecanoic acid PFTeA	ND	ND	ND
perfluorobutanesulfonic acid PFBS	2.8	4.7	2
Perfluorohexanesulfonic acid PFHxS	12B	5 B	3.6
perfluoroheptanesulfonic acid PFHpS	2.2	1.1	0.85
perfluorooctanesulfonic acid PFOS	72	40	39
perfluorodecanesulfonic acid PFDS	ND	ND	ND
perfluorooctane Sulfonamide FOSA	ND	ND	ND
n-methyl perfluorooctanesulfonamidoacetic acid NMeFOSAA	ND	ND	ND
n-ethyl perfluorooctane sulfonamidoacetic acid NEtFOSAA	ND	ND	ND
6:2 FTS	ND	ND	3.5
8:2 FTS	ND	ND	ND
total PFOA/PFAS	188.06	166.14	164.71

Sample Description: GM-2D (320-51333-1) Water
Pace PFAS Testing

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 13:10
SDG#: TAC05-01

TestAmerica Sacramento
ELLE Sample #: WW 1083882
ELLE Group #: 2049636
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid¹	27619-97-2	N.D.	0.98	2.0	1
14473	8:2-Fluorotelomersulfonic acid¹	39108-34-4	N.D.	2.0	5.9	1
14473	NEtFOSAA¹	2991-50-6	N.D.	0.98	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA¹	2355-31-9	N.D.	0.98	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic acid¹	375-73-5	0.77 J	0.29	0.98	1
14473	Perfluorobutanoic Acid¹	375-22-4	2.8 J	2.0	5.9	1
14473	Perfluorodecanesulfonic acid¹	335-77-3	N.D.	0.59	2.0	1
14473	Perfluorodecanoic Acid¹	335-76-2	N.D.	0.88	2.0	1
14473	Perfluorododecanoic Acid¹	307-55-1	N.D.	0.49	2.0	1
14473	Perfluoroheptanesulfonic acid¹	375-92-8	N.D.	0.39	2.0	1
14473	Perfluoroheptanoic Acid¹	375-85-9	1.2	0.39	0.98	1
14473	Perfluorohexanesulfonic acid¹	355-46-4	1.5 J	0.39	2.0	1
14473	Perfluorohexanoic Acid¹	307-24-4	1.1 J	0.39	2.0	1
14473	Perfluorononanoic Acid¹	375-95-1	N.D.	0.39	2.0	1
14473	Perfluorooctanesulfonamide¹	754-91-6	N.D.	0.49	2.9	1
14473	Perfluorooctanesulfonic acid¹	1763-23-1	N.D.	0.39	2.0	1
14473	Perfluorooctanoic Acid¹	335-67-1	0.57 J	0.29	0.98	1
14473	Perfluoropentanoic Acid¹	2706-90-3	N.D.	2.0	5.9	1
14473	Perfluorotetradecanoic Acid¹	376-06-7	N.D.	0.29	0.98	1
14473	Perfluorotridecanoic Acid¹	72629-94-8	N.D.	0.39	0.98	1
14473	Perfluoroundecanoic Acid¹	2058-94-8	N.D.	0.39	2.0	1

Target analyte 6:2 FTS was detected in the associated method blank as noted on the QC Summary.

The recovery for extraction standard 13C2-8:2 FTS is outside of QC acceptance limits as noted on the QC Summary.

Sample Comments

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19175003	07/02/2019 00:34	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19175003	06/24/2019 15:00	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-4D (320-51333-2) Water
Pace PFAS Testing

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 10:45
SDG#: TAC05-02

TestAmerica Sacramento
ELLE Sample #: WW 1083883
ELLE Group #: 2049636
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	N.D.	9.6	19	1
14473	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.	19	57	1
14473	NEtFOSAA[1]	2991-50-6	N.D.	9.6	29	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA[1]	2355-31-9	N.D.	9.6	29	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	2.9	9.6	1
14473	Perfluorobutanoic Acid[1]	375-22-4	N.D.	19	57	1
14473	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	5.7	19	1
14473	Perfluorodecanoic Acid[1]	335-76-2	N.D.	8.6	19	1
14473	Perfluorododecanoic Acid[1]	307-55-1	N.D.	4.8	19	1
14473	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.	3.8	19	1
14473	Perfluoroheptanoic Acid[1]	375-85-9	4.0 J	3.8	9.6	1
14473	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	3.8	19	1
14473	Perfluorohexanoic Acid[1]	307-24-4	5.0 J	3.8	19	1
14473	Perfluorononanoic Acid[1]	375-95-1	N.D.	3.8	19	1
14473	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	4.8	29	1
14473	Perfluorooctanesulfonic acid[1]	1763-23-1	N.D.	3.8	19	1
14473	Perfluorooctanoic Acid[1]	335-67-1	7.6 J	2.9	9.6	1
14473	Perfluoropentanoic Acid[1]	2706-90-3	N.D.	19	57	1
14473	Perfluorotetradecanoic Acid[1]	376-06-7	N.D.	2.9	9.6	1
14473	Perfluorotridecanoic Acid[1]	72629-94-8	N.D.	3.8	9.6	1
14473	Perfluoroundecanoic Acid[1]	2058-94-8	N.D.	3.8	19	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

The recovery for the sample injection standard and the labeled compound used as extraction standards is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

Sample Comments

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

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Sample Description: GM-4D (320-51333-2) Water
Pace PFAS Testing

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 10:45
SDG#: TAC05-02

TestAmerica Sacramento
ELLE Sample #: WW 1083883
ELLE Group #: 2049636
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19175003	07/02/2019 00:52	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19175003	06/24/2019 15:00	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-5D (320-51333-3) Water
Pace PFAS Testing

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 11:20
SDG#: TAC05-03

TestAmerica Sacramento
ELLE Sample #: WW 1083884
ELLE Group #: 2049636
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l		ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	18	JB	9.5	19	1
14473	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.		19	57	1
14473	NEtFOSAA[1]	2991-50-6	N.D.		9.5	29	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMeFOSAA[1]	2355-31-9	N.D.		9.5	29	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.		2.9	9.5	1
14473	Perfluorobutanoic Acid[1]	375-22-4	N.D.		19	57	1
14473	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.		5.7	19	1
14473	Perfluorodecanoic Acid[1]	335-76-2	N.D.		8.6	19	1
14473	Perfluorododecanoic Acid[1]	307-55-1	N.D.		4.8	19	1
14473	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.		3.8	19	1
14473	Perfluoroheptanoic Acid[1]	375-85-9	10		3.8	9.5	1
14473	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.		3.8	19	1
14473	Perfluorohexanoic Acid[1]	307-24-4	16	J	3.8	19	1
14473	Perfluorononanoic Acid[1]	375-95-1	N.D.		3.8	19	1
14473	Perfluorooctanesulfonamide[1]	754-91-6	N.D.		4.8	29	1
14473	Perfluorooctanesulfonic acid[1]	1763-23-1	7.4	J	3.8	19	1
14473	Perfluorooctanoic Acid[1]	335-67-1	16		2.9	9.5	1
14473	Perfluoropentanoic Acid[1]	2706-90-3	26	J	19	57	1
14473	Perfluorotetradecanoic Acid[1]	376-06-7	N.D.		2.9	9.5	1
14473	Perfluorotridecanoic Acid[1]	72629-94-8	N.D.		3.8	9.5	1
14473	Perfluoroundecanoic Acid[1]	2058-94-8	N.D.		3.8	19	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

The recovery for the sample injection standard and the labeled compound used as extraction standards is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

Sample Comments

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

Sample Description: GM-5D (320-51333-3) Water
Pace PFAS Testing

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 11:20
SDG#: TAC05-03

TestAmerica Sacramento
ELLE Sample #: WW 1083884
ELLE Group #: 2049636
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19175003	07/02/2019 01:01	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19175003	06/24/2019 15:00	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-6D (320-51333-4) Water
Pace PFAS Testing

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 12:00
SDG#: TAC05-04

TestAmerica Sacramento
ELLE Sample #: WW 1083885
ELLE Group #: 2049636
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l		ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid¹	27619-97-2	N.D.		9.7	19	1
14473	8:2-Fluorotelomersulfonic acid¹	39108-34-4	N.D.		19	58	1
14473	NEtFOSAA¹	2991-50-6	N.D.		9.7	29	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMeFOSAA¹	2355-31-9	N.D.		9.7	29	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	Perfluorobutanesulfonic acid¹	375-73-5	6.1	J	2.9	9.7	1
14473	Perfluorobutanoic Acid¹	375-22-4	33	J	19	58	1
14473	Perfluorodecanesulfonic acid¹	335-77-3	N.D.		5.8	19	1
14473	Perfluorodecanoic Acid¹	335-76-2	N.D.		8.8	19	1
14473	Perfluorododecanoic Acid¹	307-55-1	N.D.		4.9	19	1
14473	Perfluoroheptanesulfonic acid¹	375-92-8	N.D.		3.9	19	1
14473	Perfluoroheptanoic Acid¹	375-85-9	12		3.9	9.7	1
14473	Perfluorohexanesulfonic acid¹	355-46-4	6.0	J	3.9	19	1
14473	Perfluorohexanoic Acid¹	307-24-4	30		3.9	19	1
14473	Perfluorononanoic Acid¹	375-95-1	8.5	J	3.9	19	1
14473	Perfluorooctanesulfonamide¹	754-91-6	N.D.		4.9	29	1
14473	Perfluorooctanesulfonic acid¹	1763-23-1	7.9	J	3.9	19	1
14473	Perfluorooctanoic Acid¹	335-67-1	42		2.9	9.7	1
14473	Perfluoropentanoic Acid¹	2706-90-3	N.D.		19	58	1
14473	Perfluorotetradecanoic Acid¹	376-06-7	N.D.		2.9	9.7	1
14473	Perfluorotridecanoic Acid¹	72629-94-8	N.D.		3.9	9.7	1
14473	Perfluoroundecanoic Acid¹	2058-94-8	N.D.		3.9	19	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

The recovery for the sample injection standard and the labeled compound used as extraction standards is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

Sample Comments

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

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Sample Description: GM-6D (320-51333-4) Water
Pace PFAS Testing

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 12:00
SDG#: TAC05-04

TestAmerica Sacramento
ELLE Sample #: WW 1083885
ELLE Group #: 2049636
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19175003	07/02/2019 01:10	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19175003	06/24/2019 15:00	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-7D (320-51333-5) Water
Pace PFAS Testing

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 12:35
SDG#: TAC05-05

TestAmerica Sacramento
ELLE Sample #: WW 1083886
ELLE Group #: 2049636
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	N.D.	0.97	1.9	1
14473	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.	1.9	5.8	1
14473	NEtFOSAA[1]	2991-50-6	N.D.	0.97	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA[1]	2355-31-9	N.D.	0.97	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic acid[1]	375-73-5	4.9	0.29	0.97	1
14473	Perfluorobutanoic Acid[1]	375-22-4	18	1.9	5.8	1
14473	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	0.58	1.9	1
14473	Perfluorodecanoic Acid[1]	335-76-2	1.7 J	0.87	1.9	1
14473	Perfluorododecanoic Acid[1]	307-55-1	N.D.	0.48	1.9	1
14473	Perfluoroheptanesulfonic acid[1]	375-92-8	2.2	0.39	1.9	1
14473	Perfluoroheptanoic Acid[1]	375-85-9	35	0.39	0.97	1
14473	Perfluorohexanesulfonic acid[1]	355-46-4	27	0.39	1.9	1
14473	Perfluorohexanoic Acid[1]	307-24-4	41	0.39	1.9	1
14473	Perfluorononanoic Acid[1]	375-95-1	20	0.39	1.9	1
14473	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	0.48	2.9	1
14473	Perfluorooctanesulfonic acid[1]	1763-23-1	110	0.39	1.9	1
14473	Perfluorooctanoic Acid[1]	335-67-1	110	0.29	0.97	1
14473	Perfluoropentanoic Acid[1]	2706-90-3	38	1.9	5.8	1
14473	Perfluorotetradecanoic Acid[1]	376-06-7	N.D.	0.29	0.97	1
14473	Perfluorotridecanoic Acid[1]	72629-94-8	N.D.	0.39	0.97	1
14473	Perfluoroundecanoic Acid[1]	2058-94-8	N.D.	0.39	1.9	1

Target analyte 6:2 FTS was detected in the associated method blank as noted on the QC Summary.

The recovery for extraction standards is outside of QC acceptance limits due to the matrix of the sample.

The sample injection standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

Sample Comments

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19175003	07/02/2019 01:19	Danielle D McCully	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-7D (320-51333-5) Water
Pace PFAS Testing

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 12:35
SDG#: TAC05-05

TestAmerica Sacramento
ELLE Sample #: WW 1083886
ELLE Group #: 2049636
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19175003	06/24/2019 15:00	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-15D (320-51333-6) Water
Pace PFAS Testing

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 15:10
SDG#: TAC05-06

TestAmerica Sacramento
ELLE Sample #: WW 1083887
ELLE Group #: 2049636
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	1.9 JB	0.99	2.0	1
14473	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.	2.0	5.9	1
14473	NEtFOSAA[1]	2991-50-6	6.8	0.99	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA[1]	2355-31-9	2.0 J	0.99	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic acid[1]	375-73-5	5.7	0.30	0.99	1
14473	Perfluorobutanoic Acid[1]	375-22-4	48	2.0	5.9	1
14473	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	0.59	2.0	1
14473	Perfluorodecanoic Acid[1]	335-76-2	N.D.	0.89	2.0	1
14473	Perfluorododecanoic Acid[1]	307-55-1	N.D.	0.49	2.0	1
14473	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.	0.40	2.0	1
14473	Perfluoroheptanoic Acid[1]	375-85-9	16	0.40	0.99	1
14473	Perfluorohexanesulfonic acid[1]	355-46-4	5.7	0.40	2.0	1
14473	Perfluorohexanoic Acid[1]	307-24-4	52	0.40	2.0	1
14473	Perfluorononanoic Acid[1]	375-95-1	70	0.40	2.0	1
14473	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	0.49	3.0	1
14473	Perfluorooctanesulfonic acid[1]	1763-23-1	9.0	0.40	2.0	1
14473	Perfluorooctanoic Acid[1]	335-67-1	84	0.30	0.99	1
14473	Perfluoropentanoic Acid[1]	2706-90-3	26	2.0	5.9	1
14473	Perfluorotetradecanoic Acid[1]	376-06-7	N.D.	0.30	0.99	1
14473	Perfluorotridecanoic Acid[1]	72629-94-8	N.D.	0.40	0.99	1
14473	Perfluoroundecanoic Acid[1]	2058-94-8	N.D.	0.40	2.0	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

The recovery for the sample injection standard and the labeled compound used as extraction standards is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

Sample Comments

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

Sample Description: GM-15D (320-51333-6) Water
Pace PFAS Testing

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 15:10
SDG#: TAC05-06

TestAmerica Sacramento
ELLE Sample #: WW 1083887
ELLE Group #: 2049636
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19175003	07/02/2019 01:28	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19175003	06/24/2019 15:00	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-16D (320-51333-7) Water
Pace PFAS Testing

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 14:50
SDG#: TAC05-07

TestAmerica Sacramento
ELLE Sample #: WW 1083888
ELLE Group #: 2049636
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	N.D.	9.6	19	1
14473	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.	19	57	1
14473	NEtFOSAA[1]	2991-50-6	N.D.	9.6	29	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA[1]	2355-31-9	N.D.	9.6	29	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	2.9	9.6	1
14473	Perfluorobutanoic Acid[1]	375-22-4	N.D.	19	57	1
14473	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	5.7	19	1
14473	Perfluorodecanoic Acid[1]	335-76-2	N.D.	8.6	19	1
14473	Perfluorododecanoic Acid[1]	307-55-1	N.D.	4.8	19	1
14473	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.	3.8	19	1
14473	Perfluoroheptanoic Acid[1]	375-85-9	5.1 J	3.8	9.6	1
14473	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	3.8	19	1
14473	Perfluorohexanoic Acid[1]	307-24-4	6.8 J	3.8	19	1
14473	Perfluorononanoic Acid[1]	375-95-1	5.2 J	3.8	19	1
14473	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	4.8	29	1
14473	Perfluorooctanesulfonic acid[1]	1763-23-1	N.D.	3.8	19	1
14473	Perfluorooctanoic Acid[1]	335-67-1	8.8 J	2.9	9.6	1
14473	Perfluoropentanoic Acid[1]	2706-90-3	N.D.	19	57	1
14473	Perfluorotetradecanoic Acid[1]	376-06-7	N.D.	2.9	9.6	1
14473	Perfluorotridecanoic Acid[1]	72629-94-8	N.D.	3.8	9.6	1
14473	Perfluoroundecanoic Acid[1]	2058-94-8	N.D.	3.8	19	1

Target analyte 6:2 FTS was detected in the associated method blank as noted on the QC Summary.

The recovery for extraction standards is outside of QC acceptance limits due to the matrix of the sample.

The sample injection standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

Sample Comments

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19175003	07/02/2019 01:37	Danielle D McCully	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-16D (320-51333-7) Water
Pace PFAS Testing

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 14:50
SDG#: TAC05-07

TestAmerica Sacramento
ELLE Sample #: WW 1083888
ELLE Group #: 2049636
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19175003	06/24/2019 15:00	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-17D (320-51333-8) Water
Pace PFAS Testing

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 14:35
SDG#: TAC05-08

TestAmerica Sacramento
ELLE Sample #: WW 1083889
ELLE Group #: 2049636
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	31 B	0.95	1.9	1
14473	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.	1.9	5.7	1
14473	NEtFOSAA[1]	2991-50-6	N.D.	0.95	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA[1]	2355-31-9	N.D.	0.95	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic acid[1]	375-73-5	0.66 J	0.29	0.95	1
14473	Perfluorobutanoic Acid[1]	375-22-4	5.9	1.9	5.7	1
14473	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	0.57	1.9	1
14473	Perfluorodecanoic Acid[1]	335-76-2	N.D.	0.86	1.9	1
14473	Perfluorododecanoic Acid[1]	307-55-1	N.D.	0.48	1.9	1
14473	Perfluoroheptanesulfonic acid[1]	375-92-8	N.D.	0.38	1.9	1
14473	Perfluoroheptanoic Acid[1]	375-85-9	3.4	0.38	0.95	1
14473	Perfluorohexanesulfonic acid[1]	355-46-4	0.57 J	0.38	1.9	1
14473	Perfluorohexanoic Acid[1]	307-24-4	5.4	0.38	1.9	1
14473	Perfluorononanoic Acid[1]	375-95-1	0.82 J	0.38	1.9	1
14473	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	0.48	2.9	1
14473	Perfluorooctanesulfonic acid[1]	1763-23-1	2.0	0.38	1.9	1
14473	Perfluorooctanoic Acid[1]	335-67-1	6.9	0.29	0.95	1
14473	Perfluoropentanoic Acid[1]	2706-90-3	6.4	1.9	5.7	1
14473	Perfluorotetradecanoic Acid[1]	376-06-7	N.D.	0.29	0.95	1
14473	Perfluorotridecanoic Acid[1]	72629-94-8	N.D.	0.38	0.95	1
14473	Perfluoroundecanoic Acid[1]	2058-94-8	N.D.	0.38	1.9	1

Target analyte 6:2 FTS was detected in the associated method blank as noted on the QC Summary. The recovery for target analyte 6:2 FTS in this sample is ten times higher than the recovery in the associated method blank, therefore the data is reported.

The recovery for extraction standards is outside of QC acceptance limits due to the matrix of the sample.

The sample injection standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

Sample Comments

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

Sample Description: GM-17D (320-51333-8) Water
Pace PFAS Testing

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 14:35
SDG#: TAC05-08

TestAmerica Sacramento
ELLE Sample #: WW 1083889
ELLE Group #: 2049636
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19175003	07/02/2019 01:46	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19175003	06/24/2019 15:00	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-18D (320-51333-9) Water
Pace PFAS Testing

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 14:10
SDG#: TAC05-09

TestAmerica Sacramento
ELLE Sample #: WW 1083890
ELLE Group #: 2049636
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	6.2 B	0.97	1.9	1
14473	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.	1.9	5.8	1
14473	NEtFOSAA[1]	2991-50-6	2.6 J	0.97	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA[1]	2355-31-9	N.D.	0.97	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic acid[1]	375-73-5	5.8	0.29	0.97	1
14473	Perfluorobutanoic Acid[1]	375-22-4	27	1.9	5.8	1
14473	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	0.58	1.9	1
14473	Perfluorodecanoic Acid[1]	335-76-2	3.6	0.87	1.9	1
14473	Perfluorododecanoic Acid[1]	307-55-1	N.D.	0.48	1.9	1
14473	Perfluoroheptanesulfonic acid[1]	375-92-8	0.58 J	0.39	1.9	1
14473	Perfluoroheptanoic Acid[1]	375-85-9	17	0.39	0.97	1
14473	Perfluorohexanesulfonic acid[1]	355-46-4	11	0.39	1.9	1
14473	Perfluorohexanoic Acid[1]	307-24-4	25	0.39	1.9	1
14473	Perfluorononanoic Acid[1]	375-95-1	10	0.39	1.9	1
14473	Perfluorooctanesulfonamide[1]	754-91-6	1.3 J	0.48	2.9	1
14473	Perfluorooctanesulfonic acid[1]	1763-23-1	31	0.39	1.9	1
14473	Perfluorooctanoic Acid[1]	335-67-1	33	0.29	0.97	1
14473	Perfluoropentanoic Acid[1]	2706-90-3	29	1.9	5.8	1
14473	Perfluorotetradecanoic Acid[1]	376-06-7	N.D.	0.29	0.97	1
14473	Perfluorotridecanoic Acid[1]	72629-94-8	N.D.	0.39	0.97	1
14473	Perfluoroundecanoic Acid[1]	2058-94-8	2.8	0.39	1.9	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

The recovery for the sample injection standard and the labeled compound used as extraction standards is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

Sample Comments

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

Sample Description: GM-18D (320-51333-9) Water
Pace PFAS Testing

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 14:10
SDG#: TAC05-09

TestAmerica Sacramento
ELLE Sample #: WW 1083890
ELLE Group #: 2049636
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19175003	07/02/2019 01:55	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19175003	06/24/2019 15:00	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-19D (320-51333-10) Water
Pace PFAS Testing

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 13:40
SDG#: TAC05-10

TestAmerica Sacramento
ELLE Sample #: WW 1083891
ELLE Group #: 2049636
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	3.5 B	0.97	1.9	1
14473	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	N.D.	1.9	5.8	1
14473	NEtFOSAA[1]	2991-50-6	N.D.	0.97	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA[1]	2355-31-9	N.D.	0.97	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic acid[1]	375-73-5	2.0	0.29	0.97	1
14473	Perfluorobutanoic Acid[1]	375-22-4	8.3	1.9	5.8	1
14473	Perfluorodecanesulfonic acid[1]	335-77-3	N.D.	0.58	1.9	1
14473	Perfluorodecanoic Acid[1]	335-76-2	1.2 J	0.88	1.9	1
14473	Perfluorododecanoic Acid[1]	307-55-1	N.D.	0.49	1.9	1
14473	Perfluoroheptanesulfonic acid[1]	375-92-8	0.85 J	0.39	1.9	1
14473	Perfluoroheptanoic Acid[1]	375-85-9	12	0.39	0.97	1
14473	Perfluorohexanesulfonic acid[1]	355-46-4	3.6	0.39	1.9	1
14473	Perfluorohexanoic Acid[1]	307-24-4	14	0.39	1.9	1
14473	Perfluorononanoic Acid[1]	375-95-1	4.1	0.39	1.9	1
14473	Perfluorooctanesulfonamide[1]	754-91-6	N.D.	0.49	2.9	1
14473	Perfluorooctanesulfonic acid[1]	1763-23-1	39	0.39	1.9	1
14473	Perfluorooctanoic Acid[1]	335-67-1	61	0.29	0.97	1
14473	Perfluoropentanoic Acid[1]	2706-90-3	15	1.9	5.8	1
14473	Perfluorotetradecanoic Acid[1]	376-06-7	N.D.	0.29	0.97	1
14473	Perfluorotridecanoic Acid[1]	72629-94-8	N.D.	0.39	0.97	1
14473	Perfluoroundecanoic Acid[1]	2058-94-8	N.D.	0.39	1.9	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

The recovery for the sample injection standard and the labeled compound used as extraction standards is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

Sample Comments

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

Sample Description: GM-19D (320-51333-10) Water
Pace PFAS Testing

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 13:40
SDG#: TAC05-10

TestAmerica Sacramento
ELLE Sample #: WW 1083891
ELLE Group #: 2049636
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19175003	07/02/2019 02:04	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19175003	06/24/2019 15:00	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result


Map 2
TOBSWMF's Groundwater
Monitoring Wells
GM-2
NNU
N
SA
GM-25
GM-7
SA EXP
GM-6
GM-5D
GM-4
GM-3
GM-19
Legend
Groundwater_Wells
Produced by TOBDEC
September 2009
TOBGIS

Groundwater Monitoring for the Southern Ashfill Lateral Expansion (Cell 7)

The GMP for Cell 7 follows the procedures outlined in the draft monitoring program prepared for the facility by P.W. Grosser Consulting in 2009 and the sampling procedures included in the Site Analytical Plan for the Town of Babylon Solid Waste Management Facilities (SAP) (TOBDEC, 2018). Well clusters 26, 27 and 28 were designed to provide the preoperational and operational phase groundwater data to monitor this facility. These wells were sampled from 2009 to September 2012 with the purpose of acquiring pre-operational groundwater data. Quarterly sampling for the operational phase began in December 2012. Sampling procedures for the Cell 7 facility's operational phase adheres to the 2018 TOBSWMF's SAP.

In August 2015 an addendum to the 2009 draft GMP for Cell 7 was completed by P.W. Grosser Consulting. After reviewing the Cell 7 GMP and data accrued, the addendum noted:

- The operational groundwater monitoring protocol presented in the original GMP remains a reliable means to detect a release of leachate at Cell 7.
- Groundwater downgradient of the Cell 7 facility has been highly variable due to Lake Wyandanch's pre-existing use for stormwater impoundment and other historical land uses upgradient of the Cell 7 facility that will continue to influence the groundwater quality of the area.
- The pre-existing influences do not preclude the ability to identify a leachate release.
- STV's calculated for an individual well from its own data will vary with the variability present in groundwater quality between the wells.
- Continued breaching of individual STV's should be expected and only a downgradient well sample where all leachate indicators exceed their STV might indicate a leachate release.
- STV's should be reviewed in conjunction with Piper plots as criteria to trigger contingency actions.
- A single STV equal to the highest STV calculated at the downgradient wells be established for each indicator.
- Utilization of a Piper diagram demonstrates unique geochemical fingerprints for leachate, groundwater and stormwater.
- The final list of leachate indicators are chloride, hardness, calcium, potassium and sodium. TKN and ammonia are not considered reliable since their concentration are not as significantly different from leachate and there was a prior source (Lake Wyandanch) which may be contributing to ongoing residual influence on operational data. Either TKN or ammonia should continue to be monitored for continuity. Manganese should be eliminated as an indicator due to its concentration in groundwater and leachate being similar and the presence of anomalous spikes.
- Groundwater sampling for Cell 7 may proceed if precipitation of no greater than 0.25 inch has been recorded within the preceding week.

The 2015 addendum to the GMP provided the following means to identify if a leachate release may have occurred and the appropriate response:

1. A leak in the liner system may have occurred only if all five indicators exceed their STV's at a downgradient monitoring point.
2. The first time chloride is observed an order of magnitude above its STV (and no additional indictors exceed their STV), the next quarterly results must be closely reviewed for a repeat of this observance or any additional indicator exceeding their STV at that monitoring point.
3. The first time chloride and two additional indicators are observed exceeding their STV in a single well, that well will be re-sampled prior to the next quarterly results to confirm the STV exceedances at that monitoring point.
4. A first time occurrence where all leachate indicators exceed their STV at a single well indicates a potential leak in the liner. TOBDEC will:
    a. Consult with the lab to confirm the results.
    b. Plot the data on a Piper diagram to see if it falls within the highlighted area described as the leachate/groundwater mix zone within the GMP addendum.
    c. Notify NYSDEC.
5. Should all leachate indicators exceed their STV at a single well and the Piper data plots fall within the leachate/groundwater mix zone, TOBDEC will consult with NYSDEC on the appropriate course of action.

Pursuant to requirements set forth by NYSDEC (Groundwater Sampling for Emerging Contaminants, 2018), analysis for the Cell 7 GMP was expanded to include analysis for 1,4 dioxane and PFAS/PFOA's beginning in March 2018.

Data-GMP for Cell 7

As noted in the introduction, sampling for the Cell 7 GMP was performed in March and June 2019. The laboratory reports prepared by Pace Analytical Services Inc. have been included as appendix 1.

Monitoring for the operational phase of Cell 7 focuses on:

1. Comparison of upgradient and downgradient groundwater data with emphasis on select leachate indicators.
2. Preparation of Piper diagrams for stormwater, groundwater and leachate. Determine if there is a change to the geochemical fingerprint of groundwater downgradient of Cell 7 whereby it falls within the highlighted area described as the leachate/groundwater mix zone.
3. Monitor downgradient groundwater wells and compare data to existing water quality and STV's with objective of identifying a significant increase from existing water quality values.
4. Sampling stormwater from the USDS to monitor for changes in stormwater quality.

As detailed in 6NYCRR part 363, the existing water quality for each monitoring point was to be calculated as the arithmetic mean of the pre-operational groundwater dataset

for each relevant parameter. The Statistical Trigger Value (STV) for each parameter was calculated to be the existing water quality plus three standard deviations. A list of indicator compounds that are unique to leachate was finalized in the 2015 Addendum to the Grosser GMP. The addendum also noted that the relevant STV for each indicator compound at the downgradient monitoring points would be the highest STV calculated from these monitoring points. Stormwater data from the facility has been accrued to address the NYSDEC concern that stormwater from the USDS may cloud program results during meteorological conditions where the USDS may impact groundwater in the vicinity of the monitoring wells downgradient of Cell 7. Stormwater data was then plotted on a Piper diagram (figure 15) along with groundwater and leachate data to illustrate the geochemical fingerprint of each (figure 1). As an added precaution the Addendum to the Grosser GMP includes a requirement that the Cell 7 groundwater wells not be sampled if precipitation exceeds 0.25 inch during the prior week. The following spreadsheets provide preoperational data, operational data, baseline or existing water quality values and STV's for each well cluster utilized to monitor Cell 7.

26_Baseline Data

CAS	Analyte	Units	June_09	Aug_09	Sept_09	Dec_09	June_10	Sept_10	Dec_2010	March_2011	June_11	SEPT_11	DEC_11	Mar_12	Jun_12	Sept_12	**Mean(M)**	**stan dev(sd)**	**M+(3sd)**
	Well_Depth	feet	29.05	29.05	29.05	29.05													
	Chloride	mg_l	72	104	103	88.5	110	54	60	49	73	64	110	53	76	96	79.4642857	22.15371499	145.925431
	TKN	mg_l	0.45	0.03	0.439	0.4	1.4	0.8	1	0.6	0.6	0.6	0.4	0.6	7.8	<.1	1.163	1.966423558	7.06227067
	Alkalinity	mg_l	162	161	217	196	230	150	120	130	110	120	110	110	100	96	143.714286	43.96926999	275.622096
	TDS	mg_l	491	486	585	484	690		310	320	430	330	360	340	370	399	430.384615	113.8189633	771.841505
	Spec_Cond	umhos_cm	775	775		1410	1500	590	490	560	580	550	710	490	520	551	730.846154	335.966478	1738.74559
	pH		7.4	5.8		7.76	6.4	6.87	6.7	6.81	6.64	6.9	7.01	6.7f/7.1lab	6/6.7	6.09			0
	Ammonia as N	ppm	<.01	<'0.0500	0.09	0.05	<.2	<.2	<.2	<.2	<.02	0.2	<.2	<.2	<0.2	<.1	0.11343333	0.057098006	0.28472735
	Bromide	ppm	1.21	9.99	4	2	0.85	1.3	6	0.55	<.5	0.65	1.2	<.5	<0.5	0.67	2.58363636	2.836547197	11.093278
	COD	ppm	10.7	<10.0	<10	10	<40	70	90	<40	<40	<40	50	<40	70	12	44.6714286	32.55068491	142.323483
	Chloride	ppm	72	104	103	88.5	110	54	60	49	73	64	110	53	76	96	79.4642857	22.15371499	145.925431
	Hardness	ppm	235	169	208	176	440	190	180	170	180	170	220	160	92	330	208.571429	84.42631224	461.850365
	Mercury	ppm	<.0002	<'0.000200		0.0002	0.0011	<.00025			<.0003					<.0001	0.00065	0.000409994	0.00187998
	Nitrate	ppm	5.34	4.82	5	4.36	3.5	4.2	3.7	4.4	4.3	4.6	4.7	4.7	2	4.19	4.27214286	0.811780366	6.70748396
	Sulfate	ppm	76.3	67.8	87.1	78	170	56	48	42	43	38	54	22	33	49	61.7285714	36.19403752	170.310684
	Aluminum	ppm	3.38	0.916			**50**	**9.3**			0.25					1.84	10.9476667	19.40666444	69.16766
	Antimony	ppm	<.06	<0.0250			<.025	<.005			<.025					0.0018	0.0018	0.000734847	0.00400454
	Arsenic	ppm	<.01	<0.0250			0.042	0.007			<.025					<0015	0.0245	0.016809719	0.07492916
	Barium	ppm	<.2	0.162			0.65	0.18			0.074					0.095	0.2322	0.232805283	0.93061585
	Beryllium	ppm	<.005	<.02			<.005	<.001			<.005					<0.00012	#DIV/0!	0	#DIV/0!
	Boron															0.0791	0.0791	#DIV/0!	#DIV/0!
	Cadmium	ppm	<.005	<0.0100	<.01	0.01	<.025	<.005	<.005	<.005	<.025	<.005	<.005	<.005	<0.025	<0.000087	0.01	0.002672612	0.01801784
	Calcium	ppm	77.9	59.8	73.1	61.3	150	66	66	60	67	62	79	55	28	65.6	69.3357143	26.22378859	148.00708
	Chromium	ppm	<.01	0.00821J			0.079	0.089			<.025					0.0052	0.05773333	0.042870347	0.18634437
	Chromium Hex															<.02	#DIV/0!	#DIV/0!	#DIV/0!
	Cobalt	ppm	<.05	<0.0200			0.043	0.01			<.025					0.0015	0.01816667	0.017065804	0.06936408
	Copper	ppm	<.025	0.0106J			0.29	0.05			<.05					0.0129	0.11763333	0.114899964	0.46233322
	Iron	ppm	5.23	1.7	2.61	0.83	**88**	**16**	2.8	0.62	0.52	0.53	1.3	7.2	26	3.07	11.1721429	23.2677387	80.975359
	Lead	ppm	0.0386	0.0139J	0.02	0.00987	0.67	0.13	0.024	0.006	<.025	0.006	0.014	0.056	0.22	0.0338	0.10231417	0.1783724	0.63743137
	Magnesium	ppm	7.67	4.69	6.2	5.47	**18**	5.8	4.8	3.8	4.5	4	5.8	4.5	5.8	5.22	6.16071429	3.551518558	16.81527
	Manganese	ppm	0.299	0.0538	0.0609	0.0269	**1.6**	0.3	0.08	0.02	<.05	0.01	0.03	0.15	0.51	0.0619	0.24634615	0.42138851	1.51051168
	Nickel	ppm	<.04	0.00530J			0.06	0.05			<.05					0.0033	0.03776667	0.028183003	0.12231568
	Potassium	ppm	50.1	42.6	53.3	31.6	61	28	27	24	24	25	29	21	17	18	32.2571429	13.87552989	73.8837325
	Selenium	ppm	<.05	<0.0250			<.05	<.01			<.05					0.0045	0.0045	0.001837117	0.01001135
	Silver	ppm	<.01	<0.0200			<.025	<.005			<.025					<0.00029	#DIV/0!	0	#DIV/0!
	Sodium	ppm	52.2	17.6	16.3	18	75	24	27	26	29	25	33	24	23	34	30.2928571	15.68705808	77.3540314
	Thallium	ppm	<.01	<0.0150			<.025	<.005			<.025					<.0029	#DIV/0!	0	#DIV/0!
	Vanadium	ppm	<.05	<0.0200			0.068	0.013			<.025					0.0027	0.0279	0.026954313	0.10876294
	Zinc	ppm	0.0916	0.077			0.81	0.2			<.05					0.0353	0.24278	0.305310808	1.15871242
	TDS	ppm	491	486	585	484	690		310	320	430		360			399	455.5	118.9100968	812.23029
	BOD	ppm	<2	<2	<2	2.0	<10			<2	<2	<2	<2	<.2	16	<2	9	4.60237093	22.8071128
	TOC	ppm	2.7	2.8	4.8	3.9	5.4	1.2	<.5	<.5	<.5	0.83	0.54	<.5		2.3	2.71888889	1.918993459	8.47586927
	Phenolics	ppm	<.005	0.0603	<.01	0.0318	0.01	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.005	0.03403333	0.017547144	0.08667476
	TKN	ppm	0.45	.03J	0.44	0.4	1.4	0.8	1	0.6	0.6		0.4		7.8	<.1	1.389	2.12770523	7.77211569
	DO											2.8	2.4	1.4	1.1	1.34	1.808	0.74519796	4.04359388
	Eh/ORP											200	140	-2	150	161	129.8	77.11160743	361.134822
	1,1 Dichloroethane	ug/L					<1				<1					<5			
	1,1 Dichloroethene	ug/L					<1				<1					<5			
	1,2 Dibromoethane	ug/L					<1				<1					<5			
	1,2 Dichlorobenzene (v)	ug/L					<1				<1					<5			
	1,2 Dichloroethane	ug/L					<1				<1					<5			
	1,2 Dichloropropane	ug/L					<1				<1					<5			
	1,4 Dichlorobenzene (v)	ug/L					<1				<1					<5			

	111 Trichloroethane	ug/L	<1	<1	<5
	1112Tetrachloroethane	ug/L	<1	<1	<5
	112 Trichloroethane	ug/L	<1	<1	<5
	1122Tetrachloroethane	ug/L	<1	<1	<5
	123-Trichloropropane	ug/L	<1	<1	<5
	2-Hexanone	ug/L	<10	<10	<5
	Acetone	ug/L	<10	<10	<5
	Acrylonitrile	ug/L	<5	<5	<5
	Benzene	ug/L	<1	<1	<5
	Bromochloromethane	ug/L	<1	<1	<5
	Bromodichloromethane	ug/L	<1	<1	<5
	Bromoform	ug/L	<1	<1	<5
	Bromomethane	ug/L	<1	<1	<5
	c-1,2-Dichloroethene	ug/L	<1	2	<5
	c-1,3Dichloropropene	ug/L	<1	<1	<5
	Carbon disulfide	ug/L	<1	<1	<5
	Carbon Tetrachloride	ug/L	<1	<1	<5
	Chlorobenzene	ug/L	<1	<1	<5
124-48-1	Chlorodibromomethane	ug/L	<1	<1	<5
	Chloroethane	ug/L	<1	<1	<5
	Chloroform	ug/L	<1	<1	<5
	Chloromethane	ug/L	<1	<1	<5
96-12-8	Dibromochloropropane	ug/L	<1	<1	<5
	Dibromomethane	ug/L	<1	<1	<5
	Ethyl Benzene	ug/L	<1	<1	<5
	m + p Xylene	ug/L	<2	<2	
78-93-3	Methyl Ethyl Ketone	ug/L	<10	<10	<5
	Methylene Chloride	ug/L	<1	<1	<5
108-10-1	Methylisobutylketone	ug/L	<10	<10	<5
	o Xylene	ug/L	<1	<1	
	Styrene	ug/L	<1	<1	<5
	t-1,2-Dichloroethene	ug/L	<1	<1	<5
	t-1,3Dichloropropene	ug/L	<1	<1	<5
	t-1,4-Dichloro-2-butene	ug/L	<1	<1	<5
	Tetrachloroethene	ug/L	<1	2	<5
	Toluene	ug/L	<1	<1	<5
	Trichloroethene	ug/L	<1	<1	<5
	Trichlorofluoromethane	ug/L	<1	<1	<5
	Vinyl Acetate	ug/L	<1	<10	<5
	Vinyl Chloride	ug/L	<1	<1	<5
74-88-4	Iodomethane	ug/l			<5
1634-04-4	propane2methoxy2methyl	ug/l			<5
13330-20-7	Xylene (total)	ug/l			<5
57-12-5	Cyanide	mg/l			<10

CAS	26I baseline Analyte	Units	June_09	Aug_09	Sept_09	Dec_09	June_10	Sept_10	Dec_10	Mar_11	June_11	Sept_11	DEC_11	Mar_12	Jun_12	Sept_12	**Mean(M)**	**stan dev(sd)**	**M+(3sd)**
	Well_Depth	feet	33.72	33.72	33.72	33.72													
	Chloride	mg_l	87.4	86	87	105	39	75	68	53	65	62	120	68	63	69.5	74.85	20.87452441	137.4735732
	TKN	mg_l	0.21	<.4	<.4	0.4	1	0.6	1.2	0.4	0.2	0.2	0.4	1	0.4	<.1	0.54636364	0.390669333	1.718371634
	Alkalinity	mg_l	104	115	105	118	140	110	80	80	70	110	84	66	80	48.2	93.5857143	24.82126437	168.0495074
	Spec_Cond	umhos_cm	750	615		1420	530	580	440	450	470	540	720	420	470	363	597.538462	272.1542502	1414.001212
	pH		7	5.6		7.69	6.35	6.71	6.5	6.5	6.44	6.8	6.97	6.4l/6.97f		6.08			0
	Ammonia as N	ppm	<.1	<0.05	0.0755	0.05	<.2	<.2	0.4	<.2	<.2	0.2	<.2	<.2	<.2	<.1	0.181375	0.114557276	0.525046828
	Bromide	ppm	1.71	<2	<2	2	<.5	1.7	6	0.59	<.5	0.8	1.4	<.5	<.5	<.5	2.02857143	1.625738716	6.905787577
	COD	ppm	<10	<10	<10	10	<40	60	<40	<40	<40	<40	<40	<40	140	<10	70	39.37003937	188.1101181
	Chloride	ppm	87.4	86	87	105	39	75	68	53	65	62	120	68	63	69.5	74.85	20.87452441	137.4735732
	Hardness	ppm	175	137	151	168	150	180	150	130	140	170	220	130	140	148	156.357143	24.42762353	229.6400134
	Mercury	ppm	<.0002	<0.0002		0.0002	<.00025	<.00025			<.0003					<.0001	0.0002	7.55929E-05	0.000426779
	Nitrate	ppm	5.35	5.05	7.24	4.82	4	4.6	4	3.8	4.4	4.2	5.1	3.7	2.2	3.54	4.42857143	1.139337575	7.846584154
	Sulfate	ppm	69.6	46	43.6	73.4	50	53	36	36	69	38	55	25	27	30.4	46.5714286	15.91629202	94.32030463
	Aluminum	ppm	1.36	0.441			1.9	0.33			0.16					0.383	0.76233333	0.699765294	2.861629215
	Antimony	ppm	<.06	<0.025			<.025	<.005			<.025					0.0046	0.0046	0.001877942	0.010233826
	Arsenic	ppm	<.01	<0.025			<.025	<.005			<.025					0.0024	0.0024	0.000979796	0.005339388
	Barium	ppm	<.2	0.124			0.093	0.086			0.077					0.0943	0.09486	0.046016301	0.232908904
	Beryllium	ppm	<.005	<0.02			<.005	<.001			<.005					<.00012	#DIV/0!	0	#DIV/0!
	Boron															0.0366			
	Cadmium	ppm	<.005	<0.01	<.01	0.01	<.025	<.005	<.005	<.005	<.025	<.005	<.005	<.005	<.0025	<.000087	0.01	0.002672612	0.018017837
	Calcium	ppm	63.8	49.1	53.4	60.2	54	63	53	45	49	62	77	43	49	42.4	54.5642857	9.671338078	83.57829995
	Chromium	ppm	<.01	0.00594J			<.025	<.005			<.025					0.0034	0.0034	0.001388044	0.007564133
	Chromium hex															<.02			
	Cobalt	ppm	<.05	<0.02			<.025	<.005			<.025					<.00028	#DIV/0!	0	#DIV/0!
	Copper	ppm	0.0302	0.018J			<.05	<.01			<.05					0.0178	0.024	0.012999077	0.062997231
	Iron	ppm	3.12	1.15	2.92	1	4.9	0.82	0.81	0.88	0.31	0.58	0.89	0.26	0.8	0.87	1.37928571	1.322913244	5.348025446
	Lead	ppm	0.0207	0.0119J	0.0184	0.0085	0.027	<.005	<.005	<.005	<.025	0.007	0.008	<.005	<.025	0.0124	0.01493333	0.009164804	0.042427744
	Magnesium	ppm	<5	3.58	4.33	4.37	4	4.6	4.2	3.3	4	4	5.9	4	3.5	4	4.13692308	1.265524258	7.933495852
	Manganese	ppm	0.167	0.0437	0.0551	0.0409	0.07	0.01	0.01	0.01	<.05	0.01	0.01	<.01	<.05	0.0076	0.03948182	0.045143075	0.174911042
	Nickel	ppm	<.04	<0.02			<.05	<.01			<.05					0.0014	0.0014	0.000571548	0.003114643
	Potassium	ppm	43.5	30.6	34.3	33.1	29	25	18	11	17	25	25	12	14	11.3	23.4857143	9.731320041	52.67967441
	Selenium	ppm	<.005	<0.025			<.05	<.01			<.05					<0.0021	#DIV/0!	0	#DIV/0!
	Silver	ppm	<.01	<0.02			<.025	<.005			<.025					<0.00029	#DIV/0!	0	#DIV/0!
	Sodium	ppm	45.9	12.8	10.8	18.6	18	27	25	23	23	24	35	21	21	22.2	23.3785714	8.741077083	49.60180268
	Thallium	ppm	<.01	<0.015			<.025	<.005			<.025					<0.0029	#DIV/0!	0	#DIV/0!
	Vanadium	ppm	<.05	<0.02			<.025	<.005			<.025					0.0009	0.0009	0.000367423	0.00200227
	Zinc	ppm	0.0496	0.0873			0.09	0.03			<.05					0.0057	0.05252	0.039040526	0.169641578
	TDS	ppm	420	363	389	435	330		280	260	380	320	370	290		303	345	56.34633165	514.038995
	BOD	ppm	<2	<2	<2	2.0	<4			<2	<2	<2	<2	<2	6.5	<2	4.25	1.912379923	9.987139769
	TOC	ppm	2.02	1.6	2.6	2.5	2.8	<.5	<.5	<.5	0.6	0.81	<.5	<.5		1.4	1.79125	1.105683453	5.108300358
	Phenolics	ppm	<.005	0.0575	<.01	0.01	<.001	<.001	<.001	<.001	<.001	0.007	<.001	<.001	<.001	<.005	0.02483333	0.01533925	0.070851083
	TKN	ppm	0.21	<.4	<.4	0.4	1	0.6	1.2	0.4	0.2		0.4	1	0.4	<.1	0.581	0.400778089	1.783334268
	DO	mg/l										1	1.5	0.36	1.2	1.52	1.116	0.475057891	2.541173674
	Eh/ORP											200	11	17	170	166	112.8	91.16852527	386.3055758
	1,1 Dichloroethane	ug/L					<1				<1					<5			
	1,1 Dichloroethene	ug/L					<1				<1					<5			
	1,2 Dibromoethane	ug/L					<1				<1					<5			
	1,2 Dichlorobenzene (v)	ug/L					<1				<1					<5			
	1,2 Dichloroethane	ug/L					<1				<1					<5			
	1,2 Dichloropropane	ug/L					<1				<1					<5			
	1,4 Dichlorobenzene (v)	ug/L					<1				<1					<5			
	111 Trichloroethane	ug/L					<1				<1					<5			

	1112Tetrachloroethane	ug/L	<1	<1	<5
	112 Trichloroethane	ug/L	<1	<1	<5
	1122Tetrachloroethane	ug/L	<1	<1	<5
	123-Trichloropropane	ug/L	<1	<1	<5
	2-Hexanone	ug/L	<10	<10	<5
	Acetone	ug/L	<10	<10	<5
	Acrylonitrile	ug/L	<5	<5	<5
	Benzene	ug/L	<1	<1	<5
	Bromochloromethane	ug/L	<1	<1	<5
	Bromodichloromethane	ug/L	<1	<1	<5
	Bromoform	ug/L	<1	<1	<5
	Bromomethane	ug/L	<1	<1	<5
	c-1,2-Dichloroethene	ug/L	<1	1	<5
	c-1,3Dichloropropene	ug/L	<1	<1	<5
	Carbon disulfide	ug/L	<1	<1	<5
	Carbon Tetrachloride	ug/L	<1	<1	<5
	Chlorobenzene	ug/L	<1	<1	<5
124-48-1	Chlorodibromomethane	ug/L	<1	<1	<5
	Chloroethane	ug/L	<1	<1	<5
	Chloroform	ug/L	<1	<1	<5
	Chloromethane	ug/L	<1	<1	<5
96-12-8	Dibromochloropropane	ug/L	<1	<1	<5
	Dibromomethane	ug/L	<1	<1	<5
	Ethyl Benzene	ug/L	<1	<1	<5
	m + p Xylene	ug/L	<2	<2	
78-93-3	Methyl Ethyl Ketone	ug/L	<10	<10	<5
	Methylene Chloride	ug/L	<1	<1	<5
108-10-1	Methylisobutylketone	ug/L	<10	<10	<5
	o Xylene	ug/L	<1	<1	
	Styrene	ug/L	<1	<1	<5
	t-1,2-Dichloroethene	ug/L	<1	<1	<5
	t-1,3Dichloropropene	ug/L	<1	<1	<5
	t-1,4-Dichloro-2-butene	ug/L	<1	<1	<5
	Tetrachloroethene	ug/L	3	1	<5
	Toluene	ug/L	<1	<1	<5
	Trichloroethene	ug/L	<1	<1	<5
	Trichlorofluoromethane	ug/L	<1	<1	<5
	Vinyl Acetate	ug/L	<1	<10	<5
	Vinyl Chloride	ug/L	<1	<1	<5
74-88-4	Iodomethane	ug/L			<5
1634-04-4	propane2methoxy2methyl	ug/L			<5
13330-20-7	Xylene (total)	ug/L			<5
57-12-5	Cyanide	ug/l			<10

CAS GM27 baseline

Analyte	Units	June_09	Aug_09	Sept_09	Dec_09	Jun_10	Sept_10	Dec_10	Mar_11	Jun_11	Sept_11	DEC_11	Mar_12	Mar_12DUP	Jun_12	Sept_12	**Mean(M)**	**stan dev(sd)**	**M+(3sd)**
Well_Depth	feet	37.12	37.12	37.12	37.12														
Chloride	mg_l	106	156	116	87	990	1100	360	260	340	300	350	250	250	180	229	338.266667	300.6508337	1240.21917
TKN	mg_l	9.53	11.5	7.34	4.62	15	14	9	7.2	6.4	6.2	11	7	7.4	6.6	8.15	8.72933333	2.967135383	17.6307395
Alkalinity	mg_l	189	215	186	150	260	170	190	210	240	250	300	280	270	260	256	228.4	44.54500132	362.035004
Spec_Cond	umhos_cm	750	900		849	630	2400	1100	1100	1700	1400	1800	1300		1400	961	1253.07692	493.3811004	2733.22022
pH		10.2	7		9.97	7.17	7.32	8.1	7.36	7.83	7.9	6.89	7.9lab/7.3f		7.55	7.55			0
Ammonia as N	ppm	6.11	9.96	6.3	4.44	13	11	7.2	5.4	6	6.2	10	6	6.6	5.4	5.3	7.26066667	2.498972551	14.7575843
Bromide	ppm	0.61	<2	8.66	2	0.75	<.5	6.3	0.91	<.5	0.8	1.3	<.5	<.5	<.5	0.83	2.46222222	2.545717599	10.099375
COD	ppm	125	59	66.8	37.2	80	450	60	220	90	120	150	100	100	220	85.6	130.906667	103.3479246	440.950441
Chloride	ppm	106	156	116	87	990	1100	360	260	340	300	350	250	250	180	229	338.266667	300.6508337	1240.21917
Hardness	ppm	275	172	150	114	600	590	360	340	280	290	370	280	270	320	268	311.933333	136.1178411	720.286857
Mercury	ppm	<.0002	<0.0002		0.0002	<.001	<.00025			<.0003						<.0001	0.0002	7.55929E-05	0.00042678
Nitrate	ppm	0.11	<0.1	<.1	0.1	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.1	0.105	0.036994208	0.21598262
Sulfate	ppm	30.9	3.1	<2	5.02	5	8	<5	<.5	<5	<5	<5	5	<5	1.6	<5	8.37428571	7.915145699	32.1197228
Aluminum	ppm	7.58	6.74			27	29			0.33						0.597	11.8745	12.863334	50.464502
Antimony	ppm	<.06	<0.025			<.025	<.005			<.025						<.0018	#DIV/0!	0	#DIV/0!
Arsenic	ppm	<.01	<0.025			<.025	0.01			<.025						0.0015	0.00575	0.004005205	0.01776561
Barium	ppm	<.2	0.185			0.9	0.66			0.086						0.213	0.4088	0.356726039	1.47897812
Beryllium	ppm	<.005	<0.02			<.005	0.001			<.005						<.00012	0.001	0.000408248	0.00222474
Boron																0.164			
Cadmium	ppm	<.005	<0.01	<.01	0.01	<.025	<.005	<.005	<.005	<.025	<.005	<.005	<.005	<.005	<.025	<.000087	0.01	0.002581989	0.01774597
Calcium	ppm	92.1	62.6	53.2	42.1	190	190	120	120	98	97	120	90	89	100	88.5	103.5	41.90663091	229.219893
Chromium	ppm	0.0165	0.025			0.06	0.073			<.025						0.0175	0.0384	0.028243583	0.12313075
Chromium Hex																<.02			
Cobalt	ppm	<.05	<0.02			<.025	0.017			<.025						0.0003	0.00865	0.006916767	0.0294003
Copper	ppm	<.025	0.0231			0.08	0.1			<.05						0.0033	0.0516	0.044371928	0.18471578
Iron	ppm	8.31	8.97	6.23	0.774	37	40	5.6	20	1.6	2.4	7.5	3.4	3.4	37	3.52	12.3802667	14.03898738	54.4972288
Lead	ppm	0.0727	0.0817	0.048	0.00678	0.28	0.31	0.029	0.14	<.025	<.005	0.021	0.009	0.007	0.14	0.0151	0.08925231	0.099964344	0.38914534
Magnesium	ppm	<5	3.94	4.21	2.06	31	26	16	12	9.9	12	18	12	12	14	11.2	13.165	8.389035758	38.3321073
Manganese	ppm	0.0994	0.127	0.087	0.0137	0.52	0.52	0.16	0.31	0.13	0.13	0.19	0.14	0.14	0.57	0.139	0.21840667	0.176081347	0.74665071
Nickel	ppm	<.04	0.0153J			<.05	0.04			<.05						0.0121	0.02605	0.016087314	0.07431194
Potassium	ppm	12.5	13.8	17.9	19.9	44	51	33	26	30	33	42	32	63	26	24.7	31.2533333	14.41052919	74.4849209
Selenium	ppm	<.005	<0.025			<.05	<.01			<.05						<.0021	#DIV/0!	0	#DIV/0!
Silver	ppm	<.01	<0.02			<.025	<.005			<.025						<.00029	#DIV/0!	0	#DIV/0!
Sodium	ppm	42.7	23.9	16.1	19.9	310	240	130	110	100	120	170	110	110	97	107	113.773333	80.1525997	354.231132
Thallium	ppm	<.01	<0.015			<.025	<.005			<.025						<.0029	#DIV/0!	0	#DIV/0!
Vanadium	ppm	<.05	<0.02			0.06	0.072			<.025						0.0022	0.04473333	0.034021268	0.14679714
Zinc	ppm	0.106	0.141			0.52	0.55			<.05						0.0125	0.2659	0.248828539	1.01238562
TDS	ppm	420	460	364	321	2000		820	840	950	680	840	800	730	630	660	751.071429	409.4950858	1979.55669
BOD	ppm	4	11	17	21	44			14	31	<43	26	36	40	110	23	31.4166667	27.73084925	114.609214
TOC	ppm	18.5	34	26	15	34	22	19	19	24	18	24	22	22	24	24.3	23.0533333	5.344538824	39.0869498
Phenolics	ppm	0.0066	0.113	0.0692	0.0226	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.002	<.005	0.05285	0.032877076	0.15148123
TKN	ppm	9.53	11.5	7.34	4.62	15	14	9	7.2	6.4		11			6.6	8.15	9.29	3.1550407	18.7551221
DO											0.1	0.48	0.37		2.6	0.2	0.75	1.044605189	3.88381557
Eh/ORP											-200	-200	170		-200	-179.7	-121.94	163.4359752	368.367926
1,1 Dichloroetha	ug/L					<1				<1						<5			
1,1 Dichloroethe	ug/L					<1				<1						<5			
1,2 Dibromoeth	ug/L					<1				<1						<5			
1,2 Dichloroben	ug/L					<1				<1						<5			
1,2 Dichloroetha	ug/L					<1				<1						<5			
1,2 Dichloropro	ug/L					<1				<1						<5			
1,4 Dichloroben	ug/L					<1				<1						<5			
111 Trichloroetl	ug/L					<1				<1						<5			

	1112Tetrachlor	ug/L	<1	<1		<5
	112 Trichloroetl	ug/L	<1	<1		<5
	1122Tetrachlor	ug/L	<1	<1		<5
	123-Trichloropr	ug/L	<1	<1		<5
	2-Hexanone	ug/L	<10	<10		<5
	Acetone	ug/L	<10	<10		<5
	Acrylonitrile	ug/L	<5	<5		<5
	Benzene	ug/L	<1	<1		<5
	Bromochlorome	ug/L	<1	<1		<5
	Bromodichloron	ug/L	<1	<1		<5
	Bromoform	ug/L	<1	<1		<5
	Bromomethane	ug/L	<1	<1		<5
	c-1,2-Dichloroe	ug/L	<1	<1		<5
	c-1,3Dichloropr	ug/L	<1	<1		<5
	Carbon disulfide	ug/L	<1	<1		<5
	Carbon Tetrach	ug/L	<1	<1		<5
	Chlorobenzene	ug/L	<1	<1		<5
124-48-1	Chlorodibromor	ug/L	<1	<1		<5
	Chloroethane	ug/L	<1	<1		<5
	Chloroform	ug/L	<1	<1		<5
	Chloromethane	ug/L	<1	<1		<5
96-12-8	Dibromochloror	ug/L	<1	<1		<5
	Dibromomethar	ug/L	<1	<1		<5
	Ethyl Benzene	ug/L	<1	<1		<5
	m + p Xylene	ug/L	<2	<2		<5
78-93-3	Methyl Ethyl Ke	ug/L	<10	<10		<5
	Methylene Chlo	ug/L	<1	<1		<5
108-10-1	Methylisobutylk	ug/L	<10	<10		<5
	o Xylene	ug/L	<1	<1		<5
	Styrene	ug/L	<1	<1		<5
	t-1,2-Dichloroet	ug/L	<1	<1		<5
	t-1,3Dichloropro	ug/L	<1	<1		<5
	t-1,4-Dichloro-2	ug/L	<1	<1		<5
	Tetrachloroethe	ug/L	<1	<1		<5
	Toluene	ug/L	<1	<1		<5
	Trichloroethene	ug/L	<1	<1		<5
	Trichlorofluoron	ug/L	<1	<1		<5
	Vinyl Acetate	ug/L	<1	<10		<5
	Vinyl Chloride	ug/L	<1	<1		<5
74-88-4	Iodomethane	ug/L				<5
1634-04-4	ane2methoxy2m	ug/L				<5
13330-20-7	Xylene (total)	ug/L				<5
57-12-5	Cyanide	ug/L				<10

CAS GM27I Baseline

Analyte	Units	June_09	Aug_09	Sept_09	Dec_09	Jun_10	Sept_10	Dec_10	Mar_11	Jun_11	Jun11_DUP	Sept_11	DEC_11	Mar_12	Jun_12	Sept_12	Sept12_Dup	**Mean(M)**	**stan dev(sd)**
Well_Depth	feet	47.99	47.99		47.99														
Chloride	mg_l	105	126	112	104	150	220	250	200	310	320	310	270	260	260	208	197	213.666667	77.83835509
TKN	mg_l	4.33	4.63	4.54	4.06	4.2	5.4	6.2	4.8	6.2	6.4	6.4	7	7.4	7.4	7.58	15.6	5.76933333	1.271087648
Alkalinity	mg_l	111	206	197	225	190	210	220	200	230	240	230	240	230	230	187	195	209.733333	33.03286742
Spec_Cond	umhos_cm	515	700		501	2300	950	940	880	1600		1500	1300	1300	1500	795		1137	510.126945
pH		9.7	6.8		9.91	7.23	7.62	8.1	7.82	7.64	7.8	7.9	6.94	8lab/8.21f	7.66	8.22			
Ammonia as N	ppm	2.66	3.44	3.78	3.52	3.2	4.4	5	3.6	5.6	5.8	5.4	6.2	6.4	6.4	4.78		4.67866667	1.258331473
Bromide	ppm	0.74	<2	5.99	2	<.5	<.5	6.4	1.1	<.5	<.5	1.2	1.4	<.5	1.5	1.1	1.11	2.38111111	2.050111031
COD	ppm	42.5	22.8	12.9	27.3	<40	110	50	50	80	130	110	100	130	190	68	55.1	80.25	52.9228819
Chloride	ppm	105	126	112	104	150	220	250	200	310	320	310	270	260	260	208	197	213.666667	77.83835509
Hardness	ppm	180	175	189	187	200	480	350	270	340	340	360	320	310	350	360	256	294.066667	90.15341422
Mercury	ppm	<.0002	<0.0002		0.0002	<.00025	<.00025			<.0003	<.0003					<.0001		0.0002	7.07107E-05
Nitrate	ppm	<.1	<0.1	<.1	0.1	<.5	<.5	<.5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.1	<.1	0.1	0.025819889
Sulfate	ppm	21.6	5.19	<2	2	7	5.5	<5	5	<5	<5	<5	<5	8	7	<5	<5	7.66125	5.758938146
Aluminum	ppm	1.3	0.621			0.34	3.8			0.2	0.22					0.26	0.398	0.963	1.309940075
Antimony	ppm	<.06	<0.025			<.025	<.005			<.025	<.025					<.0018	<.0018	#DIV/0!	0
Arsenic	ppm	<.01	<0.025			<.025	<.005			<.025	<.025					0.0031	<.0015	0.0031	0.00117169
Barium	ppm	<.2	0.106			0.051	0.1			0.086	0.089					0.0571	0.0603	0.08151667	0.037059174
Beryllium	ppm	<.005	<0.02			<.005	<.001			<.005	<.005					<.00012	<.00012	#DIV/0!	0
Boron																0.15	0.172		
Cadmium	ppm	<.005	<0.01	<.01	0.01	<.025	<.005	<.005	<.005	<.025	<.025	<.005	<.005	<.005	<.025	<.000087	<.000087	0.01	0.002581989
Calcium	ppm	65.8	62.4	67.7	66.1	71	180	120	95	120	120	120	110	110	120	80	83.8	100.533333	32.33489196
Chromium	ppm	<.01	0.00649J			<.025	0.007			<.025	<.025					0.0054	0.0053	0.0062	0.003060345
Chromium hex																<.02	<.02		
Cobalt	ppm	<.05	<0.02			<.025	<.005			<.025	<.025					<.00028	<.00028	#DIV/0!	0
Copper	ppm	<.025	0.0122J			<.05	<.01			<.025	<.025					0.0022	<.002	0.0022	0.000831522
Iron	ppm	1.31	1.25	1.91	1.29	0.7	9.9	2.9	1.7	2.5	2.6	2.4	2.3	4.7	3.4	1.21	1.27	2.67133333	2.244430779
Lead	ppm	0.0133	0.00998J	0.0107	0.00711	<.025	0.038	0.01	0.008	<.025	<.025	<.005	<.005	0.023	<.025	0.0092	0.0099	0.01491375	0.010739049
Magnesium	ppm	<5	4.66	4.88	5.3	5.9	8.1	11	7.7	10	11	11	9.8	11	13	7.17	7.63	8.60785714	3.439285225
Manganese	ppm	0.0533	0.0949	0.111	0.0808	0.07	0.31	0.16	0.12	0.16	0.16	0.16	0.15	0.21	0.18	0.0975	0.101	0.14116667	0.064410721
Nickel	ppm	<.04	<0.02			<.05	<.01			<.05	<.05					0.0038	0.0034	0.0038	0.001436265
Potassium	ppm	18.8	15	18.9	15.4	22	28	27	25	32	33	31	34	34	34	23.9	24.5	26.1333333	6.885561152
Selenium	ppm	<.005	<0.025			<.05	<.01			<.05	<.05					<.0021	<.0021	#DIV/0!	0
Silver	ppm	<.01	<0.02			<.025	<.005			<.025	<.025					<.00029	<.00029	#DIV/0!	0
Sodium	ppm	52.3	19.2	15.1	20.2	54	70	74	62	32	100	110	110	95	120	77.8	80.2	67.44	35.20908568
Thallium	ppm	<.01	<0.015			<.025	<.005			<.025	<.025					<.0029	<.0029	#DIV/0!	0
Vanadium	ppm	<.05	<0.02			<.025	0.008			<.025	<.025					0.0009	0.0011	0.00445	0.002985919
Zinc	ppm	0.0255	0.0715			0.05	0.12			<.05	<.05					0.0223	0.0054	0.05786	0.043211562
TDS	ppm	341	460	442	417	450		640	530	860	1000	970	580	490	780	602	563	611.571429	211.5262174
BOD	ppm	<2	3.9	37	35	<3			10	33	46	>44	27	43	26	21	24	28.19	17.06926312
TOC	ppm	12.8	14	14	18	13	11	15	15	19	22	21	16	21	27	18.7	18.2	17.1666667	4.318674841
Phenolics	ppm	<.005	0.0785	0.0718	0.0261	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.005	<.005	0.0588	0.026624688
TKN	ppm	4.33	4.63	4.54	4.06	4.2	5.4	6.2	4.8	6.2	6.4		7	7.4	7.4	7.58	15.6	5.72428571	1.306585181
DO												0.06	0.59	0.33	0.4	0.07		0.29	0.226384628
Eh/ORP												-200	-200	-200	-200	-243.6			
1,1 Dichloroethane	ug/L					<1				<1	<1					<5	<5		
1,1 Dichloroethene	ug/L					<1				<1	<1					<5	<5		
1,2 Dibromoethane	ug/L					<1				<1	<1					<5	<5		
1,2 Dichlorobenzene (v	ug/L					<1				<1	<1					<5	<5		
1,2 Dichloroethane	ug/L					<1				<1	<1					<5	<5		
1,2 Dichloropropane	ug/L					<1				<1	<1					<5	<5		
1,4 Dichlorobenzene (v	ug/L					<1				<1	<1					<5	<5		
111 Trichloroethane	ug/L					<1				<1	<1					<5	<5		

	1112Tetrachloroethane	ug/L	<1	<1	<1		<5	<5
	112 Trichloroethane	ug/L	<1	<1	<1		<5	<5
	1122Tetrachloroethane	ug/L	<1	<1	<1		<5	<5
	123-Trichloropropane	ug/L	<1	<1	<1		<5	<5
	2-Hexanone	ug/L	<10	<10	<10		<5	<5
	Acetone	ug/L	<10	<10	<10		<5	<5
	Acrylonitrile	ug/L	<5	<5	<5		<5	<5
	Benzene	ug/L	<1	<1	<1		<5	<5
	Bromochloromethane	ug/L	<1	<1	<1		<5	<5
	Bromodichloromethane	ug/L	<1	<1	<1		<5	<5
	Bromoform	ug/L	<1	<1	<1		<5	<5
	Bromomethane	ug/L	<1	<1	<1		<5	<5
	c-1,2-Dichloroethene	ug/L	<1	<1	<1		<5	<5
	c-1,3Dichloropropene	ug/L	<1	<1	<1		<5	<5
	Carbon disulfide	ug/L	<1	<1	<1		<5	<5
	Carbon Tetrachloride	ug/L	<1	<1	<1		<5	<5
	Chlorobenzene	ug/L	<1	<1	<1		<5	<5
124-48-1	Chlorodibromomethane	ug/L	<1	<1	<1		<5	<5
	Chloroethane	ug/L	<1	<1	<1		<5	<5
	Chloroform	ug/L	<1	<1	<1		<5	<5
	Chloromethane	ug/L	<1	<1	<1		<5	<5
96-12-8	Dibromochloropropane	ug/L	<1	<1	<1		<5	<5
	Dibromomethane	ug/L	<1	<1	<1		<5	<5
	Ethyl Benzene	ug/L	<1	<1	<1		<5	<5
	m + p Xylene	ug/L	<2	<2	<2			<5
78-93-3	Methyl Ethyl Ketone	ug/L	<10	<10	<10		<5	<5
	Methylene Chloride	ug/L	<1	<1	<1		<5	<5
108-10-1	Methylisobutylketone	ug/L	<10	<10	<10		<5	<5
	o Xylene	ug/L	<1	<1	<1			<5
	Styrene	ug/L	<1	<1	<1		<5	<5
	t-1,2-Dichloroethene	ug/L	<1	<1	<1		<5	<5
	t-1,3Dichloropropene	ug/L	<1	<1	<1		<5	<5
	t-1,4-Dichloro-2-butene	ug/L	<1	<1	<1		<5	<5
	Tetrachloroethene	ug/L	<1	<1	<1		<5	<5
	Toluene	ug/L	<1	<1	<1		<5	<5
	Trichloroethene	ug/L	<1	<1	<1		<5	<5
	Trichlorofluoromethane	ug/L	<1	<1	<1		<5	<5
	Vinyl Acetate	ug/L	<1	<10	<10		<5	<5
	Vinyl Chloride	ug/L	<1	<1	<1		<5	<5
74-88-4	Iodomethane						<5	<5
1634-04-4	ropane2methoxy2methyl						<5	<5
13330-20-7	Xylene (total)						<5	<5
57-12-5	Cyanide						<10	<10

M+(3sd)
447.181732
9.58259628
308.831936
2667.38083
0
8.45366108
8.5314442
239.018646
447.181732
564.526909
0.00041213
0.17745967
24.9380644
4.89282022
#DIV/0!
0.00661507
0.19269419
#DIV/0!
0.01774597
197.538009
0.01538104
#DIV/0!
0.00469457
9.40462567
0.0471309
18.9257128
0.33439883
0.00810879
46.7900168
#DIV/0!
#DIV/0!
173.067257
#DIV/0!
0.01340776
0.18749468
1246.15008
79.3977894
30.1226912
0.13867406
9.64404126
0.96915389

CAS 28 baseline

Analyte	Units	June_09	Aug_09	Sept_09	Dec_09	Jun_10	Sept_10	Dec_10	mar_11	Jun_11	Sept_11	DEC_11	Mar_12	Jun_12	Sept_12	**WMean(M)**	**stan dev(sd)**	**STV+M+(3sd)**
Well_Depth	feet	38.56	38.56	38.56	38.56													
Chloride	mg_l	85.6	112	122	123	260	240	250	300	330	170	280	310	300	324	229.042857	87.88608636	492.7011162
TKN	mg_l	10.3	6.04	5.9	7.7	14	16	28	36	27	8.4	25	28	40	39	20.81	12.51290472	58.34871417
Alkalinity	mg_l	212	321	419	495	**800**	**900**	770	1100	**1000**	**700**	**1000**	**910**	**1100**	**728**	746.785714	287.1491648	1608.233209
Spec_Cond	umhos_cm	740	1330		950	2100	**2200**	1800	2700	2700	1800	2600	2600	2700	1967	2014.38462	674.376198	4037.513209
pH		9.8	6.3		9.81	8.76	7.3	7.3	7.28	7.13	7.2	6.97	7.4lab/8.05f	7.09	7.34			0
Ammonia as N	ppm	6.04	4.52	4.66	8.05	5.2	14	26	34	26	8.4	24	26	38	24.4	17.805	11.76087958	53.08763874
Bromide	ppm	0.73	>2	6.66	2	0.8	1.5	6.2	1.5	<.5	0.7	1.8	<.5	3	1.53	2.40181818	2.106420327	8.721079162
COD	ppm	162	16.9	28.9	50.7	110	170	90	120	60	50	150	170	180	134	106.607143	56.96162628	277.4920217
Chloride	ppm	85.6	112	122	123	260	240	250	300	330	170	280	310	300	324	229.042857	87.88608636	492.7011162
Hardness	ppm	295	334	374	382	**940**	660	500	580	830	670	800	610	560	530	576.071429	193.8208786	1157.534064
Mercury	ppm	>.0002	>0.0002		0.0002	0.0013	<.00025			<.0003					<.0001	0.00075	0.000484522	0.002203567
Nitrate	ppm	0.19	>0.1	<.1	0.1	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.1	0.145	0.055534367	0.311603101
Sulfate	ppm	100	96.6	60.6	74.2	90	65	23	42	120	140	63	36	17	11.2	67.0428571	39.10594514	184.3606926
Aluminum	ppm	55.9	1.02			200	10			7					3.56	46.2466667	78.04485753	280.3812393
Antimony	ppm	>.06	>0.025			<.025	<.005			0.06					<.0018	0.06	0.024494897	0.133484692
Arsenic	ppm	0.0169	>0.025			0.07	<.005			<.025					0.0051	0.03066667	0.027571555	0.113381333
Barium	ppm	0.238	0.155			0.85	0.23			0.33					0.202	0.33416667	0.259140438	1.111587981
Beryllium	ppm	>.005	>0.02			0.008	<.001			<.005					<.00012	0.008	0.003265986	0.017797959
Boron															0.179			
Cadmium	ppm	>.005	>0.01	<.01	0.01	<.025	<.005	<.005	<.005	<.025	<.005	<.005	<.005	<.025	<.000087	0.01	0.002672612	0.018017837
Calcium	ppm	99.3	120	134	137	290	220	180	200	280	230	260	200	120	183	189.521429	61.90394766	375.2332716
Chromium	ppm	0.0644	0.00585J			0.27	0.014			0.092					0.0227	0.09262	0.100477906	0.394053719
Chromium Hex															<.02			
Cobalt	ppm	>.05	>0.02			0.13	0.009			<.025					0.0029	0.0473	0.052217765	0.203953296
Copper	ppm	0.11	0.0068J			0.47	0.02			<.05					0.0102	0.15255	0.18517381	0.708071431
Iron	ppm	57.2	3.5	3.63	4.14	**220**	16	9	13	23	12	12	14	18	8.37	29.56	56.42854774	198.8456432
Lead	ppm	0.3	0.00895J	0.00596	0.015	1.4	0.066	0.015	0.021	0.079	0.00524	0.019	0.037	0.074	0.0387	0.15968462	0.368201782	1.264289962
Magnesium	ppm	12.2	8.22	9.48	9.65	**52**	23	15	18	33	1.2	36	30	26	21.2	21.0678571	13.52865004	61.65380727
Manganese	ppm	1.49	0.433	0.513	0.622	6.4	1.2	0.96	1.3	2.1		1.4	1.2	1.2	0.966	1.52184615	1.531453386	6.116206313
Nickel	ppm	0.0462	0.00621J			0.18	0.02			<.05					0.0132	0.06485	0.069128798	0.272236393
Potassium	ppm	33	23.5	28	23.2	58	54	60	72	87	39	74	74	85	59.9	55.0428571	22.30293924	121.9516749
Selenium	ppm	>.005	>0.025			<.05	<.01			<.05					0.0055	0.0055	0.002245366	0.012236097
Silver	ppm	>.01	>0.02			<.025	<.005			<.05					<.00029	#DIV/0!	0	#DIV/0!
Sodium	ppm	60.6	22	18.8	27.5	140	190	200	220	230	110	230	240	220	225	152.421429	87.10690318	413.7421381
Thallium	ppm	>.01	>0.015			<.025	<.005			<.025					<.0029	#DIV/0!	0	#DIV/0!
Vanadium	ppm	0.0895	>0.02			0.33	0.02			<.025					0.0068	0.111575	0.129737588	0.500787763
Zinc	ppm	0.561	0.0653			2.4	0.14			<.05					0.0467	0.6426	0.935970564	3.450511691
TDS	ppm	517	659	760	820	1300		1100	1300	2400	1000	1400	1400	720	1250	1125.07692	487.0912751	2586.350748
BOD	ppm	5	12	17	13	25			19	20	28	13	25	25	25	18.9166667	7.051219538	40.07032528
TOC	ppm	12.4	14	16	17	43	29	31	38	36	20	45	38	43	41.2	30.2571429	12.03927638	66.37497201
Phenolics	ppm	>.005	0.0416	0.0437	0.0175	0.003	<.001	0.035	0.025	<.001	0.003	<.001	0.018	<.001	<.005	0.02335	0.016747111	0.073591332
TKN	ppm	10.3	6.04	5.9	7.7	14	16	28	36	27		25	28	40	39	21.7646154	12.48195806	59.21048955
DO											0.09	0.12	0.1	0.2	0.09	0.12	0.046368092	0.259104277
Eh/ORP											-100	-100	-100	-100	-156	-111.2	25.04396135	-36.06811596
1,1 Dichloroethan	ug/L					<1				<1					<5			
1,1 Dichloroethen	ug/L					<1				<1					<5			
1,2 Dibromoethan	ug/L					<1				<1					<5			
1,2 Dichlorobenzene	ug/L					<1				<1					<5			
1,2 Dichloroethan	ug/L					<1				<1					<5			
1,2 Dichloropropar	ug/L					<1				<1					<5			
1,4 Dichlorobenzene	ug/L					<1				<1					<5			
111 Trichloroethar	ug/L					<1				<1					<5			

1112Tetrachloroetha	ug/L	<1	<1	<5
112 Trichloroethar	ug/L	<1	<1	<5
1122Tetrachloroetha	ug/L	<1	<1	<5
123-Trichloropropa	ug/L	<1	<1	<5
2-Hexanone	ug/L	<10	<10	<5
Acetone	ug/L	<10	<10	5
Acrylonitrile	ug/L	<5	<5	<5
Benzene	ug/L	<1	<1	<5
Bromochlorometha	ug/L	<1	<1	<5
Bromodichlorometha	ug/L	<1	<1	<5
Bromoform	ug/L	<1	<1	<5
Bromomethane	ug/L	<1	<1	<5
c-1,2-Dichloroethe	ug/L	<1	<1	<5
c-1,3Dichloroprope	ug/L	<1	<1	<5
Carbon disulfide	ug/L	<1	2	<5
Carbon Tetrachlori	ug/L	<1	<1	<5
Chlorobenzene	ug/L	<1	<1	<5
124-48-1 orodibromometha	ug/L	<1	<1	<5
Chloroethane	ug/L	<1	<1	<5
Chloroform	ug/L	<1	<1	<5
Chloromethane	ug/L	<1	<1	<5
96-12-8 romochloropropa	ug/L	<1	<1	<5
Dibromomethane	ug/L	<1	<1	<5
Ethyl Benzene	ug/L	<1	<1	<5
m + p Xylene	ug/L	<2	<2	<5
78-93-3 lethyl Ethyl Keton	ug/L	<10	<10	<5
Methylene Chlorid	ug/L	<1	<1	<5
108-10-1 ethylisobutylketo	ug/L	<10	<10	<5
o Xylene	ug/L	<1	<1	<5
Styrene	ug/L	<1	<1	<5
t-1,2-Dichloroether	ug/L	<1	<1	<5
t-1,3Dichloropropel	ug/L	<1	<1	<5
t-1,4-Dichloro-2-bute	ug/L	<1	<1	<5
Tetrachloroethene	ug/L	<1	<1	<5
Toluene	ug/L	<1	<1	<5
Trichloroethene	ug/L	<1	<1	<5
Trichlorofluorometha	ug/L	<1	<1	<5
Vinyl Acetate	ug/L	<1	<10	<5
Vinyl Chloride	ug/L	<1	<1	<5
74-88-4 Iodomethane				<5
1634-04-4 ane2methoxy2methyl				6JN
13330-20-7 Xylene (total)				<5
57-12-5 Cyanide	mg_l			<10

CAS 28I Baseline

Analyte	Units	June_09	Aug_09	Sept_09	Dec_09	Jun_10	Sept_10	Dec_10	Mar_11	Jun_11	Sept_11	DEC_11	Mar_12	Jun_12	Sept_12	**WMean(M)**	**stan dev(sd)**	**STV+M+(3sd)**
Well_Depth	feet	47.75	47.75	47.5	47.7													
Chloride	mg_l	97	108	100	109	130	140	110	96	140	140	150	110	100	136	119	19.23938269	176.7181481
TKN	mg_l	5.4	3.54	3.98	5.6	12	14	13	9.8	1.4	15	18	14	11	18.3	10.3585714	5.509306612	26.88649126
Alkalinity	mg_l	82.7	134	180	174	240	240	200	230	230	240	200	240	190	167	196.264286	46.7274521	336.446642
Spec_Cond	umhos_cm	520	630		584	720	880	720	800	870	910	860	840	880	641	758.076923	130.444408	1149.410147
pH		10.5	6.7		9.53	9.77	8.72	8.9	7.96	8.48	8.9	7.11	9.3lab/8.98f	8.08	9.27	8.66	2.617172579	16.51151774
Ammonia as N	ppm	3.51	2.62	2.66	6	11	13	11	9	14	14	17	13	10	11.2	9.85642857	4.554047409	23.5185708
Bromide	ppm	1.59	>2	<2	2	<.5	1.4	5.9	0.97	<.5	0.8	0.6	<.5	1.2	0.93	1.71	1.534873908	6.314621723
COD	ppm	18.2	>10	16.2	21.1	50	70	<40	<40	60	50	100	80	150	84.9	63.6727273	44.38198575	196.8186845
Chloride	ppm	97	108	100	109	130	140	110	96	140	140	150	110	100	136	119	19.23938269	176.7181481
Hardness	ppm	124	152	150	120	110	180	170	150	120	120	80	110	130	104	130	27.31018407	211.9305522
Mercury	ppm	>.0002	>0.0002		0.0002	<.00025	<.00025			<.0003					<.0001	0.0002	7.55929E-05	0.000426779
Nitrate	ppm	>.1	>0.1	<.1	0.328	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.1	0.328	0.087661687	0.590985062
Sulfate	ppm	97	50.6	79.4	18.5	16	38	48	27	7	12	5	36	32	25.2	35.1214286	26.67872038	115.1575897
Aluminum	ppm	2.4	0.177			3.5	0.69			0.16					0.572	1.24983333	1.378238937	5.384550143
Antimony	ppm	>.06	>0.025			<.025	<.005			<.025					<.0018	#DIV/0!	0	#DIV/0!
Arsenic	ppm	>.01	>0.025			<.025	0.01			<.025					0.0174	0.0137	0.007451622	0.036054865
Barium	ppm	>.2	0.0975			0.066	0.053			0.049					0.0355	0.0602	0.032349137	0.157247411
Beryllium	ppm	>.005	>0.02			<.005	<.001			<.005					<.00012	#DIV/0!	0	#DIV/0!
Boron															0.107			
Cadmium	ppm	>.005	>0.01	<.01	0.01	<.025	<.005	<.005	<.005	<.025	<.005	<.005	<.005	<.025	<.000087	0.01	0.002672612	0.018017837
Calcium	ppm	46	56.1	55	43.3	40	65	62	53	43	41	29	40	44	32.3	46.4071429	10.52714179	77.98856823
Chromium	ppm	>.01	>0.02			<.025	<.005			<.025					0.0096	0.0096	0.003919184	0.021357551
Chromium Hex															<.02			
Cobalt	ppm	>.05	>0.02			<.025	<.005			<.025					0.0003	0.0003	0.000122474	0.000667423
Copper	ppm	>.025	0.00552J			<.05	<.01			<.05					0.0027	0.0027	0.00110227	0.006006811
Iron	ppm	2.82	0.443	0.542	0.792	5.8	1.5	1.1	0.25	0.32	0.86	0.88	0.2	0.8	0.82	1.22335714	1.474097878	5.645650778
Lead	ppm	0.0173	>0.015	<.015	0.015	0.031	0.005	0.005	<.005	<.025	<.005	0.005	<.005	<.025	0.0087	0.01242857	0.009179145	0.039966006
Magnesium	ppm	>5	2.92	3.16	2.92	3.6	5.2	4.9	5.2	3.9	3.3	2	2.4	4	2.21	3.51615385	1.403000905	7.72515656
Manganese	ppm	0.0752	0.0418	0.0405	0.057	0.16	0.05	0.08	0.12	0.17	0.15	0.09	0.06	0.11	0.164	0.09775	0.047649889	0.240699667
Nickel	ppm	>.04	>0.02			<.05	<.01			<.05					0.0163	0.0163	0.006654447	0.036263341
Potassium	ppm	41.6	30.3	36.6	28.6	54	53	60	46	63	64	73	96	65	61.1	55.1571429	18.02356211	109.2278292
Selenium	ppm	>.005	>0.025			<.05	<.01			<.05					<.0021	#DIV/0!	0	#DIV/0!
Silver	ppm	>.01	>0.02			<.025	<.005			<.025					<.00029	#DIV/0!	0	#DIV/0!
Sodium	ppm	68.2	19.2	16.2	25.3	60	69	74	59	84	87	82	67	57	69.6	59.8214286	23.32236228	129.7885154
Thallium	ppm	>.01	>0.015			<.025	<.005			<.025					<.0029	#DIV/0!	0	#DIV/0!
Vanadium	ppm	>.05	>0.02			<.025	<.005			<.025					0.0137	0.0137	0.005593002	0.030479005
Zinc	ppm	0.0389	0.0475			0.08	0.03			<.05					0.0105	0.04138	0.028443306	0.126709919
TDS	ppm	412	402	402	394	390		480	420	750	450	340	480	410	431	443.153846	99.55722488	741.8255208
BOD	ppm	3	7.6	19	2.0	27			6.9	48	>41	27	18	24	33	19.5909091	14.64845374	63.53627031
TOC	ppm	7.09	6.4	11	12	14	15	9.1	9.5	18	15	18	12	11	17.2	12.5207143	3.816684958	23.97076916
Phenolics	ppm	>.5	0.024	0.03	0.0227	0.008	0.034	0.002	0.007	0.05	0.017	0.16	0.072	<.001	0.118	0.04539167	0.047691774	0.188466989
TKN	ppm	5.4	3.54	3.98	5.6	12	14	13	9.8	1.4	15	18	14	11	18.3	10.3585714	5.509306612	26.88649126
DO											0.04	0.11	0.06	1.2	0.04	0.29	0.509509568	1.818528704
Eh/ORP											-300	-200	-200	-80	-265.8	-209.16	84.12804526	43.22413579
1,1 Dichloroethar	ug/L					<1				<1					<5			
1,1 Dichloroether	ug/L					<1				<1					<5			
1,2 Dibromoetha	ug/L					<1				<1					<5			
1,2 Dichlorobenz	ug/L					<1				<1					<5			
1,2 Dichloroethar	ug/L					<1				<1					<5			
1,2 Dichloroprop	ug/L					<1				<1					<5			
1,4 Dichlorobenz	ug/L					<1				<1					<5			
111 Trichloroetha	ug/L					<1				<1					<5			

	1112Tetrachloro	ug/L	<1	<1	<5	
	112 Trichloroetha	ug/L	<1	<1	<5	
	1122Tetrachloro	ug/L	<1	<1	<5	
	123-Trichloropro	ug/L	<1	<1	<5	
	2-Hexanone	ug/L	<10	14	<5	
	Acetone	ug/L	<10	<10	28	
	Acrylonitrile	ug/L	<5	<5	<5	
	Benzene	ug/L	<1	<1	1	
	Bromochloromet	ug/L	<1	<1	<5	
	Bromodichlorom	ug/L	<1	<1	<5	
	Bromoform	ug/L	<1	<1	<5	
	Bromomethane	ug/L	<1	<1	<5	
	c-1,2-Dichloroeth	ug/L	<1	<1	<5	
	c-1,3Dichloropro	ug/L	<1	<1	<5	
	Carbon disulfide	ug/L	<1	1	1	
	Carbon Tetrachlo	ug/L	<1	<1	<5	
	Chlorobenzene	ug/L	<1	<1	<5	
124-48-1	Chlorodibromom	ug/L	<1	<1	<5	
	Chloroethane	ug/L	<1	<1	<5	
	Chloroform	ug/L	<1	<1	<5	
	Chloromethane	ug/L	<1	<1	<5	
96-12-8	Dibromochloropr	ug/L	<1	<1	<5	
	Dibromomethane	ug/L	<1	<1	<5	
	Ethyl Benzene	ug/L	<1	<1	<5	
	m + p Xylene	ug/L	<2	<2	<5	
78-93-3	Methyl Ethyl Ketc	ug/L	<10	<10	4	
	Methylene Chlori	ug/L	<1	<1	<5	
108-10-1	Methylisobutylke	ug/L	<10	<10	<5	
	o Xylene	ug/L	<1	<1	<5	
	Styrene	ug/L	<1	<1	<5	
	t-1,2-Dichloroeth	ug/L	<1	<1	<5	
	t-1,3Dichloroprop	ug/L	<1	<1	<5	
	t-1,4-Dichloro-2-b	ug/L	<1	<1	<5	
	Tetrachloroethen	ug/L	<1	<1	<5	
	Toluene	ug/L	<1	1	2	
	Trichloroethene	ug/L	<1	<1	<5	
	Trichlorofluorom	ug/L	<1	<1	<5	
	Vinyl Acetate	ug/L	<1	<10	<5	
	Vinyl Chloride	ug/L	<1	<1	<5	
74-88-4	Iodomethane	ug/L			<5	
1634-04-4	ane2methoxy2m	ug/L				8
13330-20-7	Xylene (total)	ug/L			<5	
57-12-5	Cyanide	ug/L			<10	

GM26_Op			STV	Dec_12	Mar_13	Jun_13	Dec_13	Jun_14	Oct_14	Dec_14	March_15	June_15	Sept_15	Dec_15	Mar_16	Jun_16	Sept_16	Dec_16	Mar_17
Date Collected				1/4/2013	4/9/2013		3/11/2014	6/30/2014	10/30/2014	1/2/2015	5/15/2015	7/28/2015	10/27/2015	12/10/2015	3/24/2016	6/16/2016	10/6/2016	2/1/2017	4/19/2017
Date Received				1/4/2013	4/9/2013	6/27/2013													
	Analyte	Units																	
	pH			6.95	6.64	6.52	6.08	6.34	6.25	6.64	6.46	6.06	6.42	6.42	6.57	6.84	7.22	7.35	6.46
	spec cond	mhos_c	1739	590	505	614	511	405	578	658	540	377	1006	1236	1196	1196	151	914	740
	ORP		361	133.9	114.7	62.3	71.7	100	131	132.2	145.7	78.8	342.6	329.1	103.4	97.3	44.1	191.2	140.7
	DO	mg/l	4.04	1.49	2.36	4.93	2.46	4.12	4.57	2.85	4.47	4.83	4	3.43	4.69	5.71	3.48	4.55	
	Temp	C		15.89	15.6	14.75	15.56	15.67	17.87	17.21	13.19	15.28	18.5	18.72	14.9	14.43	19.5	16.3	14.71
	Turbidity	NTU		39 D	2.3	3.6	14	3.8	<1	2.9	<1.0	4.3	2.5	6.1	5	53 D			
24959-67-9	Bromide	mg/L	11.1	1.06	0.57	1.12	1.05	0.6	1.28	1.55	0.71	0.79	1.22	1.80	0.78	<0.50	<.5	1.3	0.89
16887-00-6	Chloride	mg/L	146	102 D	66.6 D	97.7 D	107	66.3	105	132	114 D	79.4 D	**226 D**	**250 D**	**299 D**	**276 D**	14.2	**171**	117
14808-79-8	Sulfate	mg/L	170	39.4	52.5 D	131 D	53.7	42.3	47.4	54.6	45.6	20.9	76.6 D	71.8 D	74.4 D	92.5 D	5.8	83.5	59.7
	Nitrogen, Kjeldahl, Total	mg/L	7.1	0.64	0.17	0.17	1.94	<.1	<.1	<0.5	<.100	<0.100	0.500 U	0.500 U	0.100 U	0.21	<.1	2.7	<.1
14797-55-8	Nitrate as N	mg/L		4.17 D	4.89 D	5.32 D	5.12	5.1	5.55 D	6.32	5.94 D	4.43 D	5.03 D	5.24 D	5.06 D	4.75 D	0.73	4.3 D	5
14797-65-0	Nitrite as N	mg/L		0.100 U	0.100 U	<.1	<.1	<.1	<.1	<0.1	<.100	<0.100	0.100 U	0.100 U	0.100 U	<0.10	0.73	<.05	5
	Chemical Oxygen Demand	mg/L	142	10.0 U	10.0 U	10.5	<10	<10	<10.0	<10.	<10.0	10.4	10.3	<10.0 U	<10.0 U	22.5	<10	27.6	31.7
	Phenolics, Total Recoverab	mg/L	0.08	.005 U	.005 U	<.005	<.005	<.005	<.005	<.005	<.00500	<.00500	0.0229	<.005	<5.00 U	<.005	<.005	<.005	0.0172
18540-29-9	Chromium, Hexavalent	mg/L					<.02	<.02			<0.0200							<.02	<.02
	Color	units					15	5			<5.00								
	Alkalinity, Total (As CaCO3	mg/L	276	72.6 D	75.6 D	85.3 D	64.5	59.3	63.2	85.9	70.9 D	91.9	117	137 D	126	145	54.2	107	68.6
	Hardness (As CaCO3)	mg/L	462	220 D	200 D	230 D	190	112	300	240	320 D	108 D	340 D	250 D	290 D	290 D	54	230	250
	Total Dissolved Solids	mg/L	772	423	306	487	328	323	404	407	406	310	**1130**	742	686 D	750	92	557	470
	Chloride	mg/L	146				107	66.3	105	132	114	79.4	**226**	**250**	**299**	**276**	14.2	**171**	117
7664-41-7	Nitrogen, Ammonia (As N)	mg/L	0.28	0.100 U	0.100 U	<.1	<.1	<.1	<.1	<0.1	<0.100	<0.100	.1U	0.100 U	0.100 U	0.13	<.1	<0.10	<.1
	Biochemical Oxygen Dema	mg/L	22.8	2.00 U	2.00 U	<2	<2	<2	<2.	<2.	<2.00	<2.00	2U	2.00 U	2.00 U	<2.0	<2	<2.0	<2
7429-90-5	Aluminum	mg/L	69.2	12.5			1.88	<.2	<2	0.264	.0377 B	0.532	0.209		0.282	3.71		<.2	<.200
7440-36-0	Antimony	mg/L	0.004	.060 U			<.0019	<.06	<.06	<.060	<.0018	<.0018	<0.0006		<.060 U	<.060		<.060	<.060
7440-38-2	Arsenic	mg/L	0.075	.010 U			.0017 B	<.01	<.01	<.01	.0018 B	<.0014	<.0022		<.010 U	<.010		<.010	<10.0
7440-39-3	Barium	mg/L	0.93	.200 U			.134 B	<.2	<.2	<.20	.0987 B	.0955 B	.176 B		.165 J	.161 J		<.2	<.200
7440-41-7	Beryllium	mg/L		.005 U			<.00014	<.05	<.005	<.005	<0.00010	<0.0002	<.0002		<.00030 J	<.005		<.005	<5.0
7440-42-8	Boron	mg/L		.100 U			.0715 B	<.1			.0755 B							0.134	0.0873
7440-43-9	Cadmium	mg/L	0.02	.005 U	.0006 B	<.0001	.0006 B	<.005	<.005	<.005	<0.0001	<.0001	<.0001	<.0001	.00050 J	<.0025	<.0025	<.0025	<.0025
7440-70-2	Calcium	mg/L	148	69.1	54.6	70.6	65.5	48.9	61.1	75.5	59	45.6	84.1	109	111.000 E	128	22.4	84.8	68.9
7440-47-3	Chromium	mg/L	0.19	0.0258			.0045 B	<.01	<.01	<.01	<.0016	.0055 B	.002 B		.009 J	.007 J		<.01	0.037
7440-48-4	Cobalt	mg/L	0.07	.050 U			.0031 B	<.05	<.05	<.05	<.0003	.0005 B	.00040 B		.0008 J	.0027 J		<.050	<.050
7440-50-8	Copper	mg/L	0.46	0.0741			0.0298	<.025	<.025	<.025	.001 B	.006 B	.0038 B		.005 J	.0219 J		<.025	<.025
7439-89-6	Iron	mg/L	81	22	7.28	7.61	2.28	<.1	0.151	0.414	.0483 B	0.841	0.327	0.452	0.489	5.82	0.412	0.22	0.322
7439-92-1	Lead	mg/L	0.64	0.189	0.069	0.0151	0.0919	0.0062	<.005	<.005	.0015 B	0.0101	0.0072	0.0068	0.009	0.0461	0.0134	<.005	<.005
7439-95-4	Magnesium	mg/L	16.8	6.26	5.32	5.85	6.18	<5	4.99	5.7	4.050 B	3.120 B	6.08	7.5	7.770 E	10.9	1.39	5.97	4.51
7439-96-5	Manganese	mg/L	1.5	0.435	0.139	0.0162	0.134	<.015	<.015	<.015	.0013 B	0.0191	0.0148 B	.0118 B	.0136 J	0.0927	0.0274	<.01	<.010
7440-02-0	Nickel	mg/L	0.12	.0400 U			.0032 B	<.04	<.04	<.040	0.00070 B	.0035 B	.0015 B		.0056 J	.0040 J		<.04	<.040
7440-09-7	Potassium	mg/L	74	17.7	13.2	16	15.5	15.6	17.7	22	20.6	14.8	21.9	29.3	25.5	21.2	<5	20.1	18.6
7782-49-2	Selenium	mg/L	0.01	.005 U			.0021 B	<.005	<.010	<.01	<.0022	<.0029	<.0022		<.010 U	.0082 J		<.01	<.010
7440-22-4	Silver	mg/L		.010 U			.00094 B	<.01	<.01	<.01	.0017 B	<.0018	<.0005		<.010 U	<.010		<.01	<.010
7440-23-5	Sodium	mg/L	77.4	26.5	26	33.2	40.8	28.8	42.5	46.4	44.3	24.9	95.8	108	124.000 E	134	6.19	77.8	53.6
7440-28-0	Thallium	mg/L		.0100 U			<.0013	<.01	<.01	<.01	<.0027	<.0023	<.0019		<.010 U	<.010		<.01	<.010
7440-62-2	Vanadium	mg/L	0.12	.0500 U			.0032 B	<.05	<.05	<.05	<.00050	.0013 B	<.0028		<.050 U	.0057 J		<.05	<.050
7440-66-6	Zinc	mg/L	1.16	0.191			0.0697	<.02	<.02	<.02	.0092 B	0.0211	.0123 B		.0091 J	0.0339		<.02	<.020
7439-97-6	Mercury	mg/L	0.002	0.000200 U			0.00028	<.0002	<.0002	<.0002	<.0001	<.0001	<.0001		<.0002 UN	<.0002		<.0002	<0.00020
630-20-6	1,1,1,2-Tetrachloroethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
71-55-6	1,1,1-Trichloroethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
79-34-5	1,1,2,2-Tetrachloroethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
79-00-5	1,1,2-Trichloroethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0

GM26_Op			STV	Dec_12	Mar_13	Jun_13	Dec_13	Jun_14	Oct_14	Dec_14	March_15	June_15	Sept_15	Dec_15	Mar_16	Jun_16	Sept_16	Dec_16	Mar_17
75-34-3	1,1-Dichloroethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
75-35-4	1,1-Dichloroethene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
96-18-4	1,2,3-Trichloropropane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
96-12-8	1,2-Dibromo-3-chloropropa	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
106-93-4	1,2-Dibromoethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
95-50-1	1,2-Dichlorobenzene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
107-06-2	1,2-Dichloroethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
78-87-5	1,2-Dichloropropane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
106-46-7	1,4-Dichlorobenzene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
78-93-3	2-Butanone	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
591-78-6	2-Hexanone	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
108-10-1	4-Methyl-2-pentanone	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
67-64-1	Acetone	µg/L					3 J	5.0 U			5.0 U							<5.0	<5.0
107-13-1	Acrylonitrile	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
71-43-2	Benzene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
74-97-5	Bromochloromethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
75-27-4	Bromodichloromethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
75-25-2	Bromoform	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
74-83-9	Bromomethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
75-15-0	Carbon disulfide	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
56-23-5	Carbon tetrachloride	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
108-90-7	Chlorobenzene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
75-00-3	Chloroethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
67-66-3	Chloroform	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
74-87-3	Chloromethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
156-59-2	cis-1,2-Dichloroethene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
10061-01-5	cis-1,3-Dichloropropene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
124-48-1	Dibromochloromethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
74-95-3	Dibromomethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
	Ethanol	ug/L																	
100-41-4	Ethylbenzene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
74-88-4	Iodomethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
	Isopropyl Alcohol	ug/L																	
75-09-2	Methylene chloride	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
	Silane, methoxytrimethyl-	ug/L																	
	Silanol, trimethyl-	ug/L						5.0 U											
100-42-5	Styrene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
	Sulfur dioxide	ug/L																	
127-18-4	Tetrachloroethene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
108-88-3	Toluene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
156-60-5	trans-1,2-Dichloroethene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
10061-02-6	trans-1,3-Dichloropropene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
110-57-6	trans-1,4-Dichloro-2-butene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
79-01-6	Trichloroethene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
75-69-4	Trichlorofluoromethane	µg/L					<				5.0 U							<5.0	<5.0
	Trimethylsilyl fluoride	ug/L						5.0 U											
	unknown	ug/L					<												
108-05-4	Vinyl acetate	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
75-01-4	Vinyl chloride	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
1330-20-7	Xylene (total)	µg/L					<	10 U			5.0 U							<5.0	<5.0

GM26_Op			STV	Dec_12	Mar_13	Jun_13	Dec_13	Jun_14	Oct_14	Dec_14	March_15	June_15	Sept_15	Dec_15	Mar_16	Jun_16	Sept_16	Dec_16	Mar_17
57-12-5	Cyanide	µg/L					<10	<10			10.0 U							<10	<10
	Total Organic Carbon	mg/L						2.1				1.4						3.1	2.6
	sulfide																	<2	<2
	1,4 dioxane	ug/l																	
27619-97-2	6:2FTS	ng/l																	
39108-34-4	8:2FTS	ng/l																	
2991-50-6	NEtFOSAA	ng/l																	
2355-31-9	NMeFOSAA	ng/l																	
375-73-5	PFBS	ng/l																	
375-22-4	PFBA	ng/l																	
335-77-3	PFDS	ng/l																	
335-76-2	PFDA	ng/l																	
307-55-1	PFDoA	ng/l																	
375-92-8	PFHpS	ng/l																	
375-85-9	PFHpA	ng/l																	
355-46-4	PFHxS	ng/l																	
375-95-1	PFNA	ng/l																	
754-91-6	FOSA	ng/l																	
1763-23-1	PFOS	ng/l																	
335-67-1	PFOA	ng/l																	
376-06-7	PFTeDA?	ng/l																	
72629-94-8	PFTriA	ng/l																	
	PFUnA	ng/l																	
307-24-4	PFHxA	ng/l																	
2706-90-3	PFPeA	ng/l																	

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	Jul_17	Sept_17	Dec_17	Mar_18	Sept_18	Dec_18	Mar_19	Jun_19
	20-Jul	9/26/2017	12/20/2017	3/19/2018	9/24/2018	12/10/2018	3/20/2019	6/10/2019
Analyte								
pH	6.2	6	6.21	6.43	7.27	7.18	7.35	7.44
spec cond	83	555	560	644	937	980	1069	1002
ORP	126.8	-16.1	112.4	123.7	-60.3	-63.8	-71.3	-76.5
DO	2.57	7.2	6.04	7.2	5.6	4.93	5.18	5.49
Temp	15.56	16.98	17.58	15.45	16.4	15.1	12.1	14.9
Turbidity						675 D	340	19.0 D
Bromide	<.5	0.86	0.70	0.85	0.64	0.66	0.80	0.58
Chloride	137 D	137	110 D	118 D	116 D	149 D	225 D	79.8 D
Sulfate	53.9 D	35.4	48.4	62.9 D	49.1	480 D	128 D	80.8 D
Nitrogen, Kjeldahl, Total	1.4	<0.022	<0.10	6.2 D	2.6	0.87	<0.10	<0.50
Nitrate as N	4.1 D	6.1	4.7 D	3.7 D	5.8 D	4.4 D	8.0 D	6.0 D
Nitrite as N	<.05	<0.0020	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chemical Oxygen Demand	23.4	11.9	9.3J	22.0	126	63.7	34.5	10.2
Phenolics, Total Recoverab	<.01	<0.00084	<.0050	.0016J	.0114J	0.0084	0.0138	<.01
Chromium, Hexavalent								
Color								
Alkalinity, Total (As CaCO3	37.4	57.6	65.6	48.0	70.6	93.1	159	112
Hardness (As CaCO3)	200	150	120	147	148	220	250	175
Total Dissolved Solids	363	397	310	417	338	562	664	426
Chloride	137 D	137	110	118	116	149	225 D	79.8 D
Nitrogen, Ammonia (As N)	<.1	<0.016	0.022J	0.062J	0.12	0.047J	0.022J	0.084J
Biochemical Oxygen Dema	<2	<1.0	1.0J	<4.0 D	<4	<4.0 D	1.0J D	1.0J
Aluminum					122			
Antimony					<.060			
Arsenic					0.0908			
Barium					0.409			
Beryllium					0.0079			
Boron					0.0783			
Cadmium	<.0025	<0.000063	<.0025	<.0025	0.00083J	<.0025	<.0025	<.0025
Calcium	60.4	59.2	55.2	63.6	61.7	69.1	97.9	64.6
Chromium					0.124			
Cobalt					0.09			
Copper					0.658			
Iron	28	0.2	0.0539	6.91	194	67.2	25.6	21.3
Lead	0.266	<.0013	<.0050	0.0578	1.69	0.619	0.358	0.189
Magnesium	5.41	3.68	3.63	5.21	15	8.92	10.6	6.41
Manganese	0.583	0.0108	<.0100	0.102	3.38	1.19	0.638	0.4
Nickel					0.119			
Potassium	17	23	17.1	16.8	20.1	20.5	19.2	17.5
Selenium					<.010			
Silver					.0060J			
Sodium	46.8	41.4	44.9	52.1	42.8	65.8	113	45.2
Thallium					<.0100			
Vanadium					0.151			
Zinc					1.11			
Mercury					0.0026			
1,1,1,2-Tetrachloroethane					<1.0			
1,1,1-Trichloroethane					<1.0			
1,1,2,2-Tetrachloroethane					<1.0			
1,1,2-Trichloroethane					<1.0			

	Jul_17	Sept_17	Dec_17	Mar_18	Sept_18	Dec_18	Mar_19	Jun_19
1,1-Dichloroethane					<1.0			
1,1-Dichloroethene					<1.0			
1,2,3-Trichloropropane					<1.0			
1,2-Dibromo-3-chloropropa					<1.0			
1,2-Dibromoethane					<1.0			
1,2-Dichlorobenzene					<1.0			
1,2-Dichloroethane					<1.0			
1,2-Dichloropropane					<1.0			
1,4-Dichlorobenzene					<1.0			
2-Butanone					<5.0			
2-Hexanone					<5.0			
4-Methyl-2-pentanone					<5.0			
Acetone					<5.0			
Acrylonitrile					<1.0			
Benzene					<1.0			
Bromochloromethane					<1.0			
Bromodichloromethane					<1.0			
Bromoform					<1.0			
Bromomethane					<1.0			
Carbon disulfide					<1.0			
Carbon tetrachloride					<1.0			
Chlorobenzene					<1.0			
Chloroethane					<1.0			
Chloroform					<1.0			
Chloromethane					<1.0			
cis-1,2-Dichloroethene					<1.0			
cis-1,3-Dichloropropene					<1.0			
Dibromochloromethane					<1.0			
Dibromomethane					<1.0			
Ethanol								
Ethylbenzene					<1.0			
Iodomethane					<1.0			
Isopropyl Alcohol								
Methylene chloride					<1.0			
Silane, methoxytrimethyl-								
Silanol, trimethyl-								
Styrene					<1.0			
Sulfur dioxide								
Tetrachloroethene					<1.0			
Toluene					<1.0			
trans-1,2-Dichloroethene					<1.0			
trans-1,3-Dichloropropene					<1.0			
trans-1,4-Dichloro-2-butene					<1.0			
Trichloroethene					<1.0			
Trichlorofluoromethane					<1.0			
Trimethylsilyl fluoride								
unknown					6.4J			
Vinyl acetate					<1.0			
Vinyl chloride					<1.0			
Xylene (total)					<3.0			

	Jul_17	Sept_17	Dec_17	Mar_18	Sept_18	Dec_18	Mar_19	Jun_19	
Cyanide					<10				
Total Organic Carbon	1.4			2.2	6.3		4.1	3.9J	
sulfide									
1,4 dioxane				<.2	<2	<.25	.12 J	<0.25	
6:2FTS				200	72	10 J	7.7 J		7.2
8:2FTS				<18	ND	Nd	ND	ND	
NEtFOSAA				<18	ND	ND	ND	ND	
NMeFOSAA				<18	ND	ND	ND	ND	
PFBS				2.8	3.8	4.1	6.5		5.7
PFBA				230	89 B	55 B	43		43
PFDS				<1.8	3	ND	ND	ND	
PFDA				.75 J	2.1	1.6 J	1.6 JI	1.7 J	
PFDoA				<1.8	.56J	ND	ND	ND	
PFHpS				.36 J	.23 J	.38 J	.52 J	.69 J	
PFHpA				160	63	50	33		34
PFHxS				10 B	8 B	11 B	16 B		13
PFNA				7	12	8.9	11		24
FOSA				<1.8	.97 J	ND	ND	ND	
PFOS				24	41	33	39		51
PFOA				75	31	41	36		32
PFTeDA?				<1.8	ND	.57 J	.42 JB	ND	
PFTriA				<1.8	ND	ND	ND	ND	
PFUnA				1.7 J	7.3	4.6	3.1		3.3
PFHxA				680	200	130	84		63
PFPeA				880	350	180	120		94

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J <RL >mdl

GM26I_Op			STV	Dec_12	Mar_13	Jun_13	Dec_13	Jun_14	Oct_14	Dec_14	March_15	June_15	Sept_15	Dec_15	Mar_16	Jun_16	Sept_16	Sept_16
Date Collected				1/4/2013	4/9/2013	6/28/2013	3/11/2014	6/30/2013	10/30/2014	1/2/2015	5/15/2015	7/28/2015	10/27/2015	12/10/2015	3/24/2016	6/16/2016	10/6/2016	10/6/2016
Date Received				1/4/2013	4/9/2013													DUP
	Analyte	Units																
	pH			6	6.28	6.19	6.21	6.35	6.03	6.32	6.27	6.06	6.28	6.44	6.71	7.1	6.92	
	spec cond	umhos_cm	1414	440	387	505	519	323	582	533	668	347	950	1148	569	1104	686	
	ORP		386	120.9	133.5	77.2	69.2	93.8	150.6	124.2	170	85.7	343.4	343.9	92	99.8	56.2	
	DO	mg/l	2.54	1.83	2.49	**2.59**	**3.61**	**3.18**	**3.85**	2.38	4.44	5.26	3.81	4.34	5.26	5.34	4.26	
	Temp	C		15.16	14.24	14.82	15.14	15.92	17.47	16.95	13.48	14.97	18.04	18.32	14.45	15	18.9	
	Turbidity	NTU		21 D	2.4	2.4	11	1.2	2.0	4.5	1.3	5.9	1.2	21	2.5	370 D		
24959-67-9	Bromide	mg/L	6.9	0.68	0.58	1.15	0.91	0.6	1.33	1.29	0.66	0.80	1.55	2.32	0.59	<0.500	0.87	0.9
16887-00-6	Chloride	mg/L	137.5	68.4 D	62.4 D	95.2 D	129	63.9	110	109	**198 D**	114 D	**283 D**	**239 D**	123 D	**236 D**	143	**150**
14808-79-8	Sulfate	mg/L	94.3	45.2 D	41.7	49.4	44.5	30.1	43.5	49.4	39.7	24.9	74.1 D	68.6 D	50.5 D	82.6 D	56.6	58.3
	Nitrogen, Kjeldahl, Total	mg/L	1.72	0.50	0.100 U	0.100 U	0.48	<.1	<0.10	<0.50	<0.500	<1.00	<0.5	0.34	0.100 U	0.72	<.1	<.1
14797-55-8	Nitrate as N	mg/L	7.85	1.02 D	3.75 D	4.68 D	4.65	4.43	5.51	6.05	5.09 D	4.31 D	6.06 D	5.16 D	4.44 D	3.78 D	6.2	<.25
14797-65-0	Nitrite as N	mg/L		0.100 U	0.100 U	0.100 U	<.1	<.1	<0.100	<0.1	<.100	<0.1	<0.1	<0.1	0.100 U	<.1	6.2	<.25
	Chemical Oxygen Demand	mg/L	188.1	10.0 U	10.0 U	10.0 U	<10	53.4	<10.0	<10	<10.0	<10.	<10	12.9	10.0 U	22.5	13	
	Phenolics, Total Recoverable	mg/L	0.071	.005 U	.005 U	.005 U	<.005	<.005	<.005	<.005	<.0005	<.005	0.0118	0.0057	<.005 U	<.005	0.0073	0.0094
18540-29-9	Chromium, Hexavalent	mg/L					<.02	<.02			<.002							
	Color	units					15	<5				5						
	Alkalinity, Total (As CaCO3)	mg/L	168.1	32.7 D	38.6	48.5 D	52.8	32.2	36.8	37.7	48.1	95.3	106	114 D	85.4	121	94.3	96
	Hardness (As CaCO3)	mg/L	230	140 D	120 D	200 D	180	120	220	140	130 D	116 D	**280 D**	**268 D**	144 D	**244 D**	188	200
	Total Dissolved Solids	mg/L	514	343	205	425	336	283	402	331	489	386	**690**	**706**	383	**766**	474	490
	Chloride	mg/L	137.5				129	63.9		109	**198 D**	114	**283**	**239**	123	**236**	**143**	**150**
7664-41-7	Nitrogen, Ammonia (As N)	mg/L	0.53	0.100 U	0.100 U	0.100 U	<.1	<.1	<.1	<0.10	<.100	<0.1	<.1	<0.1	<.100 U	0.15	<.1	<.1
	Biochemical Oxygen Demand	mg/L	10	2.00 U	2.00 U	2.00 U	<2	<2	<2	<2.	<2.00	<2.00	<2.00	<2.00	<2.00 U	<2.0	<2	<2
	Total Organic Carbon	mg/L	5.11			1.9	1.6	1.4	**10**	**11.7**	1.1	1.4	2.59	4.85	1.69	**10.3**		
7429-90-5	Aluminum	mg/L	2.86	**5.37**			**14.8**	<.2	<.2	0.419	.0719 B	.150 B	.0301 B		.0458 J	37.1		
7440-36-0	Antimony	mg/L	0.01	.060 U			.0074 B	<.06	<.06	<.06	<.0018	<.0018	<.0006		.0102 J	13.1 J		
7440-38-2	Arsenic	mg/L	0.005	.010 U			0.0191	<.01	<.01	<.01	.0017 B	<.0014	<.0022		<.010 U	0.0368		
7440-39-3	Barium	mg/L	0.233	.200 U			0.224	<.2	<.2	<.2	.123 B	.04 B	.174 B		.0809 J	0.437		
7440-41-7	Beryllium	mg/L		.005 U			.0009 B	<.005	<.005	<.005	<.0001	<.0002	<.0002		<.0050 U	.0028 J		
7440-42-8	Boron	mg/L		.100 U			.0506 B	<.1			.0443 B							
7440-43-9	Cadmium	mg/L	0.02	.005 U	.0001 U	.00010 U	.0025 B	<.005	<.005	<.005	<.00010	.00030 B	<.00010	<.0001	<.0025 U	<.0025	<.0025	<.0025
7440-70-2	Calcium	mg/L	83.6	45.6	34.8	52.6	60.5	38.4	54.9	53.3	49.3	45.2	**100**	**106**	61.200 E	**103**	78.6	73
7440-47-3	Chromium	mg/L	0.02	0.0147			**0.0311**	<.01	<.01	<.01	<.0016	.0012 B	.00050 B		.0028 J	0.06		
7440-48-4	Cobalt	mg/L		.050 U			0.0118	<.05	<.05	<.05	<.0003	.00040 B	<.0002		<.050 U	.0293 J		
7440-50-8	Copper	mg/L	0.063	**0.0872**			**0.213**	<.025	<.025	<.025	.0109 B	.0127 B	.0060 B		.0049 J	0.419		
7439-89-6	Iron	mg/L	5.35	**12.6**	1.55	0.468	**30.9**	0.15	0.251	0.888	0.123	0.278	.0338 B	2.06	.0915 J	0.871	0.446	0.312
7439-92-1	Lead	mg/L	0.042	**0.061**	0.0143	0.0103	**0.162**	0.0103	<.005	0.0058	.002 B	.0028 B	0.0032	0.0164	.0026 J	0.354	<.005	<.005
7439-95-4	Magnesium	mg/L	7.93	5.9	3.99 B	5.64	6.26	<5	4.85	3.77	3.6 B	3.930 B	6.77	7.59	3.930 E	**13.3**	5.65	5.58
7439-96-5	Manganese	mg/L	0.18	0.124	0.0208	.0059 B	**0.299**	<.015	<.015	<.015	.0031 B	.0086 B	.0031 B	0.031	.0024 J	0.819	<.01	<.01
7440-02-0	Nickel	mg/L	0.003	.040 U			.0123 B	<.04	<.04	<.04	.0014 B	.0013 B	<.0003		.0027 J	.0239 J		
7440-09-7	Potassium	mg/L	53	10.2	8.7	11.5	16.1	13.6	17.5	21.2	14.6	12.6	24.9	33.7	21.6	24.5	15.3	17.4
7782-49-2	Selenium	mg/L		.005 U			.008 B	<.005	<.01	<.01	<.0022	.0035 B	<.22		<.010 U	<.010		
7440-22-4	Silver	mg/L		.010 U			<.00043	<.01	<.01	<.01	.0013 B	<.0018	<.0005		<.010 U	.003 J		
7440-23-5	Sodium	mg/L	50	25.6	19.2	30.5	45.4	23.3	42.8	40.6	92.4	34.7	111	95	66.200 E	116	55.6	57.2
7440-28-0	Thallium	mg/L		.010 U			<.0013	<.01	<.01	<.01	<.0027	<.0023	<.0019		<.010 U	<.010		
7440-62-2	Vanadium	mg/L	0.002	.050 U			.0242 B	<.05	<.05	<.05	<.0005	.00050 B	<.0028		<.050 U	0.0623		
7440-66-6	Zinc	mg/L	0.17	0.0459			0.12	<.02	<.02	<.02	.0106 B	0.0222	.0101 B		<.020 U	0.231		
7439-97-6	Mercury	mg/L	0.0004	0.0002 U			0.00036	<.0002	<.0002	<.0002	<.0001	<.0001	<.0001		<.0002 UN	0.00068		
630-20-6	1,1,1,2-Tetrachloroethane	µg/L					<	5.0 U			5.0 U							
71-55-6	1,1,1-Trichloroethane	µg/L					<	5.0 U			5.0 U							
79-34-5	1,1,2,2-Tetrachloroethane	µg/L					<	5.0 U			5.0 U							
79-00-5	1,1,2-Trichloroethane	µg/L					<	5.0 U			5.0 U							

GM26I_Op			STV	Dec_12	Mar_13	Jun_13	Dec_13	Jun_14	Oct_14	Dec_14	March_15	June_15	Sept_15	Dec_15	Mar_16	Jun_16	Sept_16	Sept_16
75-34-3	1,1-Dichloroethane	µg/L					<	5.0 U			5.0 U							
75-35-4	1,1-Dichloroethene	µg/L					<	5.0 U			5.0 U							
96-18-4	1,2,3-Trichloropropane	µg/L					<	5.0 U			5.0 U							
96-12-8	1,2-Dibromo-3-chloropropane	µg/L					<	5.0 U			5.0 U							
106-93-4	1,2-Dibromoethane	µg/L					<	5.0 U			5.0 U							
95-50-1	1,2-Dichlorobenzene	µg/L					<	5.0 U			5.0 U							
107-06-2	1,2-Dichloroethane	µg/L					<	5.0 U			5.0 U							
78-87-5	1,2-Dichloropropane	µg/L					<	5.0 U			5.0 U							
106-46-7	1,4-Dichlorobenzene	µg/L					<	5.0 U			5.0 U							
78-93-3	2-Butanone	µg/L					<	5.0 U			5.0 U							
591-78-6	2-Hexanone	µg/L					<	5.0 U			5.0 U							
108-10-1	4-Methyl-2-pentanone	µg/L					<	5.0 U			5.0 U							
67-64-1	Acetone	µg/L					<	5.0 U			5.0 U							
107-13-1	Acrylonitrile	µg/L					<	5.0 U			5.0 U							
71-43-2	Benzene	µg/L					<	5.0 U			5.0 U							
74-97-5	Bromochloromethane	µg/L					<	5.0 U			5.0 U							
75-27-4	Bromodichloromethane	µg/L					<	5.0 U			5.0 U							
75-25-2	Bromoform	µg/L					<	5.0 U			5.0 U							
74-83-9	Bromomethane	µg/L					<	5.0 U			5.0 U							
75-15-0	Carbon disulfide	µg/L					<	5.0 U			5.0 U							
56-23-5	Carbon tetrachloride	µg/L					<	5.0 U			5.0 U							
108-90-7	Chlorobenzene	µg/L					<	5.0 U			5.0 U							
75-00-3	Chloroethane	µg/L					<	5.0 U			5.0 U							
67-66-3	Chloroform	µg/L					<	5.0 U			5.0 U							
74-87-3	Chloromethane	µg/L					<	5.0 U			5.0 U							
156-59-2	cis-1,2-Dichloroethene	µg/L					<	5.0 U			5.0 U							
10061-01-5	cis-1,3-Dichloropropene	µg/L					<	5.0 U			5.0 U							
124-48-1	Dibromochloromethane	µg/L					<	5.0 U			5.0 U							
74-95-3	Dibromomethane	µg/L					<	5.0 U			5.0 U							
	Ethanol	ug/L																
100-41-4	Ethylbenzene	µg/L					<	5.0 U			5.0 U							
74-88-4	Iodomethane	µg/L					<	5.0 U			5.0 U							
	Isopropyl Alcohol	ug/L																
75-09-2	Methylene chloride	µg/L					<	5.0 U			5.0 U							
	Silane, methoxytrimethyl-	ug/L																
	Silanol, trimethyl-	ug/L																
100-42-5	Styrene	µg/L					<	5.0 U			5.0 U							
	Sulfur dioxide	ug/L																
127-18-4	Tetrachloroethene	µg/L					<	5.0 U			5.0 U							
108-88-3	Toluene	µg/L					<	5.0 U			5.0 U							
156-60-5	trans-1,2-Dichloroethene	µg/L					<	5.0 U			5.0 U							
10061-02-6	trans-1,3-Dichloropropene	µg/L					<	5.0 U			5.0 U							
110-57-6	trans-1,4-Dichloro-2-butene	µg/L					<	5.0 U			5.0 U							
79-01-6	Trichloroethene	µg/L					<	5.0 U			5.0 U							
75-69-4	Trichlorofluoromethane	µg/L					<	5.0 U			5.0 U							
	Trimethylsilyl fluoride	ug/L																
	unknown	ug/L					<											
108-05-4	Vinyl acetate	µg/L					<	5.0 U			5.0 U							
75-01-4	Vinyl chloride	µg/L					<	5.0 U			5.0 U							
1330-20-7	Xylene (total)	µg/L					<	5.0 U			5.0 U							
57-12-5	Cyanide	µg/L					<10	10 U			10.0 U							
	Total Organic Carbon	mg/L						1.6	1.4									
	sulfide																	
	1,4 dioxane	ug/l																

GM26I_Op			STV	Dec_12	Mar_13	Jun_13	Dec_13	Jun_14	Oct_14	Dec_14	March_15	June_15	Sept_15	Dec_15	Mar_16	Jun_16	Sept_16	Sept_16
27619-97-2	6:2FTS	ng/l																
39108-34-4	8:2FTS	ng/l																
2991-50-6	NEtFOSAA	ng/l																
2355-31-9	NMeFOSAA	ng/l																
375-73-5	PFBS	ng/l																
375-22-4	PFBA	ng/l																
335-77-3	PFDS	ng/l																
335-76-2	PFDA	ng/l																
307-55-1	PFDoA	ng/l																
375-92-8	PFHpS	ng/l																
375-85-9	PFHpA	ng/l																
355-46-4	PFHxS	ng/l																
375-95-1	PFNA	ng/l																
754-91-6	FOSA	ng/l																
1763-23-1	PFOS	ng/l																
335-67-1	PFOA	ng/l																
376-06-7	PFTeA	ng/l																
72629-94-8	PFTriA	ng/l																
	PFUnA	ng/l																
307-24-4	PFHxA	ng/l																
2706-90-3	PFPeA	ng/l																

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	Dec_16	Mar_17	Jul_17	Sept_17	9/17dup	Sept17dup	Dec_17	Mar_18	Sept_18	Dec_18	Mar_19	Jun_19
	2/1/2017	4/19/2017	7/20/2017	9/26/2017	lab error	rerun lab	12/20/2017	3/19/2018	9/24/2018	12/10/2018	3/20/2019	6/10/2019
Analyte												
pH	7.05	6.54	5.48	6.06			6.17	6	6.57	6.5	7.15	6.78
spec cond	965	654	522	550			568	442	959	827	986	1072
ORP	203.4	205	96.2	-40.2			93.7	171.6	-36.6	-29.3	-62.7	-45.6
DO	4.55	5.22	1.72	7.28			6.11	5.43	6.43	3.76	4.7	3.45
Temp	16.58	14.78	15.13	16.89			17.31	15.27	16.2	13.9	12.8	15.5
Turbidity										219 D	70	10.2 D
Bromide	1.4	0.94	0.66	1.1	1.1	1.1	0.83	0.52	0.89	0.49J	0.43J	0.53
Chloride	192 D	104 D	107 D	**149**	136	136	109 D	70.6 D	128 D	67.9 D	62.2 D	72.5 D
Sulfate	85.3 D	55.0 D	42.5	35.5	35.3	35.3	49.6	48.6	48.1	49.8	58.0 D	59.3 D
Nitrogen, Kjeldahl, Total	<0.10	<0.10	<.1	<0.022	<0.022	<.022	<0.10	<0.10	0.98	0.51	<0.10	<0.50
Nitrate as N	4.3 D	5.6 D	4.3 D	6.4	5.1	5.1	4.5 D	3.5 D	5.6 D	2.9 D	4.7 D	4.1 D
Nitrite as N	<0.050	<0.050	<.05	<0.0020	<0.0020	<.002	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chemical Oxygen Demand	27.6	17.2	<10	11.9	<6.4	<6.4	11.4	11.4	44.1	28.6	<10.0	<10.0
Phenolics, Total Recoverable	<.005	0.0292	<.005	<0.00084	<0.00084	<.00084	.0029J	.0029J	0.0268	0.0069	.0043J	<.01
Chromium, Hexavalent	<.02	<.02							<0.20 D			
Color	5											
Alkalinity, Total (As CaCO3)	107	72.4	69.4	67.6	61.8	61.8	49.8	70.6	48.1	51.3	51.2	52.5
Hardness (As CaCO3)	**230**	200	140	148	150	150	120	148	170	120	92.0	100
Total Dissolved Solids	**557**	429	326	415	381	381	352	338	342	256	248	340
Chloride	**192**	104	107 D	**149**	136	136	109	116		67.9	62.2	72.5
Nitrogen, Ammonia (As N)	<.1	<.1	0.13	<0.016	<0.016	<.016	<0.10	0.12	0.075J	0.057J	<0.10	0.066J
Biochemical Oxygen Demand	<2	<2	<2	<1.0	<1.0	<1	1.0J	<4	<4.0 D	<4.0 D	1.0J	1.0J
Total Organic Carbon	1.5	2.3	<10	1.3	1.3	1.3	1.4	1.2		2.2	1.9	1.8
Aluminum	<.2	<.200							29.8			
Antimony	<.06	<.060							<.060			
Arsenic	<.01	<.010							0.0429			
Barium	<.200	<.200							0.259			
Beryllium	<.005	<.005							.0024J			
Boron	0.124	0.5852							.0444J			
Cadmium	<.0025	<.0025	<.0025	<0.000063	<0.000063	<.000063	0.00017J	<.0025	<.0025	<.0025	<.0025	<.0025
Calcium	**86**	60.8	53	56.8	<.0394	53	52	43.1	51.3	42.7	40.7	40.8
Chromium	<.010	<.010							0.0353			
Cobalt	<.050	<.050							.0232J			
Copper	<.025	<.025							0.321			
Iron	0.209	<.100	2.46	0.375	<.0109	<.0109	0.115	0.328	70.6	23.2	6.02	7.28
Lead	<.005	<.005	<.005	<.0013	<.0013	<.0013	<.0050	.0024J	0.248	0.0863	0.029	0.0287
Magnesium	6.2	3.69	2.76	3.29	<.0704	3.11	3.63	3.3	7.79	4.04	3.15	3.44
Manganese	<.010	<.010	0.0266	<0.00065	<0.00065	<.00065	.0028J	.0043J	0.736	0.23	0.0721	0.0759
Nickel	<.040	<.040							.0256J			
Potassium	20.6	18.4	17.2	19.6	<.83	14.6	17.2	13.4	14.4	15	13.2	12.6
Selenium	<.010	<.010							<.0100			
Silver	<.010	<.010							<.0100			
Sodium	83.9	49.6	38.1	39.8	<.075	41.2	46.5	33.4	47.4	38.3	31.9	33
Thallium	<.010	<.010							<.0100			
Vanadium	<.050	<.050							0.0523			
Zinc	<.020	<.020							0.181			
Mercury	<0.0002								0.00058			
1,1,1,2-Tetrachloroethane	<5.0	<5.0							<1.0			
1,1,1-Trichloroethane	<5.0	<5.0							<1.0			
1,1,2,2-Tetrachloroethane	<5.0	<5.0							<1.0			
1,1,2-Trichloroethane	<5.0	<5.0							<1.0			

	Dec_16	Mar_17	Jul_17	Sept_17	9/17dup	Sept17dup	Dec_17	Mar_18	Sept_18	Dec_18	Mar_19	Jun_19
1,1-Dichloroethane	<5.0	<5.0							<1.0			
1,1-Dichloroethene	<5.0	<5.0							<1.0			
1,2,3-Trichloropropane	<5.0	<5.0							<1.0			
1,2-Dibromo-3-chloropropane	<5.0	<5.0							<1.0			
1,2-Dibromoethane	<5.0	<5.0							<1.0			
1,2-Dichlorobenzene	<5.0	<5.0							<1.0			
1,2-Dichloroethane	<5.0	<5.0							<1.0			
1,2-Dichloropropane	<5.0	<5.0							<1.0			
1,4-Dichlorobenzene	<5.0	<5.0							<1.0			
2-Butanone	<5.0	<5.0							<5.0			
2-Hexanone	<5.0	<5.0							<5.0			
4-Methyl-2-pentanone	<5.0	<5.0							<5.0			
Acetone	<5.0	<5.0							<5.0			
Acrylonitrile	<5.0	<5.0							<1.0			
Benzene	<5.0	<5.0							<1.0			
Bromochloromethane	<5.0	<5.0							<1.0			
Bromodichloromethane	<5.0	<5.0							<1.0			
Bromoform	<5.0	<5.0							<1.0			
Bromomethane	<5.0	<5.0							<1.0			
Carbon disulfide	<5.0	<5.0							<1.0			
Carbon tetrachloride	<5.0	<5.0							<1.0			
Chlorobenzene	<5.0	<5.0							<1.0			
Chloroethane	<5.0	<5.0							<1.0			
Chloroform	<5.0	<5.0							<1.0			
Chloromethane	<5.0	<5.0							<1.0			
cis-1,2-Dichloroethene	<5.0	<5.0							<1.0			
cis-1,3-Dichloropropene	<5.0	<5.0							<1.0			
Dibromochloromethane	<5.0	<5.0							<1.0			
Dibromomethane	<5.0	<5.0							<1.0			
Ethanol												
Ethylbenzene	<5.0	<5.0							<1.0			
Iodomethane	<5.0	<5.0							<1.0			
Isopropyl Alcohol												
Methylene chloride	<5	<5.0							<1.0			
Silane, methoxytrimethyl-												
Silanol, trimethyl-		<5.0										
Styrene	<5	null							<1.0			
Sulfur dioxide												
Tetrachloroethene	<5.0	<5.0							<1.0			
Toluene	<5.0	<5.0							<1.0			
trans-1,2-Dichloroethene	<5.0	<5.0							<1.0			
trans-1,3-Dichloropropene	<5.0	<5.0							<1.0			
trans-1,4-Dichloro-2-butene	<5.0	<5.0							<1.0			
Trichloroethene	<5.0	<5.0							<1.0			
Trichlorofluoromethane	<5.0	<5.0							<1.0			
Trimethylsilyl fluoride												
unknown									9.5J			
Vinyl acetate	<5.0	<5.0							<1.0			
Vinyl chloride	<5.0	<5.0							<1.0			
Xylene (total)	<5.0	<5.0							<3.0			
Cyanide	<10	<10							<10.0			
Total Organic Carbon		1.5	2.2						2.9		1.9	1.8
sulfide	<2	<2										
1,4 dioxane								<.2	<2	<.25	.12 J	<0.25

	Dec_16	Mar_17	Jul_17	Sept_17	9/17dup	Sept17dup	Dec_17	Mar_18	Sept_18	Dec_18	Mar_19	Jun_19
6:2FTS								170	89	16 J	10 J	9.7
8:2FTS								<18	ND	ND	ND	ND
NEtFOSAA								<18	ND	ND	ND	ND
NMeFOSAA								<18	ND	ND	ND	ND
PFBS								2.7	2.5	3.4	3.9	4.5
PFBA								150 B	57 B	54 B	43	49
PFDS								<1.8	ND	ND	ND	ND
PFDA								.52 J	1.1 J	1.2 J	1 J	.92 J
PFDoA								<1.8	ND	ND	ND	ND
PFHpS								.28 J	ND	.36 J	.66 J	.57 J
PFHpA								120	46	55	36	41
PFHxS								7.8 B	8.2 B	8.3 B	11 B	14
PFNA								4.8	6.4	7.1	8.8	11
FOSA								<1.8	ND	ND	ND	ND
PFOS								15	19	21	25	27
PFOA								52	25	28	26	27
PFTeA								<1.8	ND	Nd	ND	ND
PFTriA								<1.8	ND	ND	ND	ND
PFUnA								2.6	4.3	3.3	2.5	1.9
PFHxA								430	130	97	67	86
PFPeA								560	200	150	110	120

B found in blank
J <RL >mdl

GM27_Op	GM-27 OP		STV		Dec_12	mar_13	Jun_13	Dec_13	June_14	Oct_2014	Dec_14	March_15	June_15	Sept_15	Dec_15	Mar_16	Jun_16	Sept_16	Dec_16
Date Collected					01/04/13	4/9/2013	6/28/2013	3/11/2014	6/30/2014	10/30/2014	1/2/2015	5/15/2015	7/28/2015	10/27/2015	12/10/2015	3/24/2016	6/16/2016	10/6/2016	2/1/2017
Date Received					1/4/2013	4/9/2013													
	Analyte	Units																	
	pH				8.09	7.69	7.56	8.39	8.04	8.12	8.17	8.47	8.75	8.25	7.38	8.29	8.46	8.74	9.22
	spec cond	umhos_cm	2733		903	1870	1815	803	1295	1528	1675	1538	1559	1703	1627	1381	1260	277	1320
	ORP		368.4		-209.6	-159.4	-181.3	-203.3	-216.4	212.3	-211.2	-258.6	-183.9	-150.6	774.9	-180.2	-228.2	-248.6	-60.3
	DO	mg/l	4		0.3	0.15	0.79	0.28	0.33	0.72	0.07	0.78	0.61	0.16	0.35	0.33	0.19	0.65	0.28
	Temp	C			12.01	15.23	13.95	14.35	13.83	14.73	14.8	13.04	13.72	14.72	14.91	14.61	14.07	14.92	13.85
	Turbidity	NTU			110 D	27 D	14 D	120	8.5	7.5	21	4	5.9	17	3.8	2.5	11		
24959-67-9	Bromide	mg/L		10.1	0.76	0.80	2.06	1.36	2.2	3.14	4.02	3.57	3.61	3.99	4.23	3.83	3.18	3.7	2.8
16887-00-6	Chloride	mg/L		1240.2	161 D	340 D	439 D	452	428	406	498	456 D	509 D	492 D	457 D	409 D	359 D	349	300 D
14808-79-8	Sulfate	mg/L		32.1	5.00 U	5.00 U	5.00 U	<5	<5	<5.00	<5.	<5.00	<5.00	11.0	<5.00	<5.00	5.00 U	18.3	<5.0
	Nitrogen, Kjeldahl, Total	mg/L		17.6	14.6 D	14.8 D	11.6 D	**25.5**	**25.4**	**38.6**	**37.6**	43.2 D	43.1 D	41.5 D	42.7 D	39.7 D	51.9 D	32.8	30.8 D
14797-55-8	Nitrate as N	mg/L		0.22	0.100 U	0.100 U	0.500 U	<.1	<.1	<0.1	<.1	<0.1	<0.1	<0.10	<.10	<0.100	<0.10	**0.27**	<0.050
14797-65-0	Nitrite as N	mg/L			0.100 U	0.100 U	0.100 U	<.1	<.1	<0.1	<0.1	<0.1	<0.1	<0.10	<0.1	<0.100	<0.10	0.27	<0.050
	Chemical Oxygen Demand	mg/L		441	65.7	80.9	70.4	68.8	73.1	66.7	68.0	68.8	75.7	80.0	75.9	72	108	96.2	115
	Phenolics, Total Recoverable	mg/L		0.152	0.04	.005 U	.005 U	0.0081	<.005	0.0055	<.0050	0.0075	<.005	0.02	0.0257	0.0124	0.0099	0.0198	0.013
18540-29-9	Chromium, Hexavalent	mg/L						<.02	<.02			<0.02							<.02
	Color	units						250	100			70.0 D							7 D
	Alkalinity, Total (As CaCO3)	mg/L		362	243 D	304 D	196 D	206	201	186	222	150 D	102	168	163 D	177	186	183	201
	Hardness (As CaCO3)	mg/L		720.3	380 D	420 D	420 D	220	300	400	**1000**	220 D	290 D	340 D	220 D	208 D	208 D	200	170
	Total Dissolved Solids	mg/L		1980	540 D	924 D	1320 D	554	1020	1030	982	1130	1380	936	946	810 D	918	774	690
	Chloride	mg/L		1240.2				452	428	406	498	456	509	492	457	409	359	349	300 D
7664-41-7	Nitrogen, Ammonia (As N)	mg/L		14.8	8.13 D	14.2 D	9.94 D	**23.2**	**29.5**	**36.2 D**	**38.3**	41.7 D	43.6 D	49.3 D	48.9 D	44.9 D	39.4 D	40.3	34.2
	Biochemical Oxygen Demand	mg/L		114.6	34	32	27	20	29	19	<2.	28	28	22	7	2	17	34.1	<2
	Total Organic Carbon			39.1			26.5 D	29.6	29.3	**69.6**	**82.9**	21	24.3	23.3	22.1	24	27.7		
7429-90-5	Aluminum	mg/L		50.5	19.5			5.66	<.2	<.2	<.2	.0532 B	0.551	0.41	.0552 J	0.543			<.200
7440-36-0	Antimony	mg/L			.060 U			<.0019	<.06	<.06	<.06	<.0018	.0068 B	.00061 B	.0049 J	.0044 J			<.060
7440-38-2	Arsenic	mg/L		0.02	.010 U			.0057 B	<.01	<.01	<.01	.0046 B	.0025 B	<.0022	<.010 U	<.010			<.010
7440-39-3	Barium	mg/L		1.5	0.361			0.25	0.269	0.275	0.314	0.23	0.294	0.251	0.229	0.231			<.200
7440-41-7	Beryllium	mg/L		0.002	.005 U			<.00014	<.005	<.005	<.005	<.0001	<.0002	<.0002	<.0050	<.0050			<.005
7440-42-8	Boron	mg/L			0.15			0.152	0.159			0.136							0.155
7440-43-9	Cadmium	mg/L		0.02	.005 U	.0001 U	.00010 U	.0011 B	<.05	<.005	<.005	.0002 B	.001 B	<.00010	<.0001	<.0025 U	<.0025	<.0025	<.0025
7440-70-2	Calcium	mg/L		229.2	106	101	135	75.3	94	93.2	110	89.8	101	86.4	69.9	79.800 E	79.5	73.4	57.8
7440-47-3	Chromium	mg/L		0.123	**0.156**			0.0256	<.01	<.01	<.01	<.0016	0.0148	.0062 B		.0034 J	.0026 J		<.010
7440-48-4	Cobalt	mg/L		0.03	.050 U			.0035 B	<.05	<.05	<.05	<.0003	.0004 B	.0005 B		.00040 J	.00040 J		<.0500
7440-50-8	Copper	mg/L		0.19	0.0635			.0182 B	<.025	<.025	<.025	.0014 B	.0115 B	.0029 B		.0012 J	.0062 J		<.025
7439-89-6	Iron	mg/L		54.5	32.6	7.14	3.620	9.64	2.87	2.82	4.27	1.38	4.82	2.18	1.43	1.41	3.09	1.78	0.764
7439-92-1	Lead	mg/L		0.4	0.224	0.0149	.0067	0.0787	0.0073	<.005	<.005	<.0013	0.0116	0.0073	.0015 B	.0027 J	0.0062	<.005	<.0050
7439-95-4	Magnesium	mg/L		38.3	12.8	16.2	10.200	8.96	12.3	11.4	14.2	8.45	13	9.53	7.51	8.370 E	10	8.01	6.41
7439-96-5	Manganese	mg/L		0.75	0.428	0.204	0.219	0.197	0.145	0.12	0.149	0.0933	0.146	0.107	0.0849	0.0909	0.12	0.0908	0.058
7440-02-0	Nickel	mg/L		0.074	0.0729			.0166 B	<.04	<.04	<.040	.0098 B	.0128 B	.0118 B		.0104 J	.0097 J		<.040
7440-09-7	Potassium	mg/L		75	27.3	28.9	29.600	33.4	50.8	45.9	45.4	46.3	48.3	49.2	51.3	53.4	50.2	44.6	49.1
7782-49-2	Selenium	mg/L			.005 U			.0035 B	<.005	<.01	<.01	<.0022	<.0029	<.0022		<.010	<.010		<.010
7440-22-4	Silver	mg/L			.010 U			<.00043	<.01	<.01	<.01	.0014 B	<.0018	<.0005		<.010	<.010		<.010
7440-23-5	Sodium	mg/L		354	87.8	168	137	88.2	165	155	180	167	177	163	152	151.000 E	151	118	117
7440-28-0	Thallium	mg/L			.010 U			<.0013	<.01	<.01	<.01	<.0027	<.0023	<.0019		<.010	<.010		<.010
7440-62-2	Vanadium	mg/L		0.15	.050 U			.0177 B	<.05	<.05	<.05	.0005 B	.0022 B	<.0028		<.050	<.050		<.050
7440-66-6	Zinc	mg/L		1.01	0.338			0.115	<.02	<.02	<.02	.0114 B	0.0742	.0173 B		<.020	0.0207		<.020
7439-97-6	Mercury	mg/L		0.0004	0.0002 U			.00012 B	<.0002	<.0002	<.0002	<.00010	<.00010	<.0001		.000058 JN	<.00020		<0.0002
630-20-6	1,1,1,2-Tetrachloroethane	µg/L						<	5.0 U			5.0 U							<5.0
71-55-6	1,1,1-Trichloroethane	µg/L						<	5.0 U			5.0 U							<5.0
79-34-5	1,1,2,2-Tetrachloroethane	µg/L						<	5.0 U			5.0 U							<5.0
79-00-5	1,1,2-Trichloroethane	µg/L						<	5.0 U			5.0 U							<5.0

GM27_Op	GM-27 OP		STV	Dec_12	mar_13	Jun_13	Dec_13	June_14	Oct_2014	Dec_14	March_15	June_15	Sept_15	Dec_15	Mar_16	Jun_16	Sept_16	Dec_16
75-34-3	1,1-Dichloroethane	µg/L					<	5.0 U			5.0 U							<5.0
75-35-4	1,1-Dichloroethene	µg/L					<	5.0 U			5.0 U							<5.0
96-18-4	1,2,3-Trichloropropane	µg/L					<	5.0 U			5.0 U							<5.0
96-12-8	1,2-Dibromo-3-chloropropane	µg/L					<	5.0 U			5.0 U							<5.0
106-93-4	1,2-Dibromoethane	µg/L					<	5.0 U			5.0 U							<5.0
95-50-1	1,2-Dichlorobenzene	µg/L					<	5.0 U			5.0 U							<5.0
107-06-2	1,2-Dichloroethane	µg/L					<	5.0 U			5.0 U							<5.0
78-87-5	1,2-Dichloropropane	µg/L					<	5.0 U			5.0 U							<5.0
106-46-7	1,4-Dichlorobenzene	µg/L					<	5.0 U			5.0 U							<5.0
78-93-3	2-Butanone	µg/L					<	5.0 U			5.0 U							<5.0
591-78-6	2-Hexanone	µg/L					<	5.0 U			5.0 U							<5.0
108-10-1	4-Methyl-2-pentanone	µg/L					<	5.0 U			5.0 U							<5.0
67-64-1	Acetone	µg/L					16	5.0 U			3 J							<5.0
107-13-1	Acrylonitrile	µg/L					<	5.0 U			5.0 U							<5.0
71-43-2	Benzene	µg/L					<	5.0 U			5.0 U							<5.0
74-97-5	Bromochloromethane	µg/L					<	5.0 U			5.0 U							<5.0
75-27-4	Bromodichloromethane	µg/L					<	5.0 U			5.0 U							<5.0
75-25-2	Bromoform	µg/L					<	5.0 U			5.0 U							<5.0
74-83-9	Bromomethane	µg/L					<	5.0 U			5.0 U							<5.0
75-15-0	Carbon disulfide	µg/L					<	5.0 U			5.0 U							<5.0
56-23-5	Carbon tetrachloride	µg/L					<	5.0 U			5.0 U							<5.0
108-90-7	Chlorobenzene	µg/L					<	5.0 U			5.0 U							<5.0
75-00-3	Chloroethane	µg/L					<	5.0 U			5.0 U							<5.0
67-66-3	Chloroform	µg/L					<	5.0 U			5.0 U							<5.0
74-87-3	Chloromethane	µg/L					<	5.0 U			5.0 U							<5.0
156-59-2	cis-1,2-Dichloroethene	µg/L					<	5.0 U			5.0 U							<5.0
10061-01-5	cis-1,3-Dichloropropene	µg/L					<	5.0 U			5.0 U							<5.0
124-48-1	Dibromochloromethane	µg/L					<	5.0 U			5.0 U							<5.0
74-95-3	Dibromomethane	µg/L					<	5.0 U			5.0 U							<5.0
	Ethanol	ug/L																
100-41-4	Ethylbenzene	µg/L					<	5.0 U			5.0 U							<5.0
74-88-4	Iodomethane	µg/L					<	5.0 U			5.0 U							<5.0
	Isopropyl Alcohol	ug/L																
75-09-2	Methylene chloride	µg/L					<	5.0 U			5.0 U							<5
	Silane, methoxytrimethyl-	ug/L																
	Silanol, trimethyl-	ug/L																
100-42-5	Styrene	µg/L					<	5.0 U			5.0 U							<5
	Sulfur dioxide	ug/L																
127-18-4	Tetrachloroethene	µg/L					<	5.0 U			5.0 U							<5.0
108-88-3	Toluene	µg/L					<	5.0 U			5.0 U							<5.0
156-60-5	trans-1,2-Dichloroethene	µg/L					<	5.0 U			5.0 U							<5.0
10061-02-6	trans-1,3-Dichloropropene	µg/L					<	5.0 U			5.0 U							<5.0
110-57-6	trans-1,4-Dichloro-2-butene	µg/L					<	5.0 U			5.0 U							<5.0
79-01-6	Trichloroethene	µg/L					<	5.0 U			5.0 U							<5.0
75-69-4	Trichlorofluoromethane	µg/L					<	5.0 U			5.0 U							<5.0
	Trimethylsilyl fluoride	ug/L																
	unknown	ug/L					<											
108-05-4	Vinyl acetate	µg/L					<	5.0 U			5.0 U							<5.0
75-01-4	Vinyl chloride	µg/L					<	5.0 U			5.0 U							<5.0
1330-20-7	Xylene (total)	µg/L					<	5.0 U			5.0 U							<5.0
57-12-5	Cyanide	µg/L					<10	10 U			10.0 U							<10
	Total Organic Carbon	mg/L						29.6 29.3										134
	Sulfide																	<2
	1,4 dioxane	ug/l																

GM27_Op	GM-27 OP		STV	Dec_12	mar_13	Jun_13	Dec_13	June_14	Oct_2014	Dec_14	March_15	June_15	Sept_15	Dec_15	Mar_16	Jun_16	Sept_16	Dec_16
	6:2FTS	ng/l																
	8:2FTS	ng/l																
	NEtFOSAA	ng/l																
	NMeFOSAA	ng/l																
	PFBS	ng/l																
	PFBA	ng/l																
	PFDS	ng/l																
	PFDA	ng/l																
	PFDoA	ng/l																
	PFHpS	ng/l																
	PFHpA	ng/l																
	PFHxS	ng/l																
	PFNA	ng/l																
	FOSA	ng/l																
	PFOS	ng/l																
	PFOA	ng/l																
	PFTeA	ng/l																
	PFTriA	ng/l																
	PFUnA	ng/l																
	PFHxA	ng/l																
	PFPeA	ng/l																

B found in blank
J <RL >mdl

GM-27 OP	**Mar_17**	**Jul_17**	**Sept_17**	**Dec_17**	**Mar_18**	**3/18Dup**	**Sept_18**	**Dec_18**	**Mar_19**	**Jun_19**
	4/19/2017	**7/13/2017**	9/29/2017	12/20/2017	3/19/2018	3/19/2018	9/24/2018	12/10/2018	3/20/2019	6/10/2019
Analyte										
pH	8.47	6.15	7.26	7.89	7.65		9.15	9.08	8.66	8.83
spec cond	1304	82	1815	1371	1423		981	1064	1054	1030
ORP	-207	-90.4	-172.2	-220.9	-194.2		-165.9	-161	-138.3	-149
DO	0.71	5.49	0.11	0.18	0.2		1.42	1.71	1.3	1.13
Temp	14.78	17.14	14.68	14.99	14.51		15.8	11	11.7	14.2
Turbidity								10.9	22	6.5 D
Bromide	2.6	2.3	2.8	2.1	2.4	2.4	2.1	20.7 D	2.5	2.4
Chloride	301 D	811 D	504	319 D	306 D	346 D	368 D	292 D	468 D	442 D
Sulfate	<5.0	**36.1**	17.4	12.7	36.1	32.3	2.7J	12.7J D	<5.0	<5.0
Nitrogen, Kjeldahl, Total	32.2 D	23.9 D	39.1	34.2 D	26.5 D	36.2 D	38.5 D	37.8 D	36.2 D	33.7 D
Nitrate as N	<0.050	<0.050	<0.014	0.027J	<0.050	<0.050	<0.050	<0.050	0.034J	0.030J
Nitrite as N	<0.050	<0.050	<0.0020	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chemical Oxygen Demand	107	325	130	144	128	134	191	140	196	154
Phenolics, Total Recoverable	0.0162	0.0184	0.0155	0.0202	0.0155	0.0186	0.0422	0.0223	.0466 D	<.01
Chromium, Hexavalent	<.1						<0.10 D			
Color										
Alkalinity, Total (As CaCO3)	128	**366**	257	220	177	218	223	136	424	284
Hardness (As CaCO3)	170	700	320	320	200	193	130	200	250	180
Total Dissolved Solids	730	1610	1040	712	732	748	698	644	956	874
Chloride	301	811 D	504	319	306	346			468 D	
Nitrogen, Ammonia (As N)	33.6	25.0 D	27.6	30.6 D	30.6 D	31.4 D	34.7 D	34.0 D	29.5 D	32.0 D
Biochemical Oxygen Demand	15.3	21.9 D	30.6	32.7 D	17.1 D	19.1 D	23.1 D	25.7 D	38.9 D	32.5 D
Total Organic Carbon	37.7	**43.9 D**	35.3	31.3	30.5	29.6		35.2	63.2	43.1
Aluminum	<.200						0.628			
Antimony	<.060						<.060			
Arsenic	<.010						<.010			
Barium	<.200						.167J			
Beryllium	<.005						<.005			
Boron	0.148						0.156			
Cadmium	<.0025	0.0025	<0.000063	.0022J	<.0025	<.0025	<.0025	<.0025	<.0025	<.0025
Calcium	51.6	190	105	112	71.3	78	49.6	57.7	72.6	55.5
Chromium	0.0167						<.010			
Cobalt	<.050						<.050			
Copper	<.025						.0052J			
Iron	0.899	35.5	2.62	16.6	2.24	2.54	1.84	1.77	3.37	3.66
Lead	<.005	0.168	<.0013	0.0796	<.0050	<.0050	0.0067	0.0057	0.0088	0.0138
Magnesium	4.99	33.5	17.4	13.1	9.13	10.2	7.58	8.59	15.3	9.18
Manganese	0.0687	0.712	0.188	0.256	0.148	0.168	0.115	0.138	0.214	0.153
Nickel	<.040						.0142J			
Potassium	45.8	45.6	47.8	54.9	50.9	55.7	51.1	57.6	44	43.4
Selenium	<.010						<.010			
Silver	<.010						<.010			
Sodium	115	295	161	130	119	130	138	148	266	200
Thallium	<.010						<.010			
Vanadium	<.050						.0036J			
Zinc	<.020						0.0283			
Mercury	<.0002						<0.00020			
1,1,1,2-Tetrachloroethane	<5.0						<1.0			
1,1,1-Trichloroethane	<5.0						<1.0			
1,1,2,2-Tetrachloroethane	<5.0						<1.0			
1,1,2-Trichloroethane	<5.0						<1.0			

GM-27 OP	Mar_17	Jul_17	Sept_17	Dec_17	Mar_18	3/18Dup	Sept_18	Dec_18	Mar_19	Jun_19
1,1-Dichloroethane	<5.0						<1.0			
1,1-Dichloroethene	<5.0						<1.0			
1,2,3-Trichloropropane	<5.0						<1.0			
1,2-Dibromo-3-chloropropane	<5.0						<1.0			
1,2-Dibromoethane	<5.0						<1.0			
1,2-Dichlorobenzene	<5.0						<1.0			
1,2-Dichloroethane	<5.0						<1.0			
1,2-Dichloropropane	<5.0						<1.0			
1,4-Dichlorobenzene	<5.0						<1.0			
2-Butanone	<5.0						<5.0			
2-Hexanone	<5.0						<5.0			
4-Methyl-2-pentanone	<5.0						<5.0			
Acetone	<5.0						7.9			
Acrylonitrile	<5.0						<1.0			
Benzene	<5.0						0.53J			
Bromochloromethane	<5.0						<1.0			
Bromodichloromethane	<5.0						<1.0			
Bromoform	<5.0						<1.0			
Bromomethane	<5.0						<1.0			
Carbon disulfide	<5.0						<1.0			
Carbon tetrachloride	<5.0						<1.0			
Chlorobenzene	<5.0						<1.0			
Chloroethane	<5.0						<1.0			
Chloroform	<5.0						<1.0			
Chloromethane	<5.0						<1.0			
cis-1,2-Dichloroethene	<5.0						<1.0			
cis-1,3-Dichloropropene	<5.0						<1.0			
Dibromochloromethane	<5.0						<1.0			
Dibromomethane	<5.0						<1.0			
Ethanol										
Ethylbenzene	<5.0						<1.0			
Iodomethane	<5.0						<1.0			
Isopropyl Alcohol										
Methylene chloride	<5.0						<1.0			
Silane, methoxytrimethyl-										
Silanol, trimethyl-										
Styrene	<5.0						<1.0			
Sulfur dioxide	null									
Tetrachloroethene	<5.0						<1.0			
Toluene	<5.0						<1.0			
trans-1,2-Dichloroethene	<5.0						<1.0			
trans-1,3-Dichloropropene	<5.0						<1.0			
trans-1,4-Dichloro-2-butene	<5.0						<1.0			
Trichloroethene	<5.0						<1.0			
Trichlorofluoromethane	<5.0						<1.0			
Trimethylsilyl fluoride										
unknown	null						25.2J			
Vinyl acetate	<5.0						<1.0			
Vinyl chloride	<5.0						<1.0			
Xylene (total)	<5.0						<3.0			
Cyanide	<10						7.1J			
Total Organic Carbon		37.7					35.4			
Sulfide	<2									
1,4 dioxane				0.32	0.31	<2		0.41	0.36	0.32

GM-27 OP	Mar_17	Jul_17	Sept_17	Dec_17	Mar_18	3/18Dup	Sept_18	Dec_18	Mar_19	Jun_19
6:2FTS					<180	<180	9.6 J	ND	11 J	35
8:2FTS					<180	<180	5.1 J	ND	3.4 J	4.9 J
NEtFOSAA					9.5 J	11 J	20	17 J	14 J	15
NMeFOSAA					3.9 J	3.9 J	8.5 J	7.6 J	7.3 J	8.3
PFBS					18	18	9	8.2	9.5	25
PFBA					130 B	130 B	200 B	170 B	140	220
PFDS					1.2 J	.79 J	ND	ND	ND	ND
PFDA					36	32	46	42	28	38
PFDoA					<1.8	<1.8	ND	ND	ND	ND
PFHpS					.81 J	1.1 J	1.5 J	1.8 J	2.1	1.7 J
PFHpA					84	92	98	92	98	100
PFHxS					34 B	35 B	49 B	41 B	45 B	42
PFNA					84	87	110	100	76	100
FOSA					8.4	8.4	8.1	7.2	5.1	7.5
PFOS					110	110	140	130	160	150
PFOA					160	160	170	170	200	200
PFTeA					<1.8	<1.8	ND	ND	ND	ND
PFTriA					<1.8	<1.8	ND	ND	ND	ND
PFUnA					4.8	4.7	6.7	6.2	4.1	4.8
PFHxA					150	140	210	160	220 I	180
PFPeA					110	100	130	130	120	140

B found in blank
J <RL >mdl

GM27I_Op	GM-27I OP		STV	Dec_12	Mar_13	Jun_13	DEC_13	Jun_14	Oct_14	Dec_14	Mar_2015	June_15	Sept_15	Dec_15	Mar_16	Jun_16	Sept_16	Dec_16	Mar_17
Date Collected				1/4/2013	4/9/2013	6/28/2013	3/11/2014	6/30/2014	10/30/2014	1/2/2015	5/15/2015	7/28/2015	10/27/2015	12/10/2015	3/24/2016	6/16/2016	10/6/2016	2/1/2017	4/19/2017
Date Received				1/4/2013	4/9/2013														
	Analyte	Units																	
	pH			8.5	7.6	7.81	8.09	7.71	8.79	8.16	8.04	8.04	7.5	7.39	8.33	8.42	8.92	9.29	8.69
	spec cond	umhos_cm	2667	1165	845	1650	1010	790	1089	1432	1453	1442	1498	1524	1171	1328	1206	1188	1301
	ORP			-89	-72	-185.9	-147.8	-121.7	-242.4	-192.7	-121.1	-155	-186.2	-119.9	-210.4	-2331	-209.6	-60.3	-331
	DO	mg/l	1	0.58	0.25	0.48	**1.1**	0.6	0.36	0.19	1.2	0.47	0.06	0.15	0.89	0.27	0.37	0.45	0.05
	Temp	C		12.88	15.3	14.55	14.22	15.17	14.32	14.04	13.56	13.39	13.98	14.03	13.97	13.99	14.95	14.07	14.1
	Turbidity	NTU		3.0	2.0	14 D	8.1	6.2	2.6	13	15	6.1	6.3	3.3	3.6	39			
24959-67-9	Bromide	mg/L	8.5	2.75	0.92	0.9	2.77	1.55	3.44	3.70	3.87	4.56	3.62	4.18	3.19	3.35	3.6	2.5	2.5
16887-00-6	Chloride	mg/L	447.2	255 D	192 D	251 D	324 D	297 D	370	427	433 D	504 D	344 D	406 D	347 D	333 D	363	297 D	284 D
14808-79-8	Sulfate	mg/L	24.9	14.2	7.70	<5	<5	<5.00	<5	<5.	<5.00	<5.00	<5.00	<5.00	<5.00	5.00 U	<5	<5.0	<5.0
	Nitrogen, Kjeldahl, Total	mg/L	9.6	10.7 D	7.12 D	**17.7**	15.4 D	13.8 D	14.0	16.2	17.6 D	18.8 D	16.4 D	19.1 D	18.6 D	25.2 D	16.9	18.1 D	18.6 D
14797-55-8	Nitrate as N	mg/L	0.18	0.12	0.100 U	<.5	<.1	<0.100	<0.1	<0.1	0.21	<0.1	<0.1	<0.1	<0.10	<0.10	0.74	<0.050	<0.050
14797-65-0	Nitrite as N	mg/L		0.100 U	0.100 U	<.1	<.1	<0.100	<0.1	<0.1	<0.100	<0.1	<0.1	<0.1	<0.10	<0.10	0.74	<0.050	<0.050
	Chemical Oxygen Demand	mg/L	239	38.7	46.6	81.3	54.9	55.9	45.1	50.8	55.6	56.9	54.2	48.5	45.5	80.2	58.8	96.2	83.7
	Phenolics, Total Recoverable	mg/L	0.14	.005 U	.005 U	<.005	<.005	<.005	<.005	<.005	<.005	<.005	12.1	10.2	<.005 U	0.0099	0.0135	0.0062	0.0151
18540-29-9	Chromium, Hexavalent	mg/L					<.02	<0.0200			<0.02							<.02	<.1
	Color	units					65	75.0 D			90.0 D							40	
	Alkalinity, Total (As CaCO3)	mg/L	309	138 D	157 D	253 D	202 D	165 D	136	185	142 D	103	56.5 D	136 D	162	157	134	148	134
	Hardness (As CaCO3)	mg/L	565	300 D	240 D	370 D	290 D	280 D	440	550	400 D	320 D	300 D	276 D	228 D	280 D	250	190	250
	Total Dissolved Solids	mg/L	1246	798 D	506	786 D	700 D	1010	944	844	1370	2650	932	1.02	740 D	972	874	750	824
	Chloride	mg/L	447.2				324 D	297	370	427	433 D	504	344	406	347	333	363	297	284
7664-41-7	Nitrogen, Ammonia (As N)	mg/L	8.5	8.00 D	6.94 D	13.4 D	11.7 D	12.5 D	13.6	16.8	17.1 D	19.9 D	10.3 D	18.0 D	22.5 D	21.2 D	21.8	18.5 D	18.4
	Biochemical Oxygen Demand	mg/L	79.4	31	21	27	25	20	22	<2	23	25	23	<4.	<2.00	16	2.5	2	17.4
	Total Organic Carbon		30.2			30.1 D	23.2	21.9	**48.0**	**68.0**	16	17.4	15.4	13.8	17.4	20.8		18.2	20.9
7429-90-5	Aluminum	mg/L	4.9	0.426			0.697	0.837	<.200	<.2	.190 B	.185 B	.0424 B		.0517 J	2.51		<.200	<.200
7440-36-0	Antimony	mg/L		.060 U			<1.9	<.06	<.06	<.06	<.0018	<.0018	<.0006		<.060	<.060		<.060	<.060
7440-38-2	Arsenic	mg/L	0.007	.010 U			**.0027 B**	<.01	<.01	<.01	.0045 B	.0028 B	<.0022		<.010	<.010		<.010	<.010
7440-39-3	Barium	mg/L	0.19	.200 U			.108 B	<.2	<.2	<.2	.128 B	.121 B	.103 B		.102 J	.110 J		<.200	<.200
7440-41-7	Beryllium	mg/L		.005 U			<.00014	<.005	<.005	<.005	<.0001	<.00020	<.0002		<.005	<.0050		<.005	<.005
7440-42-8	Boron	mg/L		0.135			0.158	0.146			0.138							0.14	0.139
7440-43-9	Cadmium	mg/L	0.02	.005 U	.0001 U	.0001 U	.0003 B	<.005	<.005	<.005	.00040 B	.00030 B	<.0001	<.0001	<.0025	<.0025	<.0025	<.0025	<.0025
7440-70-2	Calcium	mg/L	198	108	75.5	90.7	119	124	111	120	142	133	109	111	96.400 E	110	92.2	73.4	76.8
7440-47-3	Chromium	mg/L	0.02	.010 U			.0038 B	<.01	<.01	<.01	<.0016	.0016 B	.0011 B		<.010	.0057 J		<.010	<.010
7440-48-4	Cobalt	mg/L		.050 U			.0009 B	<.05	<.05	<.05	<.0003	<.0002	<.00002		<.050	.0014 J		<.050	<.050
7440-50-8	Copper	mg/L	0.005	.025 U			.0029 B	<.025	<.025	<.025	.0019 B	.0031 B	.0007 B		.0010 J	.0112 J		<.025	<.025
7439-89-6	Iron	mg/L	9.4	1.5	0.928	5.78	2.57	2.84	1.1	2.74	2.66	1.62	0.796	0.702	1.52	4.64	0.511	0.266	0.719
7439-92-1	Lead	mg/L	0.047	0.006	.0028 B	0.0113	0.0207	0.0134	<.005	<.005	0.0035	.0025 B	.0029 B	.0016 B	.0015 J	0.0271	<.005	<.005	<.005
7439-95-4	Magnesium	mg/L	19	5.73	5.75	13.8	8.27	8.46	6.92	8.14	9.11	8.75	7.06	7.03	6.650 E	7.47	4.98	4.22	4.85
7439-96-5	Manganese	mg/L	0.33	0.125	0.0955	0.163	0.209	0.204	0.121	0.176	0.185	0.15	0.12	0.112	0.119	0.194	0.0748	.056.0	0.0793
7440-02-0	Nickel	mg/L	0.008	.040 U			.004 B	<.04	<.04	<.04	.0036 B	.0034 B	.0027 B		.0037 J	.0061 J		<.040	<.040
7440-09-7	Potassium	mg/L	47	29.3	23.1	28.1	34	37.5	36.1	37	39.8	44.9	39.4	43.8	39	37.3	34.2	37	35
7782-49-2	Selenium	mg/L		.005 U			.0018 B	<.005	<.01	<.01	<.0022	<.0029	<.0022		<.010	<.010		<.010	<.010
7440-22-4	Silver	mg/L		.010 U			<.00043	<.01	<.01	<.01	.0026 B	<.0018	<.0005		<.010	<.010		<.010	<.010
7440-23-5	Sodium	mg/L	173.1	81.600	76.1	133	104	145	130	143	174	149	127	131	119.000 E	126	109	112	115
7440-28-0	Thallium	mg/L		.010 U			<.0013	<.01	<.01	<.01	<.0027	<.0023	<.0019		<.010	<.010		<.010	<.010
7440-62-2	Vanadium	mg/L	0.01	.050 U			**.0023 B**	<.05	<.05	<.05	<.0005	.0012 B	<.0028		<.050	.0058 J		<.050	<.050
7440-66-6	Zinc	mg/L	0.19	.020 U			0.0426	0.0374	<.02	<.02	.0116 B	0.033	.0068 B		<.020	0.0432		<.020	<.020
7439-97-6	Mercury	mg/L	0.0004	0.0002 U			<.0001	<.0002	<.0002	<.0002	<.0001	<.0001	<.0001		<.0002 UN	<.00020		<0.0002	<0.00020
630-20-6	1,1,1,2-Tetrachloroethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
71-55-6	1,1,1-Trichloroethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
79-34-5	1,1,2,2-Tetrachloroethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
79-00-5	1,1,2-Trichloroethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0

GM27I_Op	GM-27I OP		STV	**Dec_12**	**Mar_13**	Jun_13	DEC_13	Jun_14	Oct_14	Dec_14	Mar_2015	June_15	Sept_15	Dec_15	Mar_16	Jun_16	Sept_16	Dec_16	Mar_17
75-34-3	1,1-Dichloroethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
75-35-4	1,1-Dichloroethene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
96-18-4	1,2,3-Trichloropropane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
96-12-8	1,2-Dibromo-3-chloropropane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
106-93-4	1,2-Dibromoethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
95-50-1	1,2-Dichlorobenzene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
107-06-2	1,2-Dichloroethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
78-87-5	1,2-Dichloropropane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
106-46-7	1,4-Dichlorobenzene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
78-93-3	2-Butanone	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
591-78-6	2-Hexanone	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
108-10-1	4-Methyl-2-pentanone	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
67-64-1	Acetone	µg/L					<	5.0 U			2 J							<5.0	<5.0
107-13-1	Acrylonitrile	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
71-43-2	Benzene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
74-97-5	Bromochloromethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
75-27-4	Bromodichloromethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
75-25-2	Bromoform	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
74-83-9	Bromomethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
75-15-0	Carbon disulfide	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
56-23-5	Carbon tetrachloride	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
108-90-7	Chlorobenzene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
75-00-3	Chloroethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
67-66-3	Chloroform	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
74-87-3	Chloromethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
156-59-2	cis-1,2-Dichloroethene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
10061-01-5	cis-1,3-Dichloropropene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
124-48-1	Dibromochloromethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
74-95-3	Dibromomethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
	Ethanol	ug/L																	
100-41-4	Ethylbenzene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
74-88-4	Iodomethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
	Isopropyl Alcohol	ug/L																	
75-09-2	Methylene chloride	µg/L					<	5.0 U			5.0 U							<5	<5.0
	Silane, methoxytrimethyl-	ug/L																	
	Silanol, trimethyl-	ug/L																	
100-42-5	Styrene	µg/L					<	5.0 U			5.0 U							<5	<5.0
	Sulfur dioxide	ug/L																	null
127-18-4	Tetrachloroethene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
108-88-3	Toluene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
156-60-5	trans-1,2-Dichloroethene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
10061-02-6	trans-1,3-Dichloropropene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
110-57-6	trans-1,4-Dichloro-2-butene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
79-01-6	Trichloroethene	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
75-69-4	Trichlorofluoromethane	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
	Trimethylsilyl fluoride	ug/L																	
	unknown	ug/L																	null
108-05-4	Vinyl acetate	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
75-01-4	Vinyl chloride	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
1330-20-7	Xylene (total)	µg/L					<	5.0 U			5.0 U							<5.0	<5.0
57-12-5	Cyanide	µg/L					<10	10 U			10.0 U							<10	<10
	Total Organic Carbon	mg/L					23.2	21.9										<10	20.9
	sulfide																	<2	<2
	1,4 dioxane	ug/l																	

GM27I_Op	GM-27I OP		STV	**Dec_12**	**Mar_13**	Jun_13	DEC_13	Jun_14	Oct_14	Dec_14	Mar_2015	June_15	Sept_15	Dec_15	Mar_16	Jun_16	Sept_16	Dec_16	Mar_17
	6:2FTS	ng/l																	
	8:2FTS	ng/l																	
	NEtFOSAA	ng/l																	
	NMeFOSAA	ng/l																	
	PFBS	ng/l																	
	PFBA	ng/l																	
	PFDS	ng/l																	
	PFDA	ng/l																	
	PFDoA	ng/l																	
	PFHpS	ng/l																	
	PFHpA	ng/l																	
	PFHxS	ng/l																	
	PFNA	ng/l																	
	FOSA	ng/l																	
	PFOS	ng/l																	
	PFOA	ng/l																	
	PFTeA	ng/l																	
	PFTriA	ng/l																	
	PFUnA	ng/l																	
	PFHxA	ng/l																	
	PFPeA	ng/l																	

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GM-27I OP	Jul_17 7/13/2017	Sept_17 9/29/2017	Dec_2017 12/20/2017	Mar_2018 3/19/2018	Sept_2018 9/24/2018	Dec_18 12/10/2018	Dec18Dup 12/10/2018	Mar_19 3/20/2019	Mar19DUP 3/20/2019	19-Jun
Analyte										
pH	7.51	8.03	8.75	8.37	9.07	8.33		8.35		9.26
spec cond	1329	1255	1140	1654	957	1102		1065		1040
ORP	-106.3	-253.6	-314.3	-290	-164.4	-121.6		-125.5		-171.1
DO	5.37	0.27	0.25	0.18	2.46	3.36		4.1		0
Temp	14.35	14.07	14	14.02	16.2	9.9		11.5		13.9
Turbidity						74.0 D	63.5	27		23.0 D
Bromide	2.6	3.5	2.4	2.4	1.8	1.8	1.8	1.5	1.4	2.0
Chloride	420 D	381	300 D	<2.0	357 D	**920 D**	**491 D**	343 D	340 D	424 D
Sulfate	<5.0	<0.21	2.0J	0.92J	2.7J	2.4J	3.0 J	9.3	9.9	<5.0
Nitrogen, Kjeldahl, Total	13.0 D	30.4	19.1 D	21.8 D	18.2 D	21.7 D	21.5 D	12.8 D	10.1 D	19.3 D
Nitrate as N	<0.050	<0.014	0.015J	<0.050	<0.050	<0.050	<.05	0.086	0.063	0.044J
Nitrite as N	<0.050	<0.0020	<0.050	<0.050	<0.050	<0.050	<.05	<0.050	<0.050	<0.050
Chemical Oxygen Demand	96.2	86.0	74.8	102	109	124	128	72.0	52.1	83.0
Phenolics, Total Recoverable	0.0078	0.0105	0.0096	0.0096	0.0179	0.0146	0.0156	0.012	0.0131	<.01
Chromium, Hexavalent					<0.10 D					
Color										
Alkalinity, Total (As CaCO3)	176	199	228	148	169	205	206	183	196	200
Hardness (As CaCO3)	300	220	173	320	190	350	300	160	180	190
Total Dissolved Solids	694	810	630	982	680	1060	1030	736	648	900
Chloride	420 D	381	300	<.2	357			343 D		
Nitrogen, Ammonia (As N)	14.5 D	18.3	20.4 D	20.3 D	16.1 D	20.1 D	20.3 D	11.0 D	9.8 D	17.5 D
Biochemical Oxygen Demand	12.1 D	31.3	21.0 D	21.3 D	22.1 D	24.6 D	25.9 D	17.1 D	19.5 D	21.7 D
Total Organic Carbon	19.1	21.6	18.9	23.1	19.3	27.6	27.1	23.3	17.7	25.5
Aluminum					6.62					
Antimony					<.0600					
Arsenic					<.0100					
Barium					.0965J					
Beryllium					<.0050					
Boron					0.135					
Cadmium	<.0025	<0.000063	<.0025	<.0025	0.00034J	<.0025	<.0025	<.0025	<.0025	<.0025
Calcium	86.4	82.6	71	114	72.6	124	126	63.2	70.6	72.8
Chromium					.0075J					
Cobalt					.0035J					
Copper					.0180J					
Iron	1.12	0.744	0.407	5.39	8.46	8.33	7.89	2.75	2.98	1.92
Lead	<.0050	<.0013	<.0050	<.0050	0.0647	0.0144	0.011	0.0053	.0042J	<.0050
Magnesium	5.46	5.62	4.27	7.93	4.86	8.6	8.71	4.47	5.07	4.68
Manganese	0.0911	0.0739	0.0633	0.206	0.29	0.306	0.299	0.12	0.179	0.0859
Nickel					.0079J					
Potassium	36.6	42.3	41.5	40.3	33.4	40.2	40.6	16.2	21.3	38.7
Selenium					<.0100					
Silver					<.0100					
Sodium	112	116	115	157	125	225	228	144	164	175
Thallium					<.0100					
Vanadium					.0120J					
Zinc					0.0936					
Mercury					<0.00020					
1,1,1,2-Tetrachloroethane					<1.0					
1,1,1-Trichloroethane					<1.0					
1,1,2,2-Tetrachloroethane					<1.0					
1,1,2-Trichloroethane					<1.0					

GM-27I OP	Jul_17	Sept_17	Dec_2017	Mar_2018	Sept_2018	Dec_18	Dec18Dup	Mar_19	Mar19DUP	19-Jun
1,1-Dichloroethane					<1.0					
1,1-Dichloroethene					<1.0					
1,2,3-Trichloropropane					<1.0					
1,2-Dibromo-3-chloropropane					<1.0					
1,2-Dibromoethane					<1.0					
1,2-Dichlorobenzene					<1.0					
1,2-Dichloroethane					<1.0					
1,2-Dichloropropane					<1.0					
1,4-Dichlorobenzene					<1.0					
2-Butanone					<5.0					
2-Hexanone					<5.0					
4-Methyl-2-pentanone					<5.0					
Acetone					4.4J					
Acrylonitrile					<1.0					
Benzene					<1.0					
Bromochloromethane					<1.0					
Bromodichloromethane					<1.0					
Bromoform					<1.0					
Bromomethane					<1.0					
Carbon disulfide					<1.0					
Carbon tetrachloride					<1.0					
Chlorobenzene					<1.0					
Chloroethane					<1.0					
Chloroform					<1.0					
Chloromethane					<1.0					
cis-1,2-Dichloroethene					<1.0					
cis-1,3-Dichloropropene					<1.0					
Dibromochloromethane					<1.0					
Dibromomethane					<1.0					
Ethanol										
Ethylbenzene					<1.0					
Iodomethane					<1.0					
Isopropyl Alcohol										
Methylene chloride					<1.0					
Silane, methoxytrimethyl-										
Silanol, trimethyl-										
Styrene					<1.0					
Sulfur dioxide										
Tetrachloroethene					<1.0					
Toluene					<1.0					
trans-1,2-Dichloroethene					<1.0					
trans-1,3-Dichloropropene					<1.0					
trans-1,4-Dichloro-2-butene					<1.0					
Trichloroethene					<1.0					
Trichlorofluoromethane					<1.0					
Trimethylsilyl fluoride										
unknown					15.1J					
Vinyl acetate					<1.0					
Vinyl chloride					<1.0					
Xylene (total)					<3.0					
Cyanide					<10.0					
Total Organic Carbon										
sulfide					19.3					
1,4 dioxane	0.29	<2		0.42		0.4	.26 J		.16 J	0.26

GM-27I OP	Jul_17	Sept_17	Dec_2017	Mar_2018	Sept_2018	Dec_18	Dec18Dup	Mar_19	Mar19DUP	19-Jun
6:2FTS				19	72	66 J			11 J	90
8:2FTS				<180	3.2 J	ND			ND	3.6 J
NEtFOSAA				11 J	15 J	13 J			3.7 J	14
NMeFOSAA				<18	4 J	4 J			ND	4.5
PFBS				12	7.2	6.9			3.9	18
PFBA				110 B	75 B	100 B			58	130
PFDS				<1.8	ND	ND			ND	ND
PFDA				24	25	22			7.8	24
PFDoA				<1.8	ND	ND			ND	ND
PFHpS				.88 J	1.3 J	ND			ND	1.2 J
PFHpA				69	37	65			43	62
PFHxS				28 B	22 B	34 B			19 B	27
PFNA				56	43	59			28	53
FOSA				5.2	4.5	4.3			1.3 J	4.5
PFOS				80	71	92			48	88
PFOA				120	70	110			74	110
PFTeA				<1.8	ND	ND			ND	ND
PFTriA				<1.8	ND	ND			ND	ND
PFUnA				4.7	6.4	5.1			2	6.2
PFHxA				100	80	100			58	99
PFPeA				86	69	110			55	100

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GM28_Op	GM-28 OP		STV	Dec_12	Mar_13	Jun_13	Dec_13	June_14	Oct_14	Dec_14	Mar_2015	June_2015	Sept_15	Dec_15	Mar_16	16-Jun	Sept_16	Dec_16
Date Collected				01/04/13	4/9/2013	6/28/2013	3/11/2014	6/30/2014	10/30/2014	1/2/2015	5/15/2015	7/28/2015	10/27/2015	12/10/2015	3/24/2016	6/16/2016	10/6/2016	2/1/2017
Date Received				1/4/2013	4/9/2013													
	Analyte	Units																
	pH			7.39	7.46	8.74	7.8	7.48	8.33	7.53	7.38	8.55	7.39	7.13	7.56	7.69	7.81	8.38
	spec cond	umhos_cm	4038	1842	2300	1916	1352	1528	1385	1420	1762	81.6	1826	1045	1700	1635	1702	1767
	ORP		-36	-181.5	-139.5	701.7	-169.1	-166.2	-212.9	-150.7	-138.6	-116.9	-120	-113.9	-165.6	-167.5	-188.6	-187.6
	DO	mg/l	0.3	**0.5**	0.19	**0.68**	**0.5**	0.25	**0.41**	**0.39**	**1.21**	0.95	0.18	**0.43**	**0.32**	0.18	0.25	0.25
	Temp	C		14.71	15.91	14.33	15.05	15.61	15.95	15.71	14.88	16.18	16.56	17.55	16.79	16.61	18.01	17.14
	Turbidity	NTU		53 D	28 D	43 D	40 D	32	20	42	89	7.7	20	29	44 D	39		
24959-67-9	Bromide	mg/L	8.7	1.15	1.28	0.87	1.36	1.39	1.47	1.43	1.96	1.23	1.58	1.64	1.72	1.62	2.1	1.8
16887-00-6	Chloride	mg/L	493	202 D	331 D	151 D	274 D	274	263	225	256 D	166 D	312 D	294 D	294 D	267 D	323	316 D
14808-79-8	Sulfate	mg/L	184	25.3	48.4	136 D	5.51	19.2	<5	14.3	14.7	35.4	<5.00	<5.00	85.8 D	<5.00	<5	<5.0
	Nitrogen, Kjeldahl, Total	mg/L	58.4	31.6 D	32.3 D	19.5 D	29.1 D	19	21.3	19.8	18.7 D	9.85 D	23.0 D	25.1 D	21.7 D	41.0 D	32.5	27.1 D
14797-55-8	Nitrate as N	mg/L	0.31	0.100 U	0.100 U	<.5	<.1	<.1	<.1	<0.1	<0.1	<.0001	<.1	<0.100	<0.10	<0.10	<.05	<0.050
14797-65-0	Nitrite as N	mg/L		0.100 U	0.100 U	<.1	<.1	<.1	<.1	<0.1	<0.1	<.0001	<.1	<0.10	<0.10	<0.10	<.05	<0.050
	Chemical Oxygen Demand	mg/L	278	87.5	101	71	106	99.8	109	92.8	105	41.8	123	121	103	136	**281**	148
	Phenolics, Total Recoverable	mg/L	0.073	0.0064	.005 U	<.005	**0.0892**	0.0144	0.0134	0.0108	0.0368	0.0285	.054.0 D	0.0435	0.0365	0.0554	0.035	**.0992 D**
18540-29-9	Chromium, Hexavalent	mg/L					<.02	<.02			<0.02							<.02
	Color	units					125 D	125D			175 D							100 D
	Alkalinity, Total (As CaCO3)	mg/L	1608	614 D	748 D	517 D	488 D	570	562	491	704 D	120	544 D	552 D	577	557 D	527	523
	Hardness (As CaCO3)	mg/L	1158	520 D	680 D	480 D	380 D	460	500	380	**1200 D**	160 D	300 D	304 D	420 D	310 D	260	280
	Total Dissolved Solids	mg/L	2586	1080 D	1260 D	866 D	896 D	1050	952	858	1200	492	872	994	1120 D	986	934	934
	Chloride	mg/L					274 D	274	263	225	256 D	166	312	294	294	267	323	316
7664-41-7	Nitrogen, Ammonia (As N)	mg/L	53.1	23.6 D	26.1 D	17.1 D	26.1 D	17.2	20.4	19.7	17.8 D	10.5 D	25.6 D	23.6 D	26.5 D	27.7 D	38.5	27 D
	Biochemical Oxygen Demand	mg/L	40.1	28	26	32	29	16	21	<2.	20	8	34	14	10	34	24.8	16.6
	Total Organic Carbon		66.4			25.1	39.9	44.7	**163**		**152**	10.3	40.2	36.2	37.6	44.1		8.2
7429-90-5	Aluminum	mg/L	280.4	5.65			5.65	<.2	0.558	<.2	0.204	0.214	0.324		.0742 J	3.62		<.200
7440-36-0	Antimony	mg/L	0.13	.060 U			<.0019	<.06	<.06	<.06	<.0018	<.0018	.00072 B		<.060	.0178 J		<.060
7440-38-2	Arsenic	mg/L	0.11	.010 U			0.0111	<.01	<.01	<.01	.0071 B	0.0125	.0038 B		.0057 J	.0054 J		<.010
7440-39-3	Barium	mg/L	1.11	.200 U			.133 B	<.2	<.2	<.2	.162 B	.0576 B	.102 B		.136 J	.143 J		<.200
7440-41-7	Beryllium	mg/L	0.02	.005 U			.0002 B	<.005	<.005	<.005	<.0001	<.0002	<.0002		<.005	<.005		<.005
7440-42-8	Boron	mg/L		0.187			0.167	0.18			0.186							0.191
7440-43-9	Cadmium	mg/L	0.02	.005 U	.0001 U	.0001 U	.0013 B	<.05	<.005	<.005	.0019 B	.0003 B	<.0001	<0.0001	<.0025	.0012 J	<.0025	<.0025
7440-70-2	Calcium	mg/L	375	170	201	158	120	164	130	131	196	62.2	105	106	158.000 E	116	95.9	96.6
7440-47-3	Chromium	mg/L	0.39	0.0125			0.0113	<.01	<.01	<.0329	.0061 B	.0052 B	.008 B		.0063 J	0.168		<.010
7440-48-4	Cobalt	mg/L	0.2	.050 U			.0043 B	<.05	<.05	<.050	.0013 B	<.0002	.0009 B		.0012 J	.0045 J		<.050
7440-50-8	Copper	mg/L	0.71	.025 U			.0157 B	<.025	<.025	<.025	.0054 B	.0052 B	.0024 B		.0037 J	0.0564		<.025
7439-89-6	Iron	mg/L	198.8	12.9	9.53	8.4	9.5	4.9	3.94	5.77	8.9	3	2.8	3.82	5.06	8.91	3.02	2.05
7439-92-1	Lead	mg/L	1.26	0.0472	0.0136	0.015	0.0561	0.01	<.005	<.005	<.0013	0.005	0.0068	0.0092	.0040 J	.048.0	<.005	<.005
7439-95-4	Magnesium	mg/L	61.7	16.5	23.4	21.2	11.4	18.9	14.5	14.7	30.3	5.58	10.9	10.8	16.200 E	13	8.74	8.87
7439-96-5	Manganese	mg/L	6.12	1.15	1.22	1.07	0.832	0.914	0.667	0.699	1.14	0.863	0.545	0.57	0.93	0.771	0.497	0.468
7440-02-0	Nickel	mg/L	0.27	.040 U			.015 B	<.04	<.04	<.04	.0068 B	.0087 B	.0108 B		.0069 J	0.084		<.040
7440-09-7	Potassium	mg/L	122	54.6	53.8	36	60.5	46.8	52.8	43	44.6	63.2	48.7	55.3	59.6	57.5	55.7	54.1
7782-49-2	Selenium	mg/L	0.01	.005 U			.0026 B	<.005	<.01	<.10.0 U	<.0022	<0.0029	<.0022		<.010	<.010		<.010
7440-22-4	Silver	mg/L		.010 U			.00081 B	<.01	<.01	<.01	.0018 B	<.0018	<.0005		<.010	<.010		<.010
7440-23-5	Sodium	mg/L	414	179.000	206	100	183	200	224	173	197	80.9	216	233	213.000 E	217	214	221
7440-28-0	Thallium	mg/L		.010 U			<.0013	<.01	<.01	<.01	.0041 B	.0031 B	.0023 B		<.010	<.010		<.010
7440-62-2	Vanadium	mg/L	0.5	.050 U			.0141 B	<.05	<.05	<.05	.00070 B	.0053 B	<.0028		<.050	.0087 J		<.050
7440-66-6	Zinc	mg/L	3.5	0.0709			0.112	<.02	<.02	<.02	.012 B	0.0405	0.0231		.0047 J	0.196		<.020
7439-97-6	Mercury	mg/L	0.002	0.0002 U			0.00014	<.0002	<.0002	<.0002	<.0001	<.00010	<.0001		.000047 JN	.00014 J		<0.0002
630-20-6	1,1,1,2-Tetrachloroethane	µg/L					<	5.0 U			5.0 U							<5.0
71-55-6	1,1,1-Trichloroethane	µg/L					<	5.0 U			5.0 U							<5.0
79-34-5	1,1,2,2-Tetrachloroethane	µg/L					<	5.0 U			5.0 U							<5.0
79-00-5	1,1,2-Trichloroethane	µg/L					<	5.0 U			5.0 U							<5.0

GM28_Op	GM-28 OP		STV	Dec_12	Mar_13	Jun_13	Dec_13	June_14	Oct_14	Dec_14	Mar_2015	June_2015	Sept_15	Dec_15	Mar_16	16-Jun	Sept_16	Dec_16
75-34-3	1,1-Dichloroethane	µg/L					<	5.0 U			5.0 U							<5.0
75-35-4	1,1-Dichloroethene	µg/L					<	5.0 U			5.0 U							<5.0
96-18-4	1,2,3-Trichloropropane	µg/L					<	5.0 U			5.0 U							<5.0
96-12-8	1,2-Dibromo-3-chloropropane	µg/L					<	5.0 U			5.0 U							<5.0
106-93-4	1,2-Dibromoethane	µg/L					<	5.0 U			5.0 U							<5.0
95-50-1	1,2-Dichlorobenzene	µg/L					<	5.0 U			5.0 U							<5.0
107-06-2	1,2-Dichloroethane	µg/L					<	5.0 U			5.0 U							<5.0
78-87-5	1,2-Dichloropropane	µg/L					<	5.0 U			5.0 U							<5.0
106-46-7	1,4-Dichlorobenzene	µg/L					<	5.0 U			5.0 U							<5.0
78-93-3	2-Butanone	µg/L					3 JZ	5.0 U			5.0 U							<5.0
591-78-6	2-Hexanone	µg/L					<	5.0 U			5.0 U							<5.0
108-10-1	4-Methyl-2-pentanone	µg/L					<	5.0 U			5.0 U							<5.0
67-64-1	Acetone	µg/L					15	5.0 U			5							21.9
107-13-1	Acrylonitrile	µg/L					<	5.0 U			5.0 U							<5.0
71-43-2	Benzene	µg/L					<	5.0 U			5.0 U							<5.0
74-97-5	Bromochloromethane	µg/L					<	5.0 U			5.0 U							<5.0
75-27-4	Bromodichloromethane	µg/L					<	5.0 U			5.0 U							<5.0
75-25-2	Bromoform	µg/L					<	5.0 U			5.0 U							<5.0
74-83-9	Bromomethane	µg/L					<	5.0 U			5.0 U							<5.0
75-15-0	Carbon disulfide	µg/L					1 J	5.0 U			5.0 U							<5.0
56-23-5	Carbon tetrachloride	µg/L					<	5.0 U			5.0 U							<5.0
108-90-7	Chlorobenzene	µg/L					<	5.0 U			5.0 U							<5.0
75-00-3	Chloroethane	µg/L					<	5.0 U			5.0 U							<5.0
67-66-3	Chloroform	µg/L					<	5.0 U			5.0 U							<5.0
74-87-3	Chloromethane	µg/L					<	5.0 U			5.0 U							<5.0
156-59-2	cis-1,2-Dichloroethene	µg/L					<	5.0 U			5.0 U							<5.0
10061-01-5	cis-1,3-Dichloropropene	µg/L					<	5.0 U			5.0 U							<5.0
124-48-1	Dibromochloromethane	µg/L					<	5.0 U			5.0 U							<5.0
74-95-3	Dibromomethane	µg/L					<	5.0 U			5.0 U							<5.0
	Ethanol	ug/L																
100-41-4	Ethylbenzene	µg/L					<	5.0 U			5.0 U							<5.0
74-88-4	Iodomethane	µg/L					<	5.0 U			5.0 U							<5.0
	Isopropyl Alcohol	ug/L																
75-09-2	Methylene chloride	µg/L					<	5.0 U			5.0 U							<5
	Silane, methoxytrimethyl-	ug/L																
	Silanol, trimethyl-	ug/L																
100-42-5	Styrene	µg/L					<	5.0 U			5.0 U							<5
	Sulfur dioxide	ug/L																
127-18-4	Tetrachloroethene	µg/L					<	5.0 U			5.0 U							<5.0
108-88-3	Toluene	µg/L					<	5.0 U			5.0 U							<5.0
156-60-5	trans-1,2-Dichloroethene	µg/L					<	5.0 U			5.0 U							<5.0
10061-02-6	trans-1,3-Dichloropropene	µg/L					<	5.0 U			5.0 U							<5.0
110-57-6	trans-1,4-Dichloro-2-butene	µg/L					<	5.0 U			5.0 U							<5.0
79-01-6	Trichloroethene	µg/L					<	5.0 U			5.0 U							<5.0
75-69-4	Trichlorofluoromethane	µg/L					<	5.0 U			5.0 U							<5.0
	Trimethylsilyl fluoride	ug/L																
	unknown	ug/L																
108-05-4	Vinyl acetate	µg/L					<	5.0 U			5.0 U							<5.0
75-01-4	Vinyl chloride	µg/L					<	5.0 U			5.0 U							<5.0
1330-20-7	Xylene (total)	µg/L					<	5.0 U			5.0 U							<5.0
57-12-5	Cyanide	µg/L					<10	<10			10.0 U							<2
	Total Organic Carbon	mg/L					39.9		44.7									802
	Sulfide																	<2
	1,4 dioxane	ug/l																

GM28_Op	GM-28 OP		STV	**Dec_12**	Mar_13	Jun_13	Dec_13	June_14	Oct_14	Dec_14	Mar_2015	June_2015	Sept_15	Dec_15	Mar_16	16-Jun	Sept_16	Dec_16	
	6:2FTS	ng/l																	
	8:2FTS	ng/l																	
	NEtFOSAA	ng/l																	
	NMeFOSAA	ng/l																	
	PFBS	ng/l																	
	PFBA	ng/l																	
	PFDS	ng/l																	
	PFDA	ng/l																	
	PFDoA	ng/l																	
	PFHpS	ng/l																	
	PFHpA	ng/l																	
	PFHxS	ng/l																	
	PFNA	ng/l																	
	FOSA	ng/l																	
	PFOS	ng/l																	
	PFOA	ng/l																	
	PFTeA	ng/l																	
	PFTriA	ng/l																	
	PFUnA	ng/l																	
	PFHxA	ng/l																	
	PFPeA	ng/l																	

B found in blank
J <RL >mdl

GM-28 OP		Mar_17	**Jun_17**	**Sept_17**	Dec_17	Mar_2018	Sept_2018	Dec_18	Mar_19	Jun_19
		4/19/2017	7/20/2017	9/26/2017	12/20/2017	3/19/2018	9/24/2018	12/10/2018	3/20/2019	6/10/2019
Analyte	Units									
pH		7.98	5.64	7.19	7.65	7.01	8.03	7.93	7.78	7.89
spec cond	umhos_cm	1011	75	2158	1967	1840	943	1001	982	982
ORP		-350.6	-97.8	-127.9	-228.3	-76	-109.6	-101.9	-95	-100
DO	mg/l	0.03	1.41	0.3	0.24	0.49	0	3.61	3.14	0
Temp	C	16.81	15.89	17.25	17.73	17.51	17.7	14.1	14.4	16.2
Turbidity	NTU							52.0 D	13	65.0 D
Bromide	mg/L	1.4	2.0	2.3	1.8	0.71	1.6	1.6	1.0	1.3
Chloride	mg/L	183 D	422 D	398	322 D	141 D	352 D	259 D	217 D	256 D
Sulfate	mg/L	46.5	111 D	37.7	53.1 D	652 D	201 D	117 D	<5.0	216 D
Nitrogen, Kjeldahl, Total	mg/L	5.9 D	45.4 D	55.3	36.8 D	9.3	34.4 D	28.0 D	10.8 D	20.9 D
Nitrate as N	mg/L	<0.050	<0.050	<0.014	**0.52**	6.3 D	<0.050	<0.050	0.022J	0.042J
Nitrite as N	mg/L	<0.050	<0.050	<0.0020	<0.050	0.62	<0.050	<0.050	<0.050	<0.050
Chemical Oxygen Demand	mg/L	38.0	169	164	142	62.1	175	136	107	109
Phenolics, Total Recoverable	mg/L	0.0198	<.0050	0.0096	0.0128	.0047J	29.2	0.0151	0.0125	<.01
Chromium, Hexavalent	mg/L	<.1					<0.10 D			
Color	units									
Alkalinity, Total (As CaCO3)	mg/L	119	373	658	524	269	705	569	1060	984
Hardness (As CaCO3)	mg/L	260	440	400	180	580	470	430	1240	880
Total Dissolved Solids	mg/L	555	1360	1230	1150	1370	1330	1090	1670	1530
Chloride	mg/L	183	422 D	398	322	141	352			
Nitrogen, Ammonia (As N)	mg/L	6.2	29.6	34.8	34.6 D	8.7 D	17.4 D	25.3 D	8.8 D	18.2 D
Biochemical Oxygen Demand	mg/L	8.1	13.3	30.2	17.0 D	<4.0 D	23.8 D	11.1 D	4.4 D	11.9 D
Total Organic Carbon		7.7	36.7 D	47.3	43.6	15.7		34.3	33.5	35.9
Aluminum	mg/L	<.200					0.563			
Antimony	mg/L	<.060					<.0600			
Arsenic	mg/L	0.0119					<.0100			
Barium	mg/L	<.200					.0940J			
Beryllium	mg/L	<.0050					<.0050			
Boron	mg/L	0.0882					0.236			
Cadmium	mg/L	<.0025	<.0025	<0.000063	0.00027J	<.0025	0.00020J	.00018 J	<.0025	<.0025
Calcium	mg/L	58.9	200	136	109	262	167	157	384	248
Chromium	mg/L	<.010					<.0100			
Cobalt	mg/L	<.050					.0018J			
Copper	mg/L	<.025					.0059J			
Iron	mg/L	4.54	14.2	3.2	2.13	8.11	4.66	5.91	13.5	8.54
Lead	mg/L	<.005	0.0356	<.0013	.0031J	<.0050	0.0054	0.0114	0.0095	0.0109
Magnesium	mg/L	4.52	27.9	15.5	10.8	39.4	22	23	80.3	54.4
Manganese	mg/L	0.955	1.69	1.2	0.586	1.27	0.936	1.03	2.74	1.67
Nickel	mg/L	<.040					.0057J			
Potassium	mg/L	56.2	76.1	87.4	96.2	57.4	48.6	59.2	58.2	51.2
Selenium	mg/L	<.010					<.0100			
Silver	mg/L	<.010					<.0100			
Sodium	mg/L	85.8	262	239	234	83	236	206	197	186
Thallium	mg/L	<.010					<.0100			
Vanadium	mg/L	<.050					.0026J			
Zinc	mg/L	<.020					0.0431			
Mercury	mg/L	<0.0002					<0.00020			
1,1,1,2-Tetrachloroethane	µg/L	<5.0					<1.0			
1,1,1-Trichloroethane	µg/L	<5.0					<1.0			
1,1,2,2-Tetrachloroethane	µg/L	<5.0					<1.0			
1,1,2-Trichloroethane	µg/L	<5.0					<1.0			

GM-28 OP		Mar_17	**Jun_17**	**Sept_17**	Dec_17	Mar_2018	Sept_2018	Dec_18	Mar_19	Jun_19
1,1-Dichloroethane	µg/L	<5.0					<1.0			
1,1-Dichloroethene	µg/L	<5.0					<1.0			
1,2,3-Trichloropropane	µg/L	<5.0					<1.0			
1,2-Dibromo-3-chloropropane	µg/L	<5.0					<1.0			
1,2-Dibromoethane	µg/L	<5.0					<1.0			
1,2-Dichlorobenzene	µg/L	<5.0					<1.0			
1,2-Dichloroethane	µg/L	<5.0					<1.0			
1,2-Dichloropropane	µg/L	<5.0					<1.0			
1,4-Dichlorobenzene	µg/L	<5.0					<1.0			
2-Butanone	µg/L	<5.0					<5.0			
2-Hexanone	µg/L	<5.0					<5.0			
4-Methyl-2-pentanone	µg/L	<5.0					<5.0			
Acetone	µg/L	<5.0					7.5			
Acrylonitrile	µg/L	<5.0					<1.0			
Benzene	µg/L	<5.0					<1.0			
Bromochloromethane	µg/L	<5.0					<1.0			
Bromodichloromethane	µg/L	<5.0					<1.0			
Bromoform	µg/L	<5.0					<1.0			
Bromomethane	µg/L	<5.0					<1.0			
Carbon disulfide	µg/L	<5.0					<1.0			
Carbon tetrachloride	µg/L	<5.0					<1.0			
Chlorobenzene	µg/L	<5.0					<1.0			
Chloroethane	µg/L	<5.0					<1.0			
Chloroform	µg/L	<5.0					<1.0			
Chloromethane	µg/L	<5.0					<1.0			
cis-1,2-Dichloroethene	µg/L	<5.0					<1.0			
cis-1,3-Dichloropropene	µg/L	<5.0					<1.0			
Dibromochloromethane	µg/L	<5.0					<1.0			
Dibromomethane	µg/L	<5.0					<1.0			
Ethanol	ug/L									
Ethylbenzene	µg/L	<5.0					<1.0			
Iodomethane	µg/L	<5.0					<1.0			
Isopropyl Alcohol	ug/L									
Methylene chloride	µg/L	<5.0					<1.0			
Silane, methoxytrimethyl-	ug/L									
Silanol, trimethyl-	ug/L									
Styrene	µg/L	<5.0					<1.0			
Sulfur dioxide	ug/L	63.8								
Tetrachloroethene	µg/L	<5.0					<1.0			
Toluene	µg/L	<5.0					<1.0			
trans-1,2-Dichloroethene	µg/L	<5.0					<1.0			
trans-1,3-Dichloropropene	µg/L	<5.0					<1.0			
trans-1,4-Dichloro-2-butene	µg/L	<5.0					<1.0			
Trichloroethene	µg/L	<5.0					<1.0			
Trichlorofluoromethane	µg/L	<5.0					<1.0			
Trimethylsilyl fluoride	ug/L									
unknown	ug/L	null					9.7J			
Vinyl acetate	µg/L	<5.0					<1.0			
Vinyl chloride	µg/L	<5.0					<1.0			
Xylene (total)	µg/L	<5.0					<3.0			
Cyanide	µg/L	<10.0					<10.0			
Total Organic Carbon	mg/L	7.7					39.6 D			
Sulfide		<2.0								
1,4 dioxane	ug/l					<.2		1.2	0.74	0.24	0.38

GM-28 OP		Mar_17	**Jun_17**	**Sept_17**	Dec_17	Mar_2018	Sept_2018	Dec_18	Mar_19	Jun_19
6:2FTS	ng/l					<180	27 F1	31 J	7.4 J	12
8:2FTS	ng/l					<180	6.4 J	ND	2.3 J	5.7 J
NEtFOSAA	ng/l					<18	11 J	15 J	ND	4.5
NMeFOSAA	ng/l					<18	3.8 J	5.1 J	ND	1.8 J
PFBS	ng/l					23	19 F1	13	22	39
PFBA	ng/l					59 B	270 B	160 B	81	140
PFDS	ng/l					<1.8	ND	ND	ND	ND
PFDA	ng/l					8.3	20	20	15	22
PFDoA	ng/l					<1.8	.67 J	.8 J	ND	ND
PFHpS	ng/l					1.6 J	2.8	3.6	3.9	4.7
PFHpA	ng/l					61	140 F1	110 F1	130	130
PFHxS	ng/l					35 B	110 B	86 B	140 B	120
PFNA	ng/l					18	45	42	57	67
FOSA	ng/l					1.3 J	4.4	5.2	.68 J	3.7
PFOS	ng/l					100	170	150	150	190
PFOA	ng/l					200	300	270		350
PFTeA	ng/l					<1.8	ND	.37 J	.33 JB	ND
PFTriA	ng/l					<1.8	ND	ND	ND	ND
PFUnA	ng/l					3.3	6.3	7.6	4.8	6.3
PFHxA	ng/l					71	220	160	160	170
PFPeA	ng/l						210	180	190	180

B found in blank
J <RL >mdl

GM28I_Op	GM-28I OP		STV	Dec_12	Mar_13	Jun_13	DEC_13	Jun_14	Oct_14	Dec_14	Mar_15	June_2015	Sept_2015	Dec_15	Mar_16	Jun_16	Sept_16	Dec_16
Date Collected				1/4/2013	4/9/2013	6/28/2013	3/11/2014	6/30/2014	10/30/2014	1/2/2015	5/15/2015	7/28/2015	10/27/2015	12/10/2015	3/25/2016		10/6/2016	2/1/2017
Date Received				1/4/2013	4/9/2013													
	Analyte	Units																
	pH			9.5	9.1	8.97	8.65	8.78	7.78	8.49	8.71	7.45	7.74	8	8.52	8.88	8.04	7.91
	spec cond	umhos_cm	1149	865	1120	808	972	790	796	951	812	**1600**	1072	1103	737	904	862	805
	ORP		43	-236.9	-110.6	-257.1	-135	-172.3	-333.8	-202.7	-271.1	-120.8	-223.9	-245.6	-237.5	-148.3	-241.5	-175.6
	DO	mg/l	1.82	0.17	0.14	0.61	1.05	0.46	0.2	0.96	0.85	0.56	0.05	0.08	0.18	0.22	0.26	0.27
	Temp	C		14.21	16.19	14.92	14.61	15.79	15.69	14.23	15.19	16.35	16.39	17.05	16.73	17.38	17.53	16.38
	Turbidity	NTU		47 D	24 D	14 D	10 D	15	28	28	21	8.9	45	24	27	74		
24959-67-9	Bromide	mg/L	6.3	0.76	1.06	1	1.63	1.15	1.80	2.52	1.64	1.55	1.43	1.4	1.36	1.19	1.8	1.2
16887-00-6	Chloride	mg/L	177	139 D	**224 D**	118 D	**232 D**	**205 D**	**224**	**231**	**201 D**	**266 D**	**222 D**	**205 D**	176 D	170 D	**213**	165 D
14808-79-8	Sulfate	mg/L	115.2	14.2	13.9	39.3	<5	15.2	26.4	41.5	36.6	<5.	38.8	36.1	32.6	32.9	44.9	44.7
	Nitrogen, Kjeldahl, Total	mg/L	27	26.0 D	23.1 D	10.9	24.3 D	14.5 D	11.4	6.81	11.0 D	21.6 D	12.1 D	13.0 D	7.20 D	14.7 D	5.6	4.7 D
14797-55-8	Nitrate as N	mg/L	0.6	0.100 U	0.100 U	<.1	<.1	<.1	<0.1	<0.1	<.1	<0.1	<.1	<.1	<0.1	<0.10	<.05	0.089
14797-65-0	Nitrite as N	mg/L		0.100 U	0.100 U	<.1	<.1	<.1	<0.1	<0.1	<.1	<0.1	<.1	<.1	<0.1	<.10	<.05	<.05
	Chemical Oxygen Demand	mg/L	197	68.3	67.7	36.9	63.1	42.6	31.8	17.2	41.2	115	52.6	49.2	15.4	52.4	75.4	29.6
	Phenolics, Total Recoverable	mg/L	0.188	**0.222**	.0862 D	0.0209	0.0081	0.017	0.019	0.017	.0612 D	0.0358	0.0361	0.0417	0.01	0.0378	0.0167	<.005
18540-29-9	Chromium, Hexavalent	mg/L					<.02	<.02			<0.02							<10 D
	Color	units					20	60			45.0							20
	Alkalinity, Total (As CaCO3)	mg/L	336.5	191 D	229 D	173 D	218 D	156 D	145	120	163 D	152	189 D	200 D	144	176	117	123
	Hardness (As CaCO3)	mg/L	212	110 D	130 D	100 D	132 D	130 D	**250**	**280**	120 D	**360 D**	160 D	168 D	108 D	128 D	180	160
	Total Dissolved Solids	mg/L	742	503	538	434	562 D	480	556	518	494	**1080**	558	564	**814 D**	512	527	440
	Chloride	mg/L							224	231	201 D	266	222	205	176	170	213	165 D
7664-41-7	Nitrogen, Ammonia (As N)	mg/L	23.52	19.7 D	20.2 D	9.06 D	20.1 D	13.1 D	9.28	7.58	11.3 D	22.4 D	13.8 D	13.5 D	9.24 D	11.0 D	6.4	5.6 D
	Biochemical Oxygen Demand	mg/L	64	38	34	14	21	29	14	13	16	21	17	5	<4.00	23	4.3	3.2
	Total Organic Carbon		24			10	21	13.6	**30.9**	**40.7**	10	**39.5**	12.6	15.9	7.11	17	<5 D	
7429-90-5	Aluminum	mg/L	5.4	1.48			1.32	0.525	0.214	0.263	.126 B	0.378	.140 B		.0846 J	4.3	<.200	
7440-36-0	Antimony	mg/L		.060 U			<.0019	<.06	<.06	<.06	<.0018	<.0018	<.0006		<.060	.0088 J		<.060
7440-38-2	Arsenic	mg/L	0.04	0.0163			0.0111	0.0115	<.01	<.010	0.0133	.0044 B	0.0131		0.0113	0.0117		0.0122
7440-39-3	Barium	mg/L	0.16	.200 U			.0721 B	<.2	<.2	<.2	.0604 B	.134 B	.0789 B		.0531 J	.0833 J		<.200
7440-41-7	Beryllium	mg/L		.005 U			<.00014	<.005	<.005	<.005	<.0001	<.0002	<.0002		<.0050	<.005		<.0050
7440-42-8	Boron	mg/L		0.112			0.127	0.104			0.104							0.0735
7440-43-9	Cadmium	mg/L	0.02	.005 U	.0001 U	.0001 U	.0004 B	<.005	<.005	<.005	.0003 B	.00030 B	<.0001	<.0001	<.0025	.00030 J	<.0025	<.0025
7440-70-2	Calcium	mg/L	78	24.2	30.7	37.1	49.6	45.4	53.9	62.3	55	**138**	60.4	58.1	47.000 E	53.7	61	50.5
7440-47-3	Chromium	mg/L	0.02	.010 U			.0061 B	<.01	<.01	.013.0	.0022 B	.0088 B	.0021 B		0.0379	.0092 J		<.0100
7440-48-4	Cobalt	mg/L	0.006	.050 U			.001 B	<.05	<.05	<.05	<.0003	.00090 B	<.0002		0.00060 J	.0027 J		<.050
7440-50-8	Copper	mg/L	0.006	.025 U			**.0077 B**	<.025	<.025	<.025	.0025 B	.0063 B	.0019 B		.0029 J	0.0471		<.025
7439-89-6	Iron	mg/L	5.6	2.71	1.52	0.222	3.05	2.12	1.36	1.18	1.38	4.53	2.08	4.15	2.85	**11.2**	**8.2**	**6.16**
7439-92-1	Lead	mg/L	0.04	0.012	0.0046	0.0052	0.0192	0.008	<.005	<.005	<.0013	.003 B	0.0052	.0018 B	.0039 J	0.0403	<.005	<.005
7439-95-4	Magnesium	mg/L	7.73	5.000 U	1.74 B	2.8 B	3.14 B	5	3.98	5.19	4.420 B	**19.6**	5.39	5.12	3.810 E	4.93	4.46	3.71
7439-96-5	Manganese	mg/L	0.24	0.142	0.164	0.129	**0.335**	**0.278**	**0.406**	**0.29**	**0.476**	**0.719**	**0.851**	**1.28**	**0.89**	**1.05**	**1.58**	**0.984**
7440-02-0	Nickel	mg/L	0.04	.040 U			.011B	<.04	<.04	<.04	.0091 B	.0089 B	.0105 B		.0209 J	.0148 J		<.040
7440-09-7	Potassium	mg/L	109.2	77.8	81.8	80.4	85.2	71.7	76.5	66.7	64.2	56.4	73.4	73.5	59.8	59.2	41.4	46.4
7782-49-2	Selenium	mg/L		.005 U			.0024 B	<.005	<.01	<.01	<.0022	<.0029	<.0022		<.010	<.01		<.010
7440-22-4	Silver	mg/L		.010 U			.00067 B	<.01	<.01	<.01	.0015 B	<.0018	<.0005		<.010	<.010		<.010
7440-23-5	Sodium	mg/L	130	96.4	102	67.3	109	92.5	97.1	86	86.5	**219**	111	95.3	68.800 E	89.2	75.2	62.6
7440-28-0	Thallium	mg/L		.010 U			.0019 B	<.01	<.01	<.01	<.0027	<.0023	.0031 B		<.010	<.010		<.010
7440-62-2	Vanadium	mg/L	0.03	.050 U			.0068 B	<.05	<.05	<.05	.0040 B	.0021 B	.0069 B		.0039 J	.0133 J		<.050
7440-66-6	Zinc	mg/L	0.13	.020 U			0.0277	<.02	<.02	<.02	.0164 B	0.139	.0138 B		.0054 J	0.135		<.020
7439-97-6	Mercury	mg/L	0.0004	0.0002 U			.0001 B	<.0002	<.0002	<.0002	<.0001	<.0001	<.0001		.000048 JN	<.0020		<0.00020
630-20-6	1,1,1,2-Tetrachloroethane	µg/L					<	5.0 U			5.0 U							<5.0
71-55-6	1,1,1-Trichloroethane	µg/L					<	5.0 U			5.0 U							<5.0
79-34-5	1,1,2,2-Tetrachloroethane	µg/L					<	5.0 U			5.0 U							<5.0
79-00-5	1,1,2-Trichloroethane	µg/L					<	5.0 U			5.0 U							<5.0

GM28I_Op	GM-28I OP		STV	Dec_12	Mar_13	Jun_13	DEC_13	Jun_14	Oct_14	Dec_14	Mar_15	June_2015	Sept_2015	Dec_15	Mar_16	Jun_16	Sept_16	Dec_16
75-34-3	1,1-Dichloroethane	µg/L					<	5.0 U			5.0 U							<5.0
75-35-4	1,1-Dichloroethene	µg/L					<	5.0 U			5.0 U							<5.0
96-18-4	1,2,3-Trichloropropane	µg/L					<	5.0 U			5.0 U							<5.0
96-12-8	1,2-Dibromo-3-chloropropane	µg/L					<	5.0 U			5.0 U							<5.0
106-93-4	1,2-Dibromoethane	µg/L					<	5.0 U			5.0 U							<5.0
95-50-1	1,2-Dichlorobenzene	µg/L					<	5.0 U			5.0 U							<5.0
107-06-2	1,2-Dichloroethane	µg/L					<	5.0 U			5.0 U							<5.0
78-87-5	1,2-Dichloropropane	µg/L					<	5.0 U			5.0 U							<5.0
106-46-7	1,4-Dichlorobenzene	µg/L					<	5.0 U			5.0 U							<5.0
78-93-3	2-Butanone	µg/L					<	5.0 U			5.0 U							<5.0
591-78-6	2-Hexanone	µg/L					<	5.0 U			5.0 U							<5.0
108-10-1	4-Methyl-2-pentanone	µg/L					<	5.0 U			5.0 U							<5.0
67-64-1	Acetone	µg/L					2 J	5.0 U			5							<5.0
107-13-1	Acrylonitrile	µg/L					<	5.0 U			5.0 U							<5.0
71-43-2	Benzene	µg/L					<	5.0 U			5.0 U							<5.0
74-97-5	Bromochloromethane	µg/L					<	5.0 U			5.0 U							<5.0
75-27-4	Bromodichloromethane	µg/L					<	5.0 U			5.0 U							<5.0
75-25-2	Bromoform	µg/L					<	5.0 U			5.0 U							<5.0
74-83-9	Bromomethane	µg/L					<	5.0 U			5.0 U							<5.0
75-15-0	Carbon disulfide	µg/L						5 5.0 U			5.0 U							<5.0
56-23-5	Carbon tetrachloride	µg/L					<	5.0 U			5.0 U							<5.0
108-90-7	Chlorobenzene	µg/L					<	5.0 U			5.0 U							<5.0
75-00-3	Chloroethane	µg/L					<	5.0 U			5.0 U							<5.0
67-66-3	Chloroform	µg/L					<	5.0 U			5.0 U							<5.0
74-87-3	Chloromethane	µg/L					<	5.0 U			5.0 U							<5.0
156-59-2	cis-1,2-Dichloroethene	µg/L					<	5.0 U			5.0 U							<5.0
10061-01-5	cis-1,3-Dichloropropene	µg/L					<	5.0 U			5.0 U							<5.0
124-48-1	Dibromochloromethane	µg/L					<	5.0 U			5.0 U							<5.0
74-95-3	Dibromomethane	µg/L					<	5.0 U			5.0 U							<5.0
	Ethanol	ug/L																
100-41-4	Ethylbenzene	µg/L					<	5.0 U			5.0 U							<5.0
74-88-4	Iodomethane	µg/L					<	5.0 U			5.0 U							<5.0
	Isopropyl Alcohol	ug/L																
75-09-2	Methylene chloride	µg/L					<	5.0 U			5.0 U							<5
	Silane, methoxytrimethyl-	ug/L																
	Silanol, trimethyl-	ug/L																
100-42-5	Styrene	µg/L					<	5.0 U			5.0 U							<5
	Sulfur dioxide	ug/L																
127-18-4	Tetrachloroethene	µg/L					<	5.0 U			5.0 U							<5.0
108-88-3	Toluene	µg/L					1 J	5.0 U			5.0 U							<5.0
156-60-5	trans-1,2-Dichloroethene	µg/L					<	5.0 U			5.0 U							<5.0
10061-02-6	trans-1,3-Dichloropropene	µg/L					<	5.0 U			5.0 U							<5.0
110-57-6	trans-1,4-Dichloro-2-butene	µg/L					<	5.0 U			5.0 U							<5.0
79-01-6	Trichloroethene	µg/L					<	5.0 U			5.0 U							<5.0
75-69-4	Trichlorofluoromethane	µg/L					<	5.0 U			5.0 U							<5.0
	Trimethylsilyl fluoride	ug/L																
	unknown	ug/L																
108-05-4	Vinyl acetate	µg/L					<	5.0 U			5.0 U							<5.0
75-01-4	Vinyl chloride	µg/L					<	5.0 U			5.0 U							<5.0
1330-20-7	Xylene (total)	µg/L					<	5.0 U			5.0 U							<5.0
57-12-5	Cyanide	µg/L					<10	<10			10.0 U							<10
	Total Organic Carbon	mg/L						21	13.6									<5 D
	Sulfide	mg/l																<2
	1,4 dioxane	ug/l																

GM28I_Op	GM-28I OP		STV	Dec_12	Mar_13	Jun_13	DEC_13	Jun_14	Oct_14	Dec_14	Mar_15	June_2015	Sept_2015	Dec_15	Mar_16	Jun_16	Sept_16	Dec_16
	6:2FTS	ng/l																
	8:2FTS	ng/l																
	NEtFOSAA	ng/l																
	NMeFOSAA	ng/l																
	PFBS	ng/l																
	PFBA	ng/l																
	PFDS	ng/l																
	PFDA	ng/l																
	PFDoA	ng/l																
	PFHpS	ng/l																
	PFHpA	ng/l																
	PFHxS	ng/l																
	PFNA	ng/l																
	FOSA	ng/l																
	PFOS	ng/l																
	PFOA	ng/l																
	PFTeA	ng/l																
	PFTriA	ng/l																
	PFUnA	ng/l																
	PFHxA	ng/l																
	PFPeA	ng/l																

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GM-28I OP		Mar_17	Jul_17	Sept_17	Dec_17	mar_2018	Sept_18	Dec_18	Mar_19	Jun_19
		4/19/2017	7/17/2017	9/26/2017	12/20/2017	Sep-18	9/24/2018	12/10/2018	3/20/2019	6/10/2019
Analyte	Units									
pH		7.7	6.95	7.6	7.69	8.09	8.48	9.34	9.46	9.25
spec cond	umhos_cm	**1917**	936	802	849	936	967	965	978	959
ORP		-253.2	-167	-322.5	-310.6	-245.6	-131.3	-175.6	-187.2	-171.9
DO	mg/l	0.05	**4.41**	0.05	0.14	0.19	0.47	1.01	2.44	0.96
Temp	C	17.21	17.4	16.96	16.8	16.93	16.6	15.7	14.7	16.7
Turbidity	NTU							40.1 D	8.9	20.0 D
Bromide	mg/L	1.7	1.6	1.3	1.3	1.3	0.91	1.1	1.4	1.7
Chloride	mg/L	**299 D**	**261 D**	**215**	**187 D**	215 D	172 D	174 D	248 D	251 D
Sulfate	mg/L	75.0 D	14.3	37.1	46.5	60.4 D	48.7	28.9	15.2	31.5
Nitrogen, Kjeldahl, Total	mg/L	31.3 D	5.7 D	9.2	4.3 D	8.0	24.8 D	32.5 D	3.8 D	12.2 D
Nitrate as N	mg/L	<0.050	<0.050	<0.014	0.020J	<0.050	<0.050	<0.050	0.051	0.029J
Nitrite as N	mg/L	<0.050	<0.050	<0.0020	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chemical Oxygen Demand	mg/L	140	73.3	37.3	26.2	34.7	76.8	53.4	21.2	45.5
Phenolics, Total Recoverable	mg/L	.0574 D	0.0199	0.0123	0.0074	0.0146	24.0	0.0095	0.0136	<.01
Chromium, Hexavalent	mg/L	<0.10					<0.20 D			
Color	units									
Alkalinity, Total (As CaCO3)	mg/L	**371**	135	116	110	104	117	95.9	103	149
Hardness (As CaCO3)	mg/L	**390**	132	140	127	113	120	96.0	92.0	100
Total Dissolved Solids	mg/L	**1010**	481	468	442	543	460	498	464	596
Chloride	mg/L	299	261 D	215	187					
Nitrogen, Ammonia (As N)	mg/L	**31.2**	7.8 D	5.4	3.6 D	7.1 D	6.8 D	12.3 D	7.3 D	11.4 D
Biochemical Oxygen Demand	mg/L	21.7	8.4 D	9.5	6.7 D	9.4 D	16.2 D	13.3 D	12.1 D	13.3 D
Total Organic Carbon		**43.4**	9.7	7.1	6.0	7.1		7.4	4.3	12.7
Aluminum	mg/L	<.200					2.42			
Antimony	mg/L	<.060					<.0600			
Arsenic	mg/L	<.010					0.0138			
Barium	mg/L	<.200					.0635J			
Beryllium	mg/L	<.005					<.0050			
Boron	mg/L	0.189					0.0814			
Cadmium	mg/L	<.0025	<.0025	<0.000063	.00070J	<.0025	0.00020J	<.0025	<.0025	<.0025
Calcium	mg/L	**111**	44	45.9	53.2	49.2	41.5	35.5	35.3	39.6
Chromium	mg/L	0.0675					<.0100			
Cobalt	mg/L	<.050					.0016J			
Copper	mg/L	<.025					.0104J			
Iron	mg/L	4.32	5.38	5.37	**7.84**	1.9	8.65	4.19	2.94	4.07
Lead	mg/L	<.005	<.0050	<1.3	<.0050	<.0050	0.0204	0.0095	0.0052	0.0146
Magnesium	mg/L	**11.8**	3.54	3.965	4.3	4.4	3.55	2.65	2.58	4.31
Manganese	mg/L	**0.951**	**0.956**	**1.04**	**1.37**	0.426	0.778	0.487	0.32	0.292
Nickel	mg/L	0.0422					.0059J			
Potassium	mg/L	60	58	47.7	49.8	57.5	40.5	54.4	42.7	62.6
Selenium	mg/L	<.010					<.0100			
Silver	mg/L	<.010					<.0100			
Sodium	mg/L	**219**	92.2	78.3	84.8	92.9	85.2	88.5	85.2	114
Thallium	mg/L	<.010					<.0100			
Vanadium	mg/L	<.050					.0064J			
Zinc	mg/L	<.020					0.0519			
Mercury	mg/L	<.0002					<0.00020			
1,1,1,2-Tetrachloroethane	µg/L	<5.0					<1.0			
1,1,1-Trichloroethane	µg/L	<5.0					<1.0			
1,1,2,2-Tetrachloroethane	µg/L	<5.0					<1.0			
1,1,2-Trichloroethane	µg/L	<5.0					<1.0			

GM-28I OP		Mar_17	Jul_17	Sept_17	Dec_17	mar_2018	Sept_18	Dec_18	Mar_19	Jun_19
1,1-Dichloroethane	µg/L	<5.0					<1.0			
1,1-Dichloroethene	µg/L	<5.0					<1.0			
1,2,3-Trichloropropane	µg/L	<5.0					<1.0			
1,2-Dibromo-3-chloropropane	µg/L	<5.0					<1.0			
1,2-Dibromoethane	µg/L	<5.0					<1.0			
1,2-Dichlorobenzene	µg/L	<5.0					<1.0			
1,2-Dichloroethane	µg/L	<5.0					<1.0			
1,2-Dichloropropane	µg/L	<5.0					<1.0			
1,4-Dichlorobenzene	µg/L	<5.0					<1.0			
2-Butanone	µg/L	<5.0					<5.0			
2-Hexanone	µg/L	<5.0					<5.0			
4-Methyl-2-pentanone	µg/L	<5.0					<5.0			
Acetone	µg/L	<5.0					3.1J			
Acrylonitrile	µg/L	<5.0					<1.0			
Benzene	µg/L	<5.0					<1.0			
Bromochloromethane	µg/L	<5.0					<1.0			
Bromodichloromethane	µg/L	<5.0					<1.0			
Bromoform	µg/L	<5.0					<1.0			
Bromomethane	µg/L	<5.0					<1.0			
Carbon disulfide	µg/L	<5.0					<1.0			
Carbon tetrachloride	µg/L	<5.0					<1.0			
Chlorobenzene	µg/L	<5.0					<1.0			
Chloroethane	µg/L	<5.0					<1.0			
Chloroform	µg/L	<5.0					<1.0			
Chloromethane	µg/L	<5.0					<1.0			
cis-1,2-Dichloroethene	µg/L	<5.0					<1.0			
cis-1,3-Dichloropropene	µg/L	<5.0					<1.0			
Dibromochloromethane	µg/L	<5.0					<1.0			
Dibromomethane	µg/L	<5.0					<1.0			
Ethanol	ug/L									
Ethylbenzene	µg/L	<5.0					<1.0			
Iodomethane	µg/L	<5.0					<1.0			
Isopropyl Alcohol	ug/L									
Methylene chloride	µg/L	<5.0					<1.0			
Silane, methoxytrimethyl-	ug/L									
Silanol, trimethyl-	ug/L									
Styrene	µg/L	<5.0					<1.0			
Sulfur dioxide	ug/L	null								
Tetrachloroethene	µg/L	<5.0					<1.0			
Toluene	µg/L	<5.0					<1.0			
trans-1,2-Dichloroethene	µg/L	<5.0					<1.0			
trans-1,3-Dichloropropene	µg/L	<5.0					<1.0			
trans-1,4-Dichloro-2-butene	µg/L	<5.0					<1.0			
Trichloroethene	µg/L	<5.0					<1.0			
Trichlorofluoromethane	µg/L	<5.0					<1.0			
Trimethylsilyl fluoride	ug/L									
unknown	ug/L	9.1					10.5J			
Vinyl acetate	µg/L	<5.0					<1.0			
Vinyl chloride	µg/L	<5.0					<1.0			
Xylene (total)	µg/L	<5.0					<3.0			
Cyanide	µg/L	<10					<10.0			
Total Organic Carbon	mg/L		43.4				9.5			
Sulfide	mg/l	<2								
1,4 dioxane	ug/l					.12 J	<2	.22 J	.22 J	0.25J

GM-28I OP		Mar_17	Jul_17	Sept_17	Dec_17	mar_2018	Sept_18	Dec_18	Mar_19	Jun_19
6:2FTS	ng/l					<180	52	65	52	67
8:2FTS	ng/l					<180	ND	ND	ND	3.3 J
NEtFOSAA	ng/l					3.9 J	4.6 J	7.8 J	5.5 J	10
NMeFOSAA	ng/l					<18	ND	ND	ND	3.2
PFBS	ng/l					6	4	4	3.4	14
PFBA	ng/l					30 B	23 B	22 B	22	48
PFDS	ng/l					<1.8	ND	.44 J	ND	ND
PFDA	ng/l					7.3	7.1	9.3	7.3	15
PFDoA	ng/l					<1.8	ND	.68 J	ND	.69 J
PFHpS	ng/l					.88 J	.51 J	.89 J	.75 J	1.3 J
PFHpA	ng/l					25	17	19	19	34
PFHxS	ng/l					18 B	12 B	15 B	14 B	26
PFNA	ng/l					15	12	15	14	26
FOSA	ng/l					3.4	2	3.1	2.4	4.1
PFOS	ng/l					50	45	57	57	88
PFOA	ng/l					49	35	46	45	82
PFTeA	ng/l					<1.8	.78 J	ND	ND	ND
PFTriA	ng/l					<1.8	ND	ND	ND	ND
PFUnA	ng/l					7.7	6.9	6.7	5.5	6.4
PFHxA	ng/l					36	35	38	33	55
PFPeA	ng/l					41	47	48	44	73

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The following graphs are utilized to compare the operational data of leachate indicators to their STV's.

Well 26 Operational Data																									
Analyte	**Units**	**Dec 2012**	**Mar 2013**	**Jun 2013**	**Mar 2014**	**Jun 2014**	**Oct 2014**	**Dec 2014**	**May 2015**	**Jun 2015**	**Sep 2015**	**Dec 2015**	**Mar 2016**	**Jun 2016**	**Sep 2016**	**Dec 2016**	**Apr 2017**	**Jun 2017**	**Sep 2017**	**Dec 2017**	**Mar 2018**	**Sep 2018**	**Dec 2018**	**Mar 2019**	**Jun 2019**
Hardness (Operational)	ppm	220	200	230	190	112	300	240	320	108	340	250	290	290	54	250	250	200	150	120	147	148	220	250	175
Chloride (Operational)	ppm	102	66.6	97.7	107	66.3	105	132	114	79	**226**	**250**	**299**	**276**	14.2	**171**	117	137	137	110	118	116	**149**	**225**	79.8
Manganese (Operational)	ppm	0.435	0.139	0.0162	0.134	0.01	0.01	0.01	0.001	0.0191															
TKN (Operational)	mg/L	0.64	0.17	0.17	1.94	0.1	0.1	0.5	0.1	0.1	0.5	0.5	0.1	0.21	0.1	2.7	0.1	1.4	0.02	0.1	6.2	2.6	0.87	0.1	0.5
Ammonia as N (Operational)	ppm	0.1	0.1	0.01	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.31	0.1	0.22	0.1	0.1	0.016	0.022	0.062	0.12	0.047	0.022	0.084
Sodium (Operational)	ppm	26.5	26	33.2	40.8	28.8	42.5	46.4	44.3	24.9	**95.8**	**108**	**124**	**134**	6.19	**77.8**	53.6	46.8	41.4	44.9	52.1	42.8	65.8	**113**	45.2
Potassium (Operational)	ppm	17.7	13.2	16	15.5	15.6	17.7	22	20.6	14.8	21.9	29.3	25.5	21.2	5	20.1	18.6	17	23	17.1	16.8	20.1	20.5	19.2	17.5
Calcium (Operational)	ppm	69.1	54.6	70.6	65.5	48.9	61.1	75.5	59	45.6	84.1	109	111	128	22.4	84.8	68.9	60.4	59.2	55.2	63.6	61.7	69.1	97.9	64.6

Well 26 Preoperational Data																		
Analyte	**Units**	**Jun 2009**	**Aug 2009**	**Sep 2009**	**Dec 2009**	**Jun 2010**	**Sep 2010**	**Dec 2010**	**Mar 2011**	**Jun 2011**	**Sep 2011**	**Dec 2011**	**Mar 2012**	**Jun 2012**	**Sep 2012**	**Mean(M)**	**stan dev(sd)**	**M+(3sd)**
Hardness (Preoperational)	ppm	235	169	208	176	440	190	180	170	180	170	220	160	92	330	208.57	84.43	461.85
Chloride (Preoperational)	ppm	72	104	103	88.5	110	54	60	49	73	64	110	53	76	96	79.46	22.15	145.93
Manganese (Preoperational)	ppm	0.299	0.0538	0.0609	0.0269	**1.6**	0.3	0.08	0.02	<.05	0.01	0.03	0.15	0.51	0.0619	0.25	0.42	1.51
TKN (Preoperational)	mg/L	0.45	0.03	0.439	0.4	1.4	0.8	1	0.6	0.6	0.6	0.4	0.6	**7.8**	0.1	1.09	1.96	6.97
Ammonia as N (Preoperational)	ppm	0.01	0.05	0.09	0.05	0.2	0.2	0.2	0.2	0.02	0.2	0.2	0.2	0.2	0.1	0.14	0.08	0.37
Sodium (Preoperational)	ppm	52.2	17.6	16.3	18	75	24	27	26	29	25	33	24	23	34	30.29	15.69	77.35
Potassium (Preoperational)	ppm	50.1	42.6	53.3	31.6	61	28	27	24	24	25	29	21	17	18	32.26	13.88	73.88
Calcium (Preoperational)	ppm	77.9	59.8	73.1	61.3	**150**	66	66	60	67	62	79	55	28	65.6	69.34	26.22	148.01

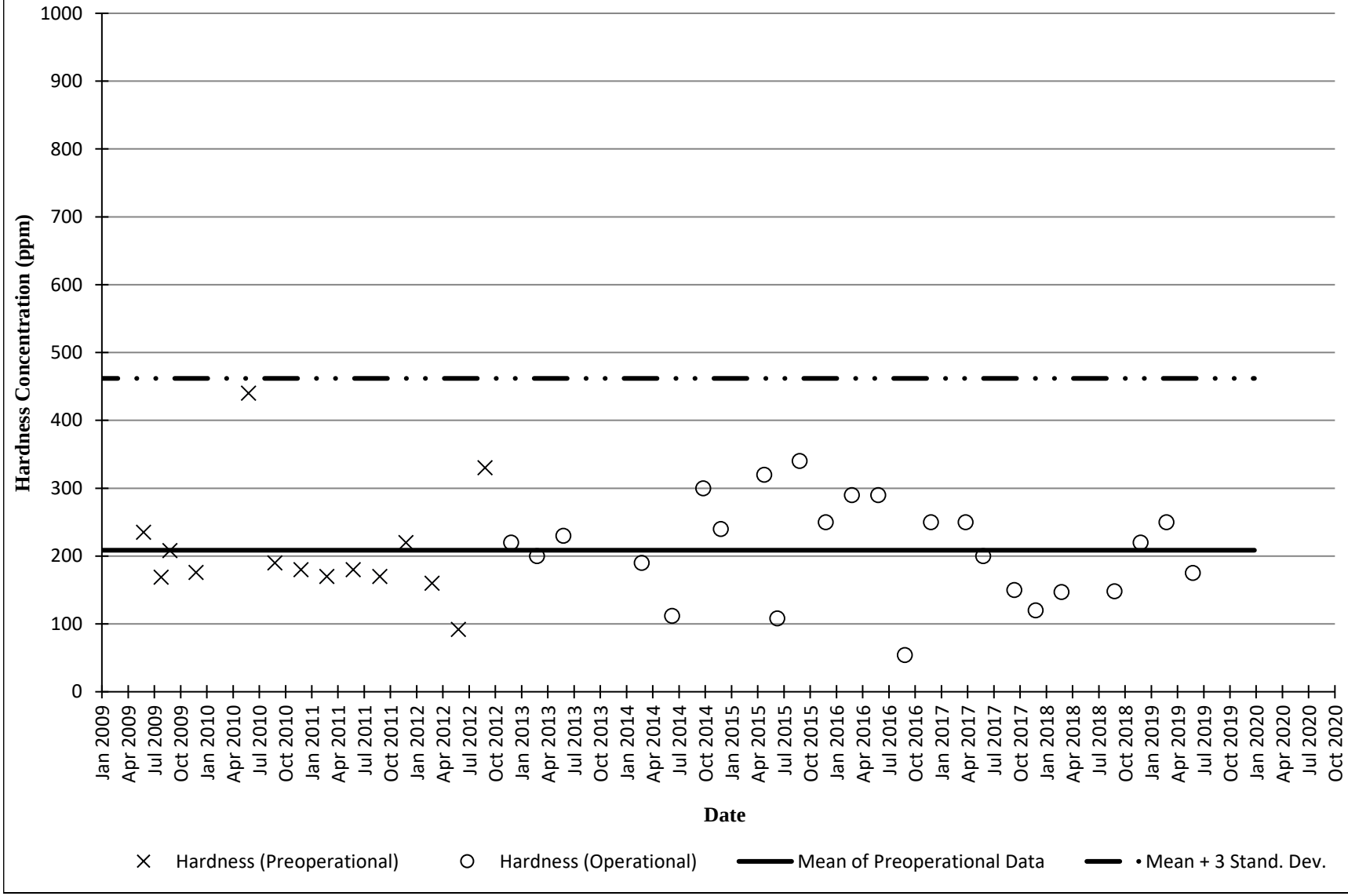
Mean	**Mean**
Jan 2008	Jan 2020
208.57	208.57
79.46	79.46
0.25	0.25
1.09	1.09
0.14	0.14
30.29	30.29
32.26	32.26
69.34	69.34

M+3sd	**M+3sd**
Jan 2008	Jan 2020
461.85	461.85
145.93	145.93
1.51	1.51
6.97	6.97
0.37	0.37
77.35	77.35
73.88	73.88
148.01	148.01

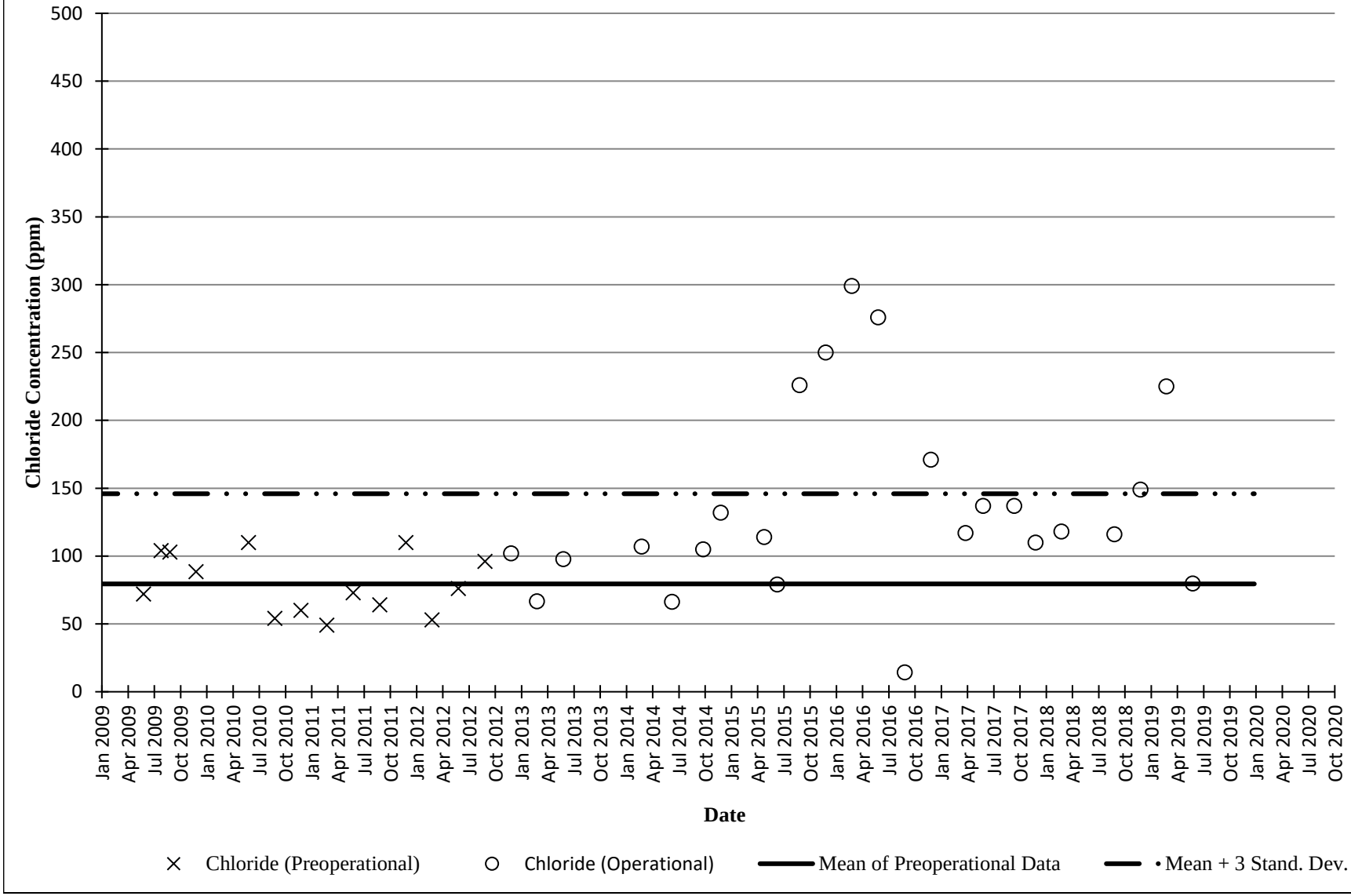
Indicates sample is below detection limit

Inidicates sample is above Mean + 3 Standard Deviations

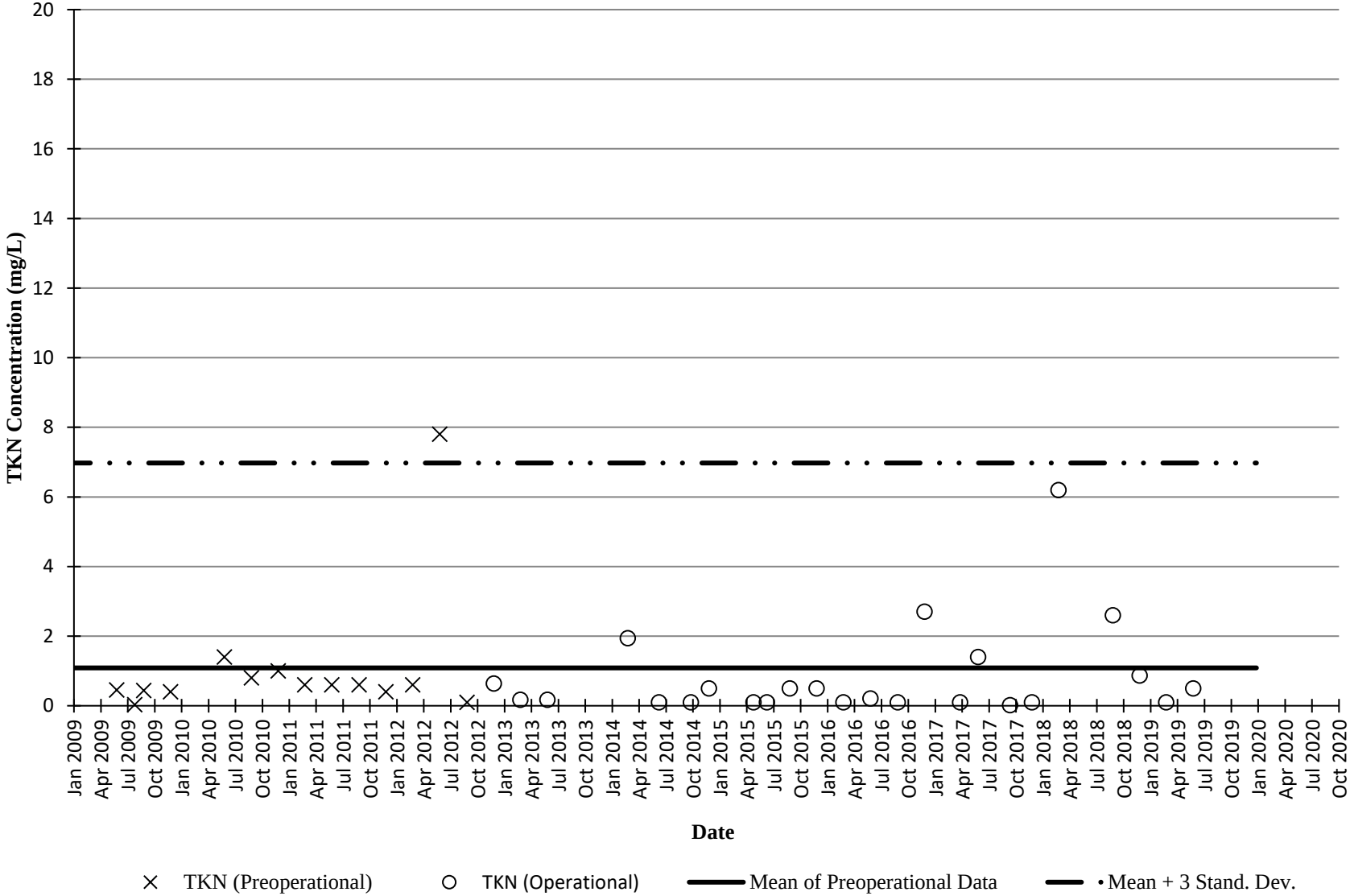
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 26 Existing Water Quality and Statistical Trigger - Hardness



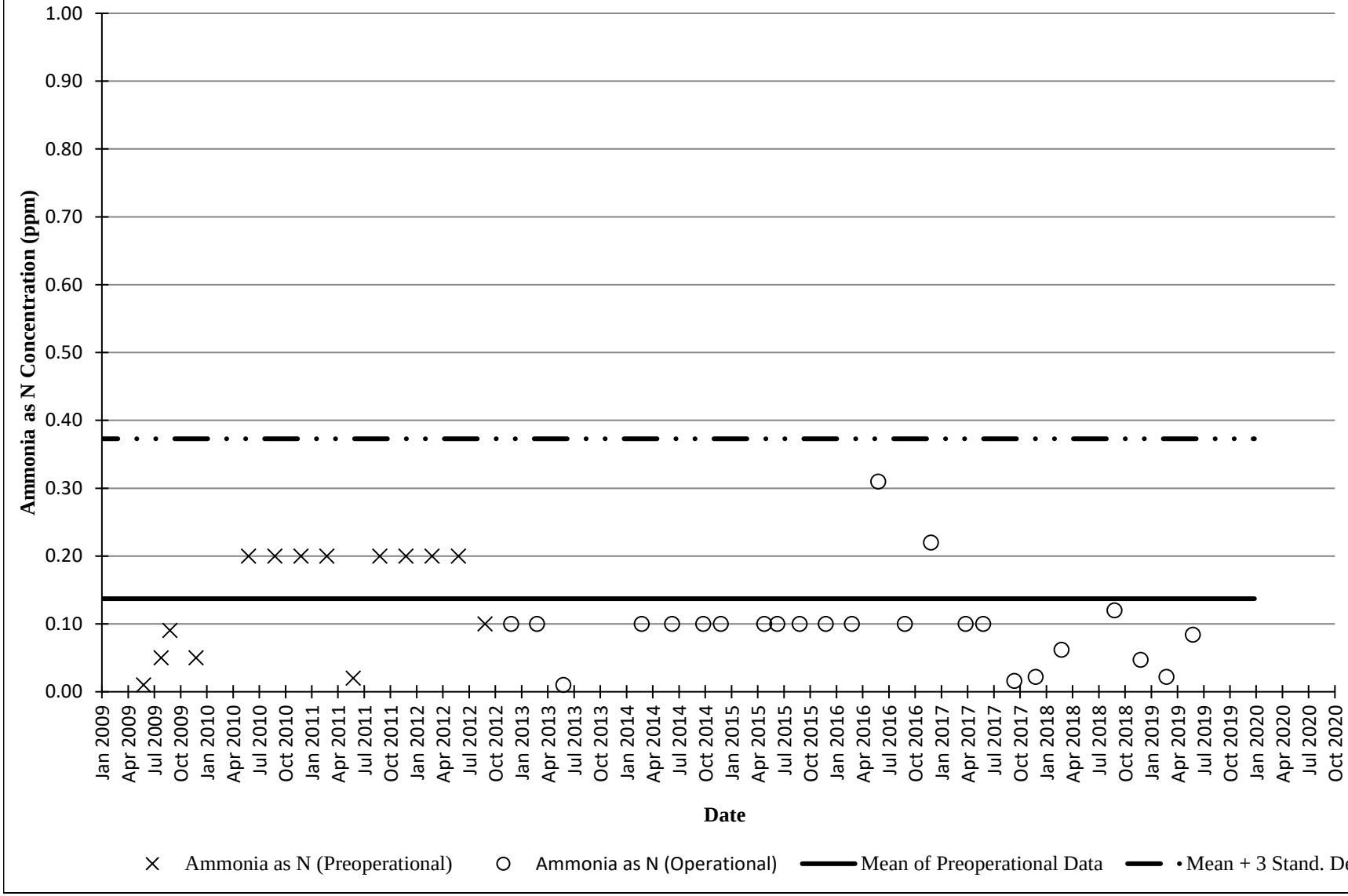
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 26 Existing Water Quality and Statistical Trigger - Chloride



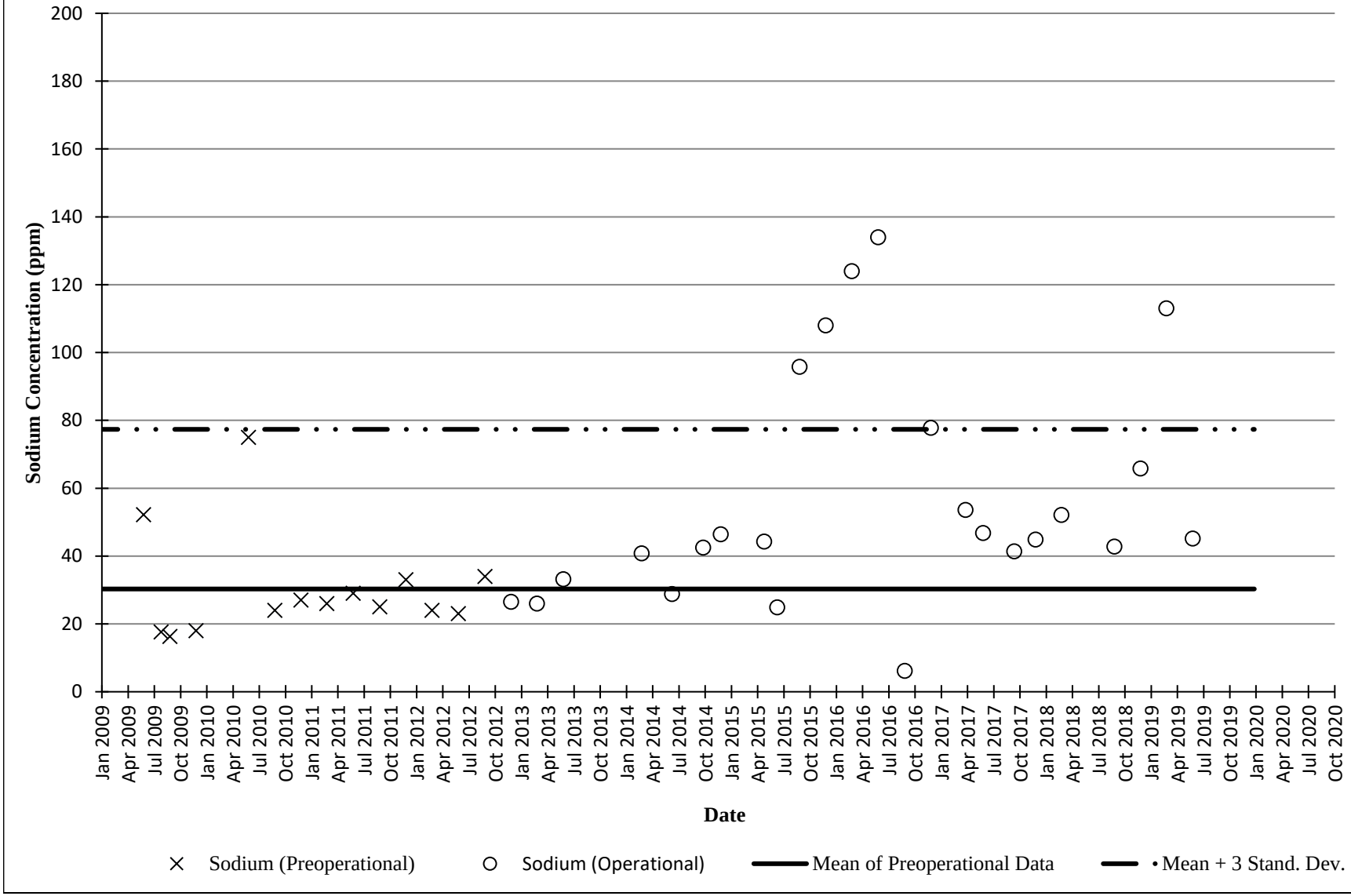
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 26 Existing Water Quality and Statistical Trigger - TKN



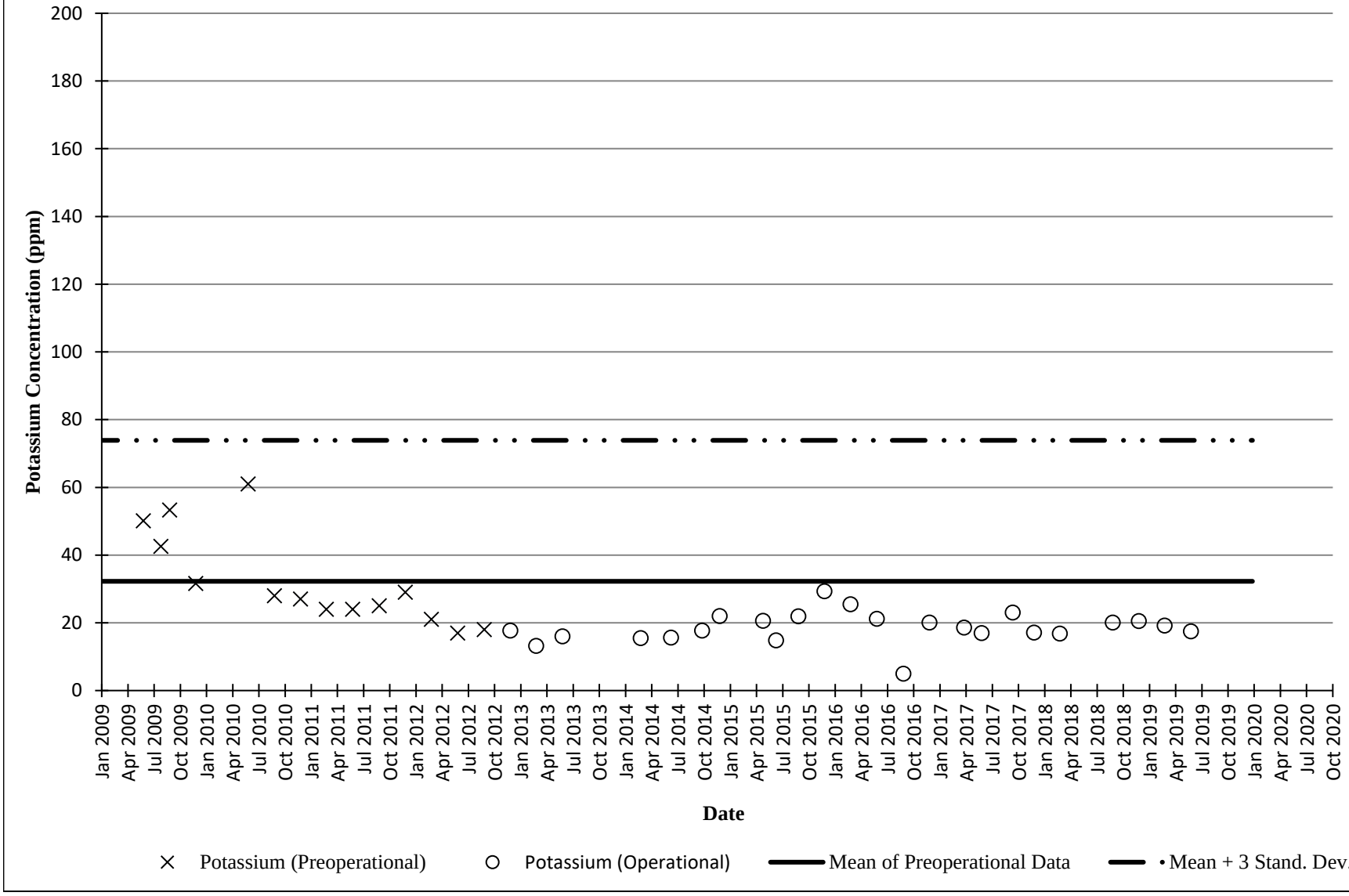
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 26 Existing Water Quality and Statistical Trigger - Ammonia as N



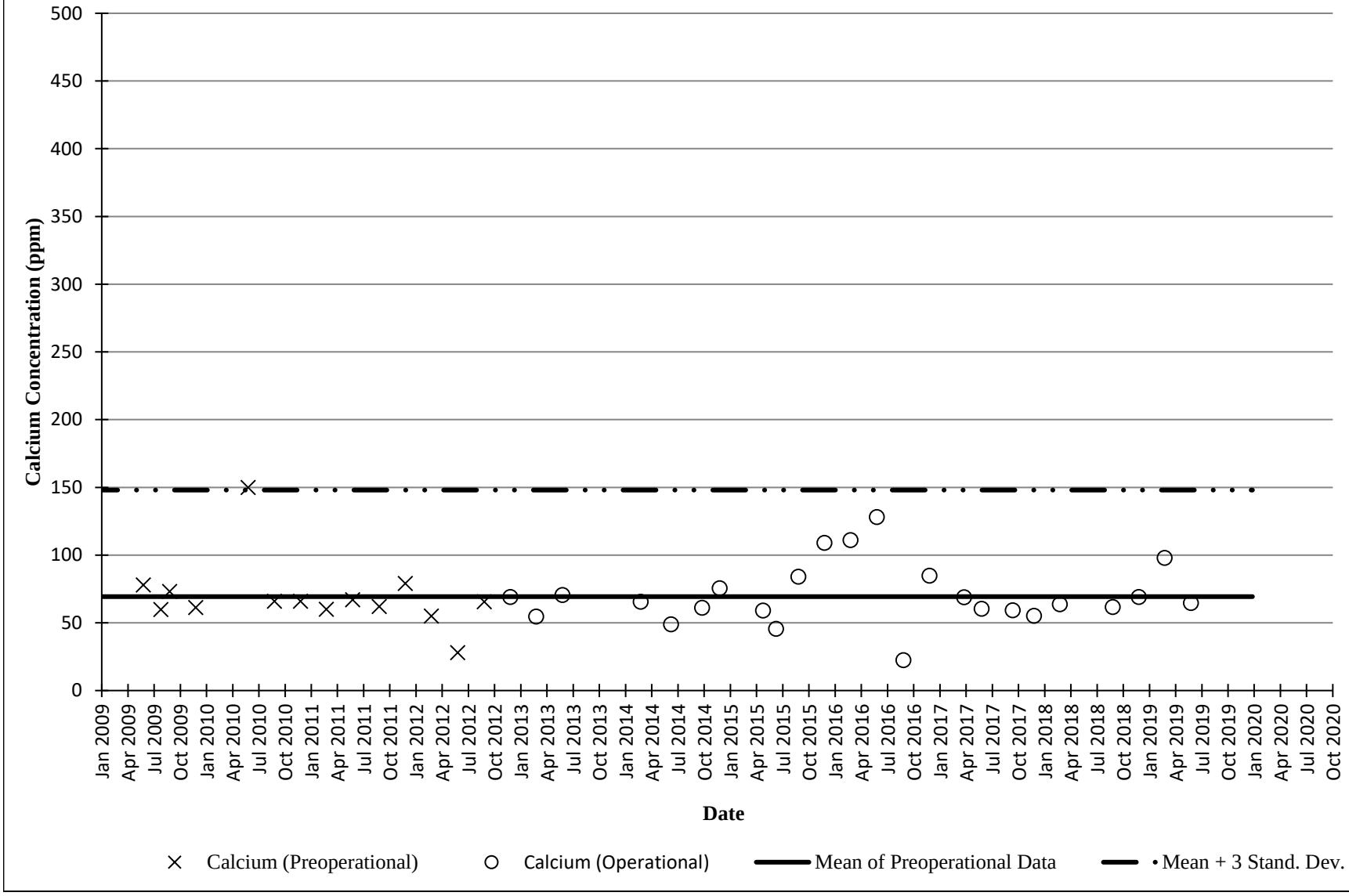
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 26 Existing Water Quality and Statistical Trigger - Sodium



Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 26 Existing Water Quality and Statistical Trigger - Potassium



Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 26 Existing Water Quality and Statistical Trigger - Calcium



Well 26i Operational Data																							
Analyte	**Units**	**Dec 2012**	**Mar 2013**	**Jun 2013**	**Mar 2014**	**Jun 2014**	**Oct 2014**	**Dec 2014**	**Mar 2015**	**Jun 2015**	**Sep 2015**	**Dec 2015**	**Mar 2016**	**Jun 2016**	**Sep 2016**	**Dec 2016**	**Apr 2017**	**Jun 2017**	**Sep 2017**	**Dec 2017**	**Mar 2018**	**Sep 2018**	**Dec 2018**	**Mar 2019**
Hardness (Operational)	ppm	140	120	200	180	120	220	140	130	116	**280**	**268**	144	**244**	188	**230**	200	140	148	120	93.3	170	120	92
Chloride (Operational)	ppm	68.4	62.4	95.2	129	63.9	110	109	**198**	114	**283**	**239**	123	**236**	**143**	**192**	104	107	**149**	109	70.6	128	67.9	62.2
Manganese (Operational)	ppm	0.124	0.0208	0.0059	**0.299**	0.015	0.015	0.015	0.003	0.0086														
TKN (Operational)	mg/L	0.5	0.1	0.1	0.48	0.1	0.1	0.5	0.5	0.1	0.5	0.34	0.1	0.72	0.1	0.1	0.1	0.1	0.022	0.1	0.1	0.98	0.51	0.1
Ammonia as N (Operational)	ppm	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15	0.1	0.1	0.1	0.13	0.016	0.1	0.052	0.075	0.057	0.1
Sodium (Operational)	ppm	25.6	19.2	30.5	45.4	23.3	42.8	40.6	**92.4**	34.7	**111**	**95**	**66.2**	**116**	**55.6**	**83.9**	**49.6**	38.1	39.8	46.5	33.4	47.4	38.3	31.9
Potassium (Operational)	ppm	10.2	8.7	11.5	16.1	13.6	17.5	21.2	14.6	12.6	24.9	33.7	21.6	24.5	15.3	20.6	18.4	17.2	19.6	17.2	13.4	14.4	15	13.2
Calcium (Operational)	ppm	45.6	34.8	52.6	60.5	38.4	54.9	53.3	49.3	45.2	**100**	**106**	61.2	**103**	78.6	**86**	60.8	53	56.8	52	43.1	51.3	42.7	40.7

Well 26i Preoperational Data																		
Analyte	**Units**	**Jun 2009**	**Aug 2009**	**Sep 2009**	**Dec 2009**	**Jun 2010**	**Sep 2010**	**Dec 2010**	**Mar 2011**	**Jun 2011**	**Sep 2011**	**Dec 2011**	**Mar 2012**	**Jun 2012**	**Sep 2012**	**Mean(M)**	**stan dev(sd)**	**M+(3sd)**
Hardness (Preoperational)	ppm	175	137	151	168	150	180	150	130	140	170	220	130	140	148	156.36	24.43	229.64
Chloride (Preoperational)	ppm	87.4	86	87	105	39	75	68	53	65	62	120	68	63	69.5	74.85	20.87	137.47
Manganese (Preoperational)	ppm	**0.167**	0.0437	0.0551	0.0409	0.07	0.01	0.01	0.01	0.05	0.01	0.01	0.01	0.05	0.0076	0.04	0.04	0.17
TKN (Preoperational)	mg/L	0.21	0.4	0.4	0.4	1	0.6	1.2	0.4	0.2	0.2	0.4	1	0.4	0.1	0.49	0.34	1.51
Ammonia as N (Preoperational)	ppm	0.1	0.05	0.08	0.05	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.17	0.09	0.44
Sodium (Preoperational)	ppm	45.9	12.8	10.8	18.6	18	27	25	23	23	24	35	21	21	22.2	23.38	8.74	49.60
Potassium (Preoperational)	ppm	43.5	30.6	34.3	33.1	29	25	18	11	17	25	25	12	14	11.3	23.49	9.99	53.44
Calcium (Preoperational)	ppm	63.8	49.1	53.4	60.2	54	63	53	45	49	62	77	43	49	42.4	54.56	9.67	83.58

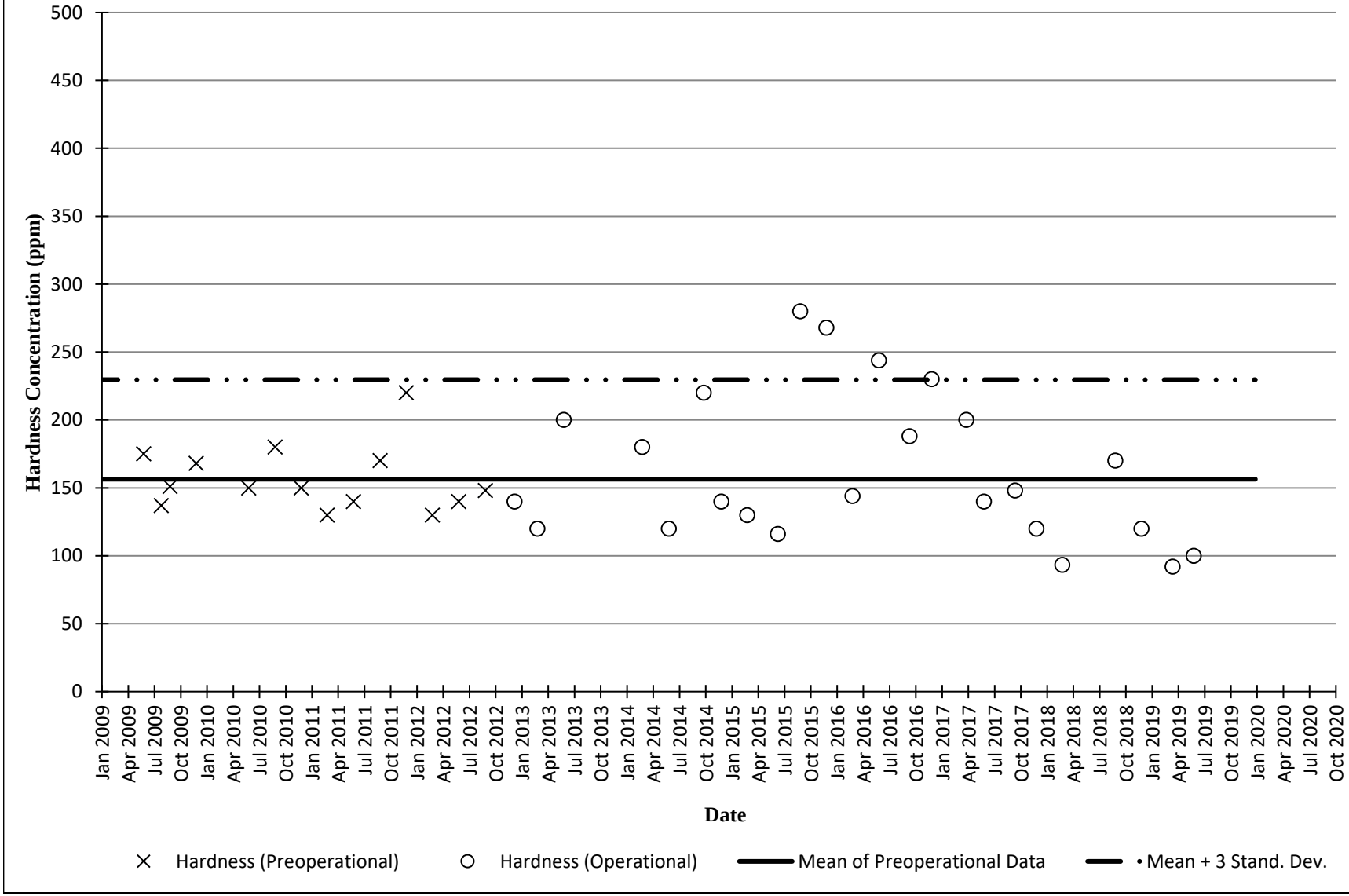
Mean	**Mean**
Jan 2008	Jan 2020
156.36	156.36
74.85	74.85
0.04	0.04
0.49	0.49
0.17	0.17
23.38	23.38
23.49	23.49
54.56	54.56

M+3sd	**M+3sd**
Jan 2008	Jan 2020
229.64	229.64
137.47	137.47
0.17	0.17
1.51	1.51
0.44	0.44
49.60	49.60
53.44	53.44
83.58	83.58

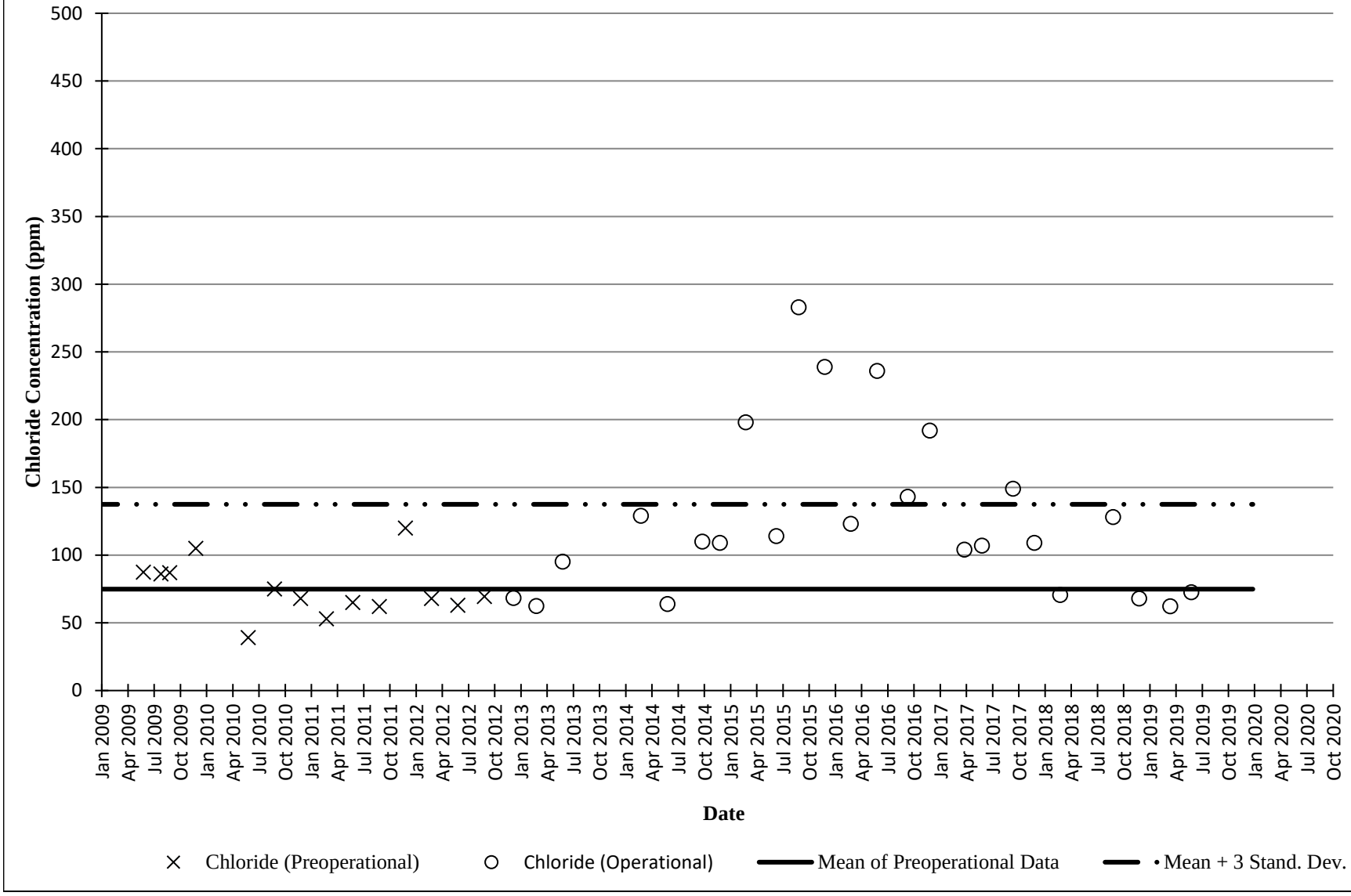
Indicates sample is below detection limit

Inidicates sample is above Mean + 3 Standard Deviations

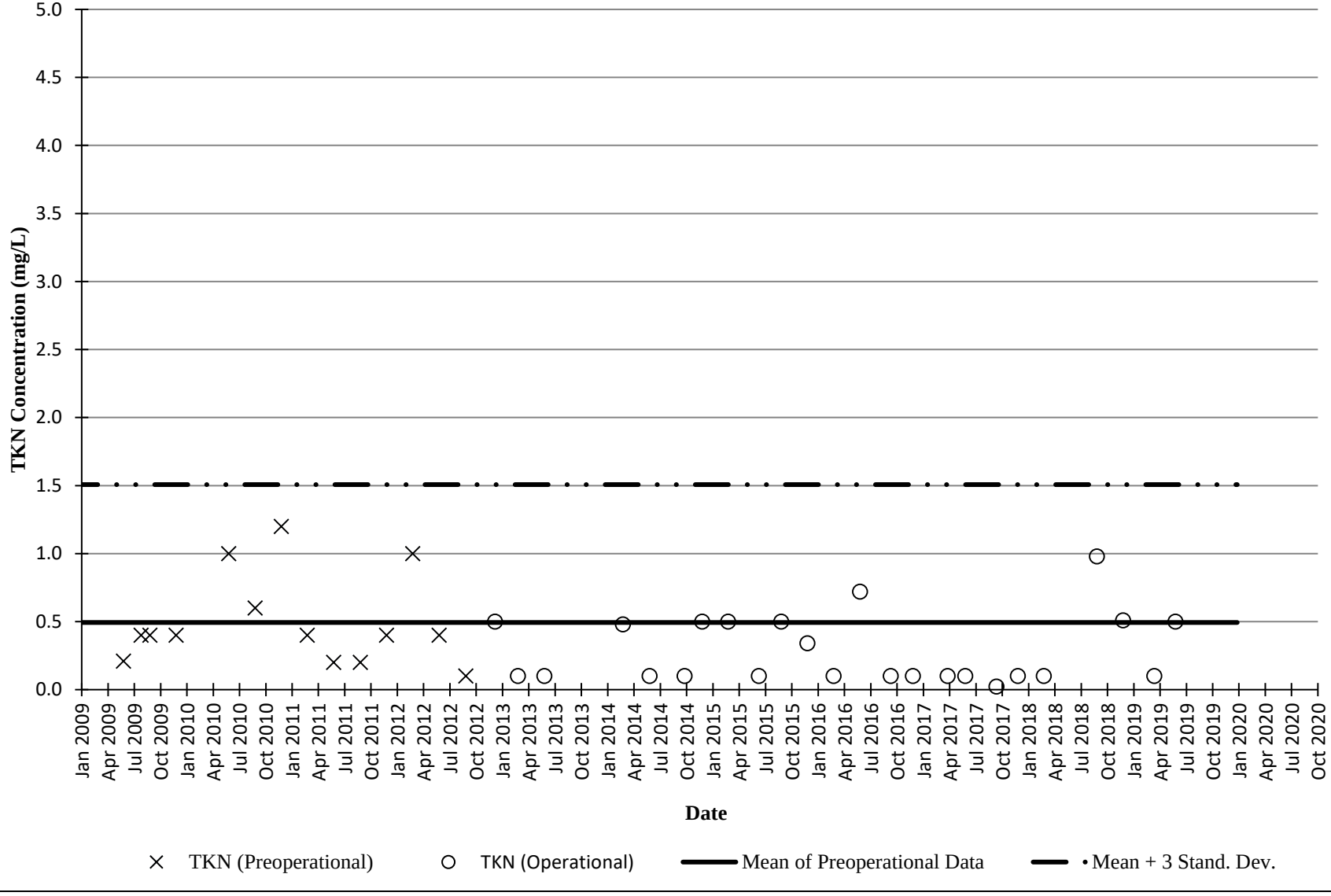
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 26i Existing Water Quality and Statistical Trigger - Hardness



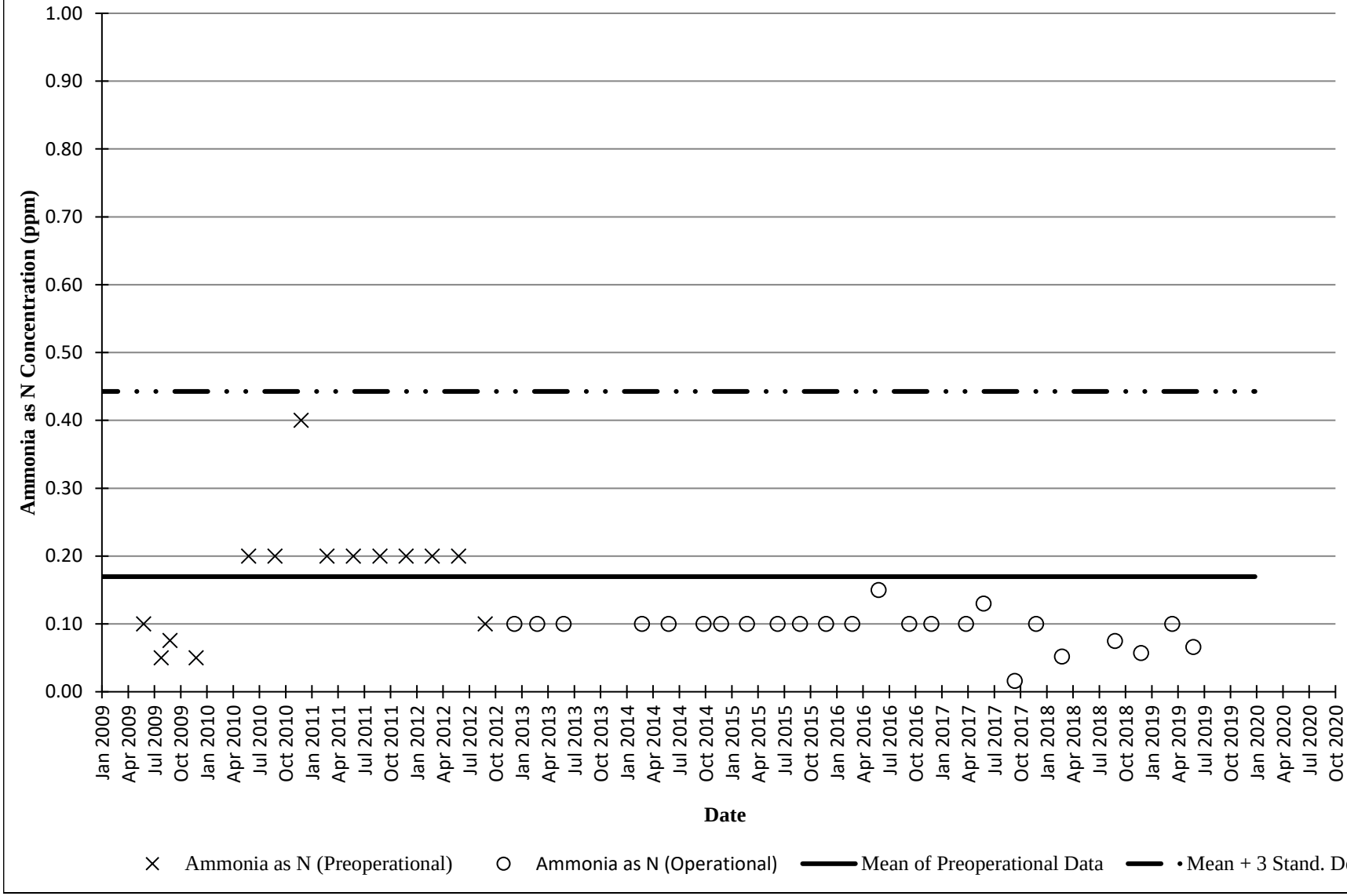
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 26i Existing Water Quality and Statistical Trigger - Chloride



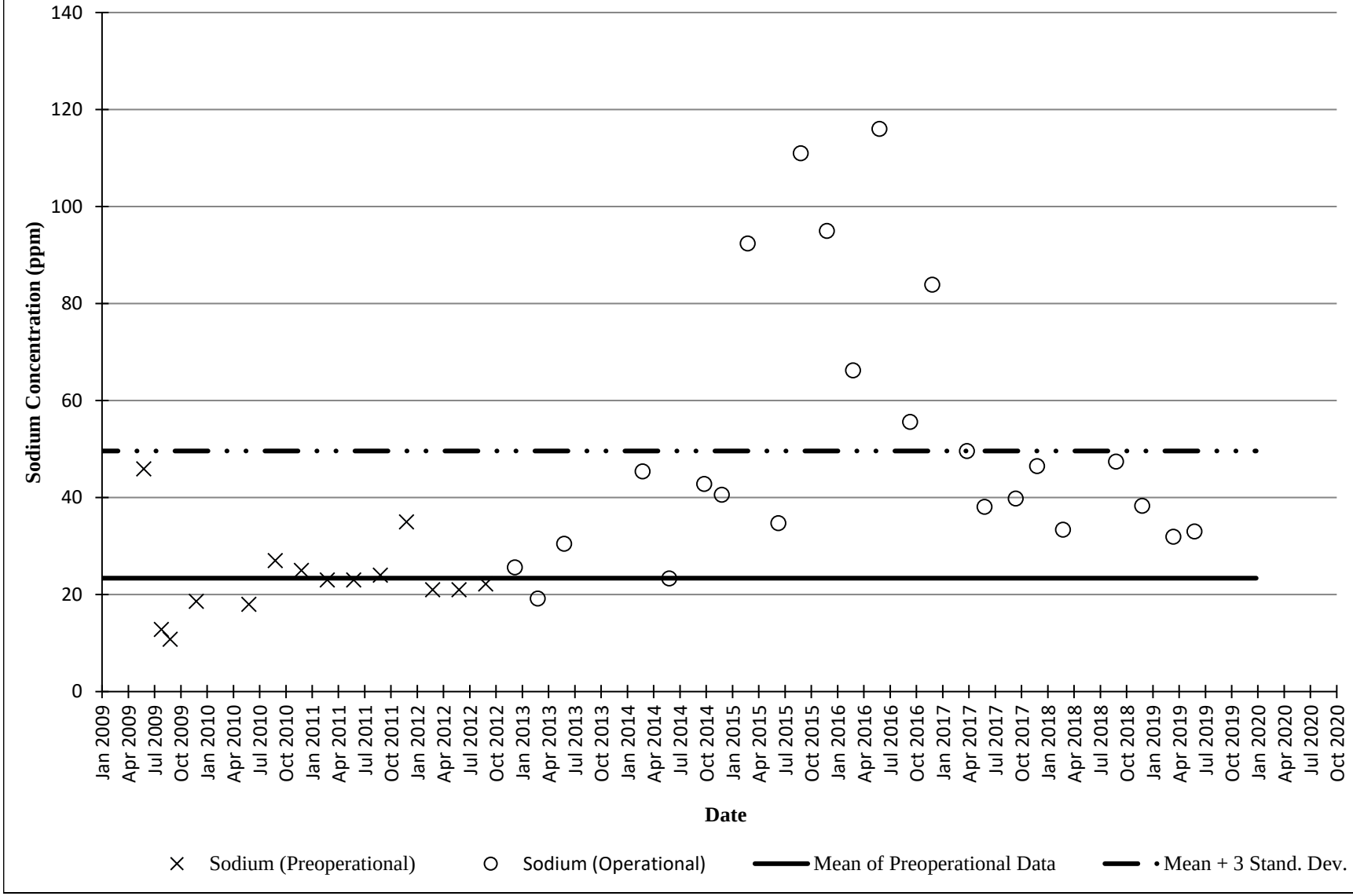
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 26i Existing Water Quality and Statistical Trigger - TKN



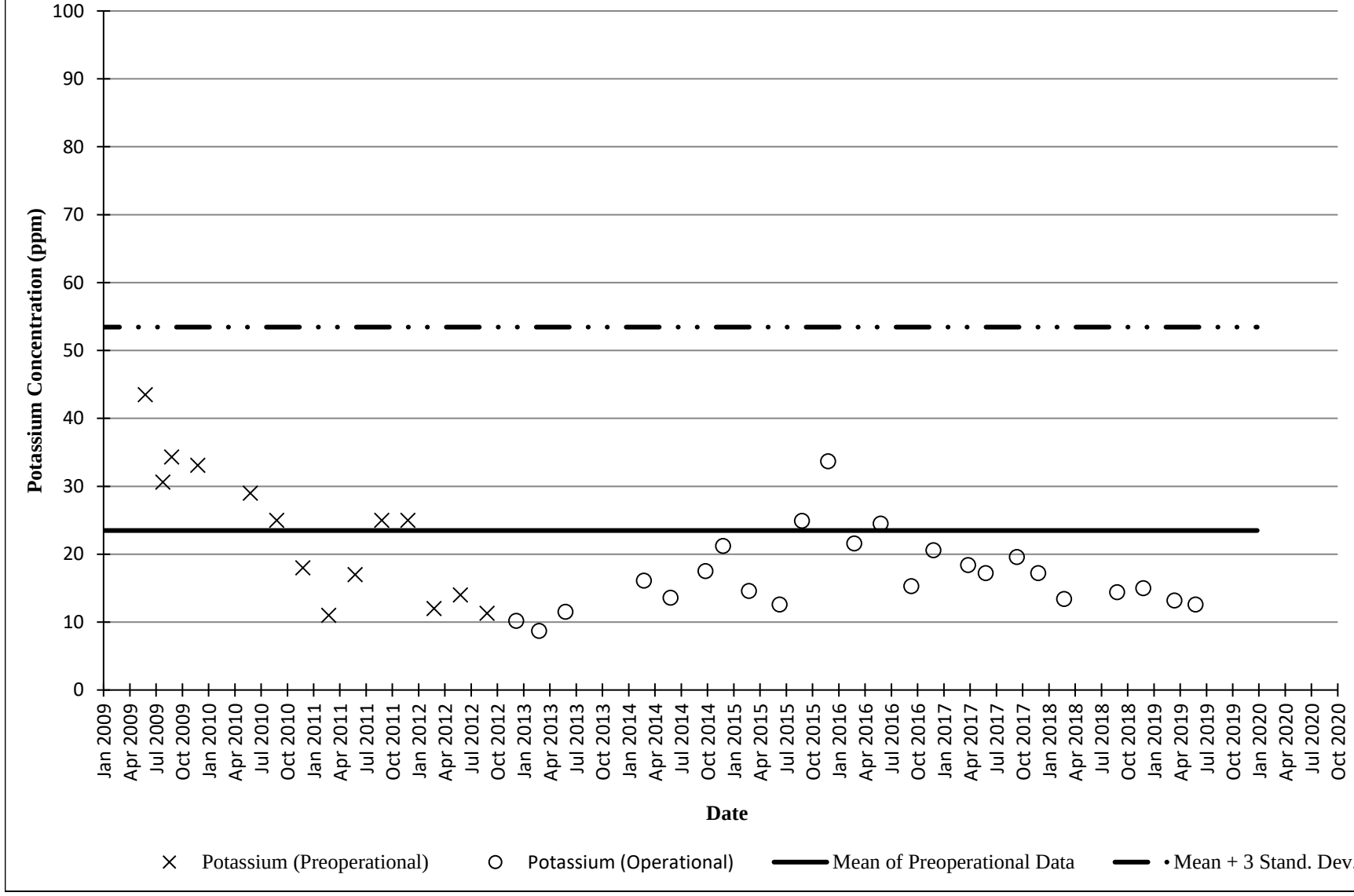
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 26i Existing Water Quality and Statistical Trigger - Ammonia as N



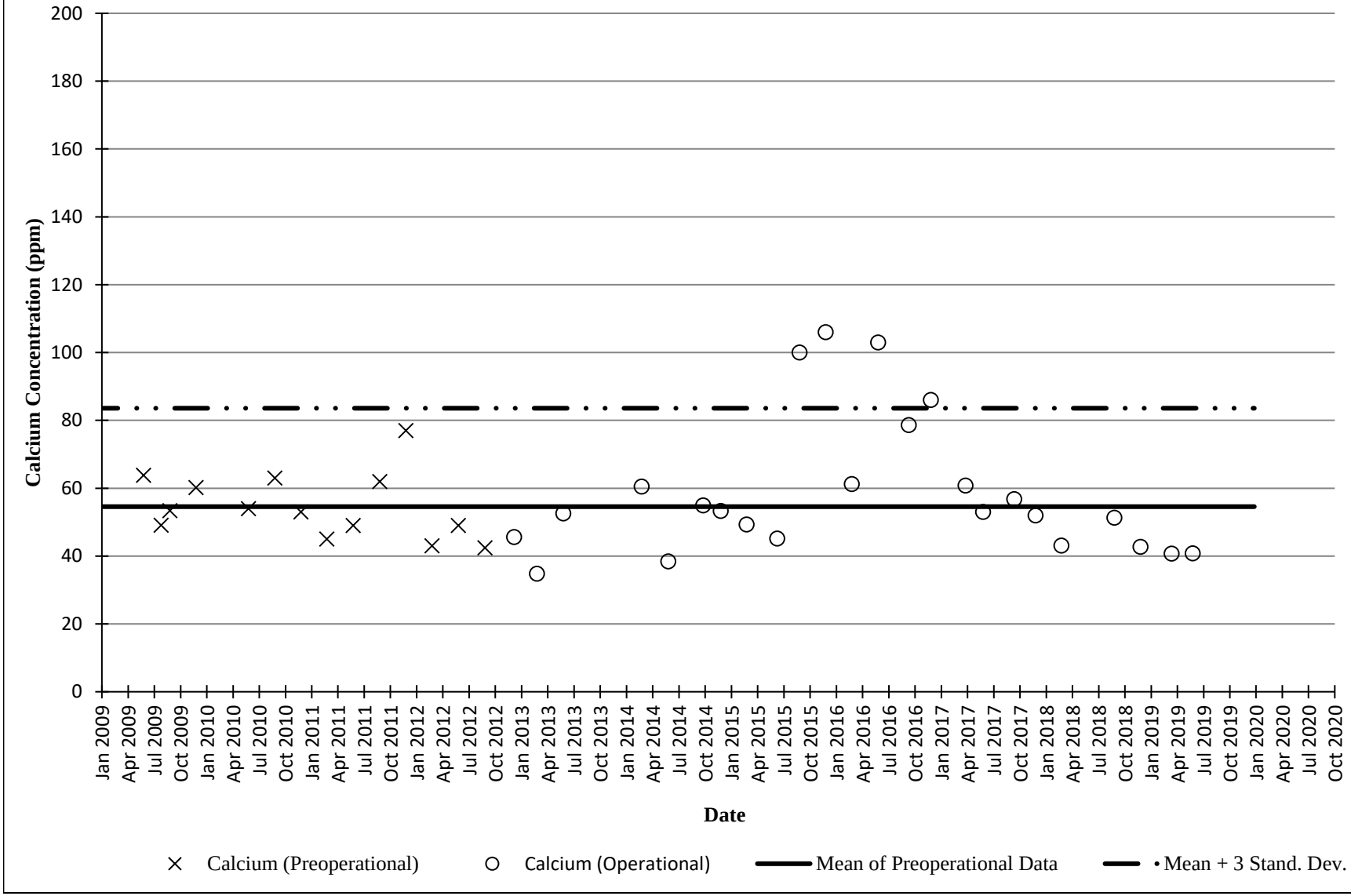
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 26i Existing Water Quality and Statistical Trigger - Sodium



Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 26i Existing Water Quality and Statistical Trigger - Potassium



Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 26i Existing Water Quality and Statistical Trigger - Calcium



Analyte	Units	Dec 2012	Mar 2013	Jun 2013	Mar 2014	Jun 2014	Oct 2014	Dec 2014	May 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	Jun 2016	Sep 2016	Dec 2016	Apr 2017	Jun 2017	Sep 2017	Dec 2017	Mar 2018	Sep 2018	Dec 2018	Mar 2019	Jun 2019	
Hardness (Operational)	ppm	380	420	420	220	300	400	**1000**	220	290	340	220	208	208	200	170	170	700	320	320	200	130	200	250	180	
Chloride (Operational)	ppm	161	340	439	452	428	406	498	456	509	492	457	409	359	349	300	301	811	504	319	306	368	292	468	442	
TKN (Operational)	mg/L	14.6	14.8	11.6	**25.5**	**25.4**	**38.6**	**37.6**	**43.2**	**43.1**	**41.5**	**42.7**	**39.7**	**51.9**	**32.8**	**30.8**	**32.2**	**23.9**	**39.1**	**34.2**	**26.5**	**38.5**	**37.8**	**36.2**	**33.7**	
Ammonia as N (Operational)	ppm	8.13	14.2	9.94	**23.2**	**29.5**	**36.2**	**38.3**	**41.7**	**43.6**	**49.3**	**48.9**	**44.9**	**39.4**	**40.3**	**34.2**	**33.6**	**25**	**27.6**	**30.6**	**30.6**	**34.7**	**34**	**29.5**	**32**	
Sodium (Operational)	ppm	87.8	168	137	88.2	165	155	180	167	177	163	152	151	151	118	117	115	295	161	130	119	138	148	266	200	
Potassium (Operational)	ppm	27.3	28.9	29.6	33.4	50.8	45.9	45.4	46.3	48.3	49.2	51.3	53.4	50.2	44.6	49.1	45.8	45.6	47.8	54.9	50.9	51.1	57.6	44	43.4	
Calcium (Operational)	ppm	106	101	135	75.3	94	93.2	110	89.8	101	86.4	69.9	79.8	79.5	73.4	57.8	51.6	190	105	112	71.3	49.6	57.7	72.6	55.5	

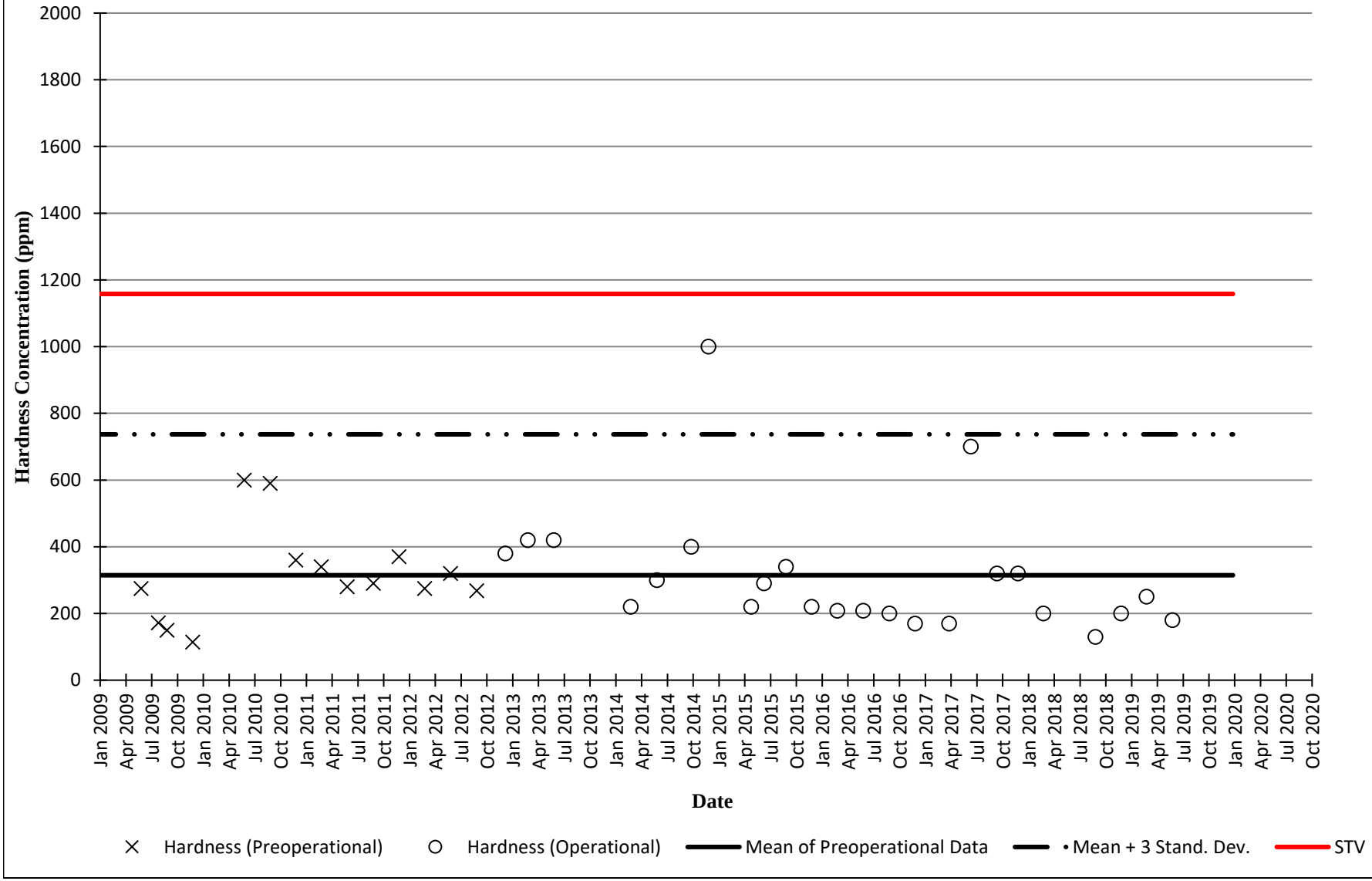
Well 27 Preoperational Data																			Mean	Mean	M+3sd	M+3sd	STV	STV
Analyte	Units	Jun 2009	Aug 2009	Sep 2009	Dec 2009	Jun 2010	Sep 2010	Dec 2010	Mar 2011	Jun 2011	Sep 2011	Dec 2011	Mar 2012	Jun 2012	Sep 2012	Mean(M)	stan dev(sd)	M+(3sd)	Jan 2008	Jan 2020	Jan 2008	Jan 2020	Jan 2008	Jan 2020
Hardness (Preoperational)	ppm	275	172	150	114	600	590	360	340	280	290	370	275	320	268	314.57	140.84	737.10	314.57	314.57	**737.10**	**737.10**	**1158.00**	**1158.00**
Chloride (Preoperational)	ppm	106	156	116	87	990	1100	360	260	340	300	350	250	180	229	344.57	310.97	1277.48	344.57	344.57	**1277.48**	**1277.48**	**1277.00**	**1277.00**
TKN (Preoperational)	mg/L	9.53	11.5	7.34	4.62	15	14	9	7.2	6.4	6.2	11	7.2	6.6	8.15	8.84	3.05	17.98	8.84	8.84	**17.98**	**17.98**	**58.35**	**58.35**
Ammonia as N (Preoperational)	ppm	6.11	9.96	6.30	4.44	13	11	7.2	5.4	6	6.2	10	6.3	5.4	5.3	7.33	2.58	15.06	7.33	7.33	**15.06**	**15.06**	**53.00**	**53.00**
Sodium (Preoperational)	ppm	42.7	23.9	16.1	19.9	310	240	130	110	100	120	170	110	97	107	114.04	83.17	363.56	114.04	114.04	**363.56**	**363.56**	**414.00**	**414.00**
Potassium (Preoperational)	ppm	12.5	13.8	17.9	19.9	44	51	33	26	30	33	42	47.5	26	24.7	30.09	12.35	67.14	30.09	30.09	**67.14**	**67.14**	**122.00**	**122.00**
Calcium (Preoperational)	ppm	92.1	62.6	53.2	42.1	190	190	120	120	98	97	120	89.5	100	88.5	104.50	43.30	234.41	104.50	104.50	**234.41**	**234.41**	**375.00**	**375.00**

Indicates sample is below detection limit

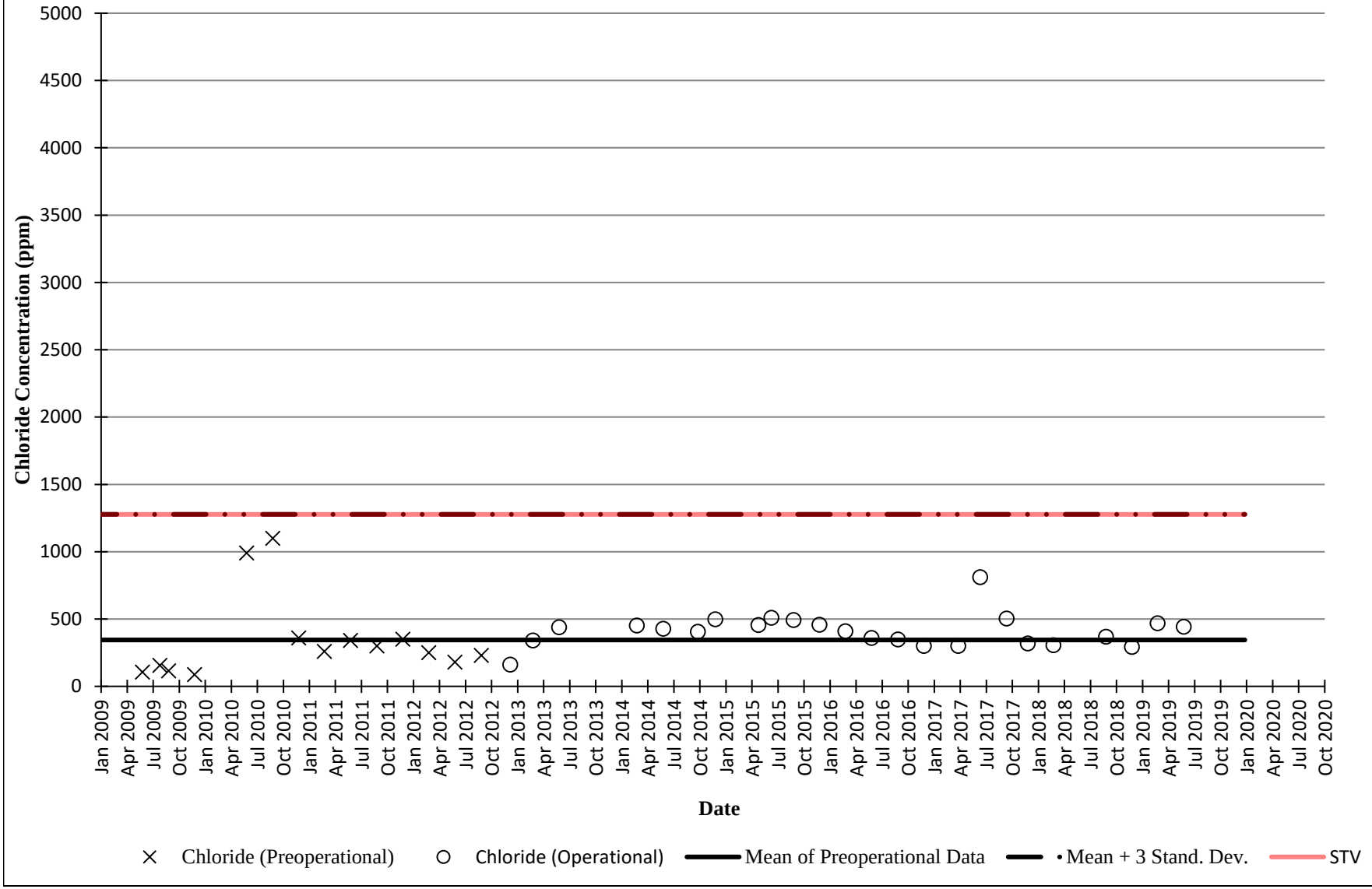
Inidicates sample is above Mean + 3 Standard Deviations

Indicates sample exceeds overall STV

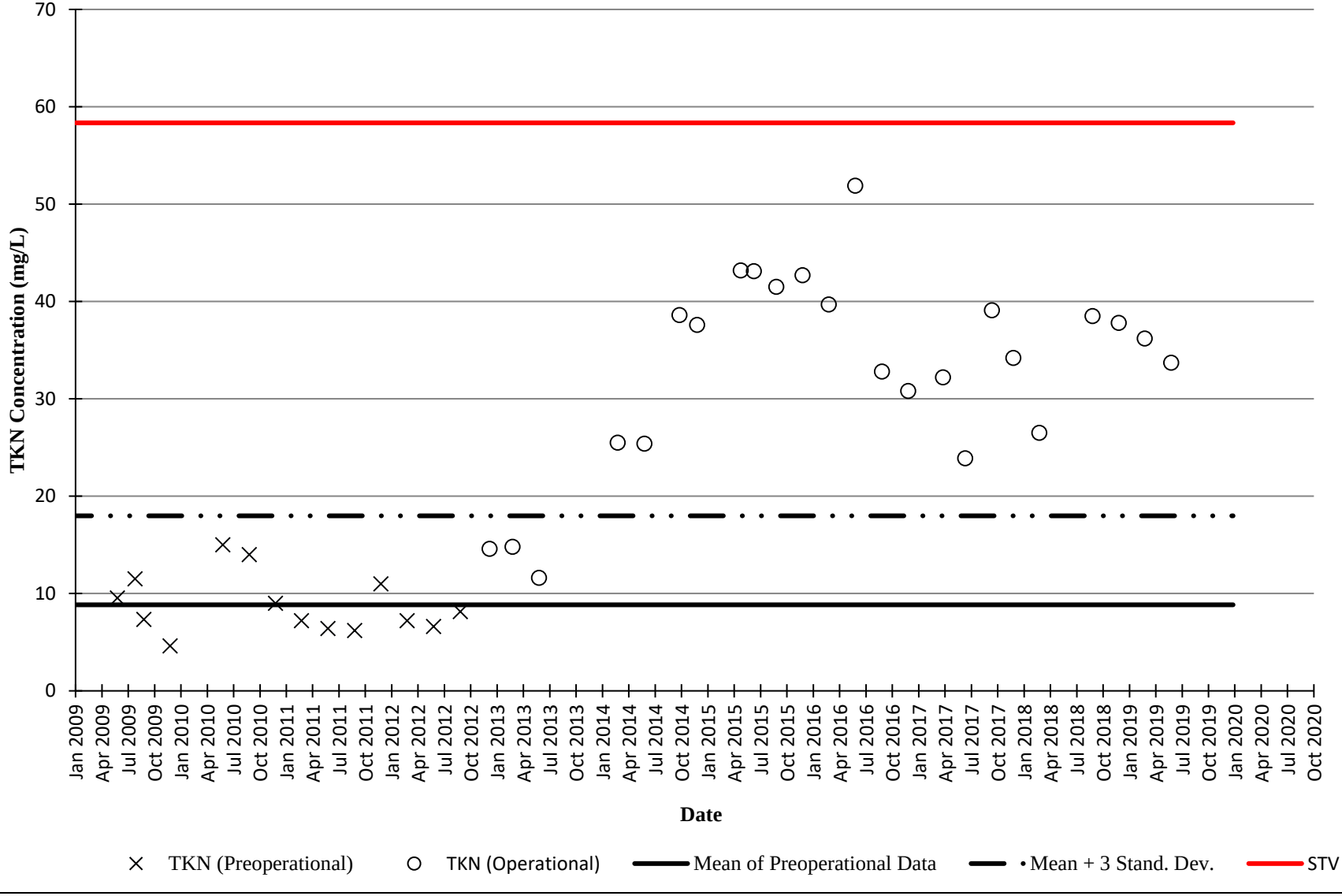
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 27 Existing Water Quality and Statistical Trigger - Hardness



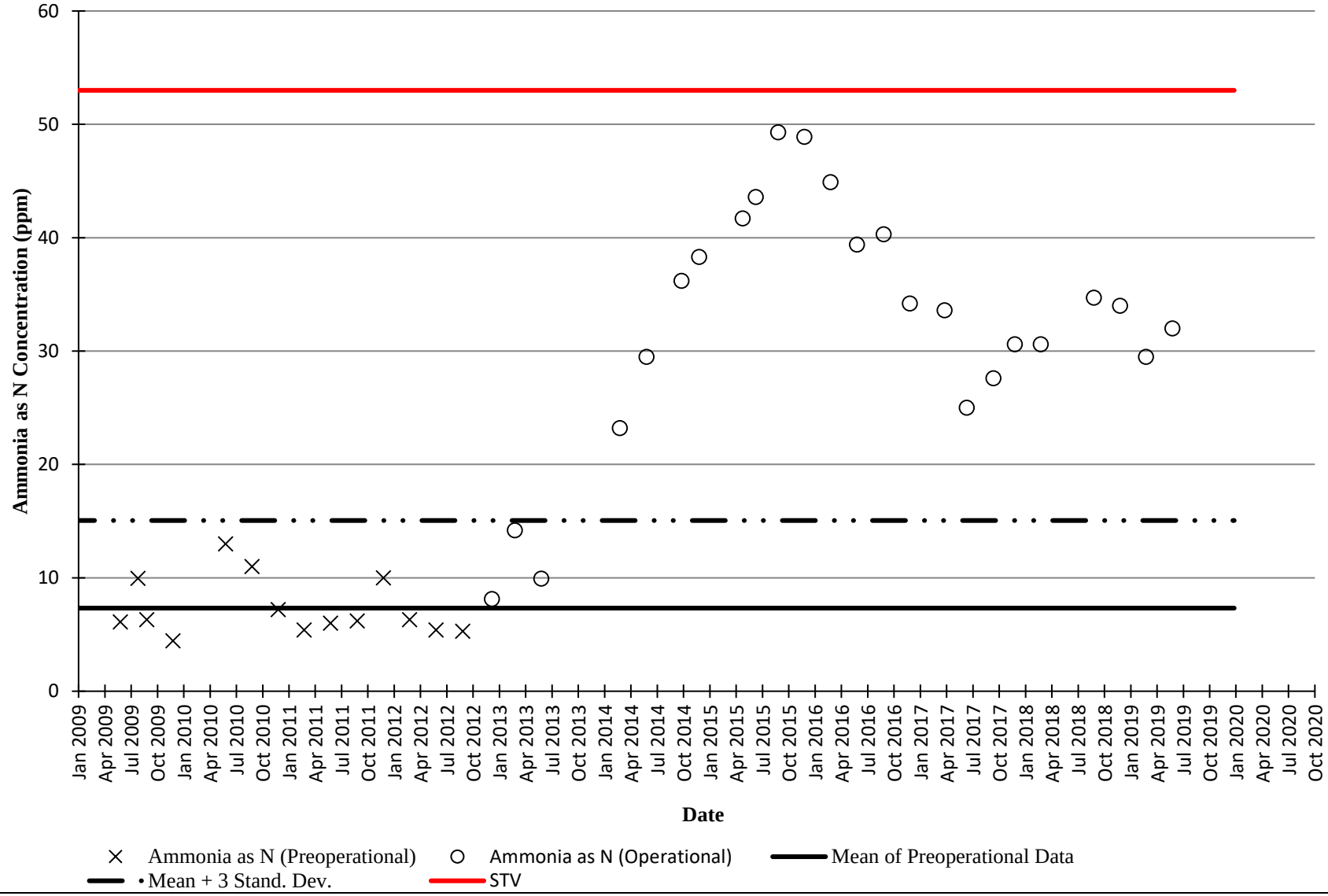
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 27 Existing Water Quality and Statistical Trigger - Chloride



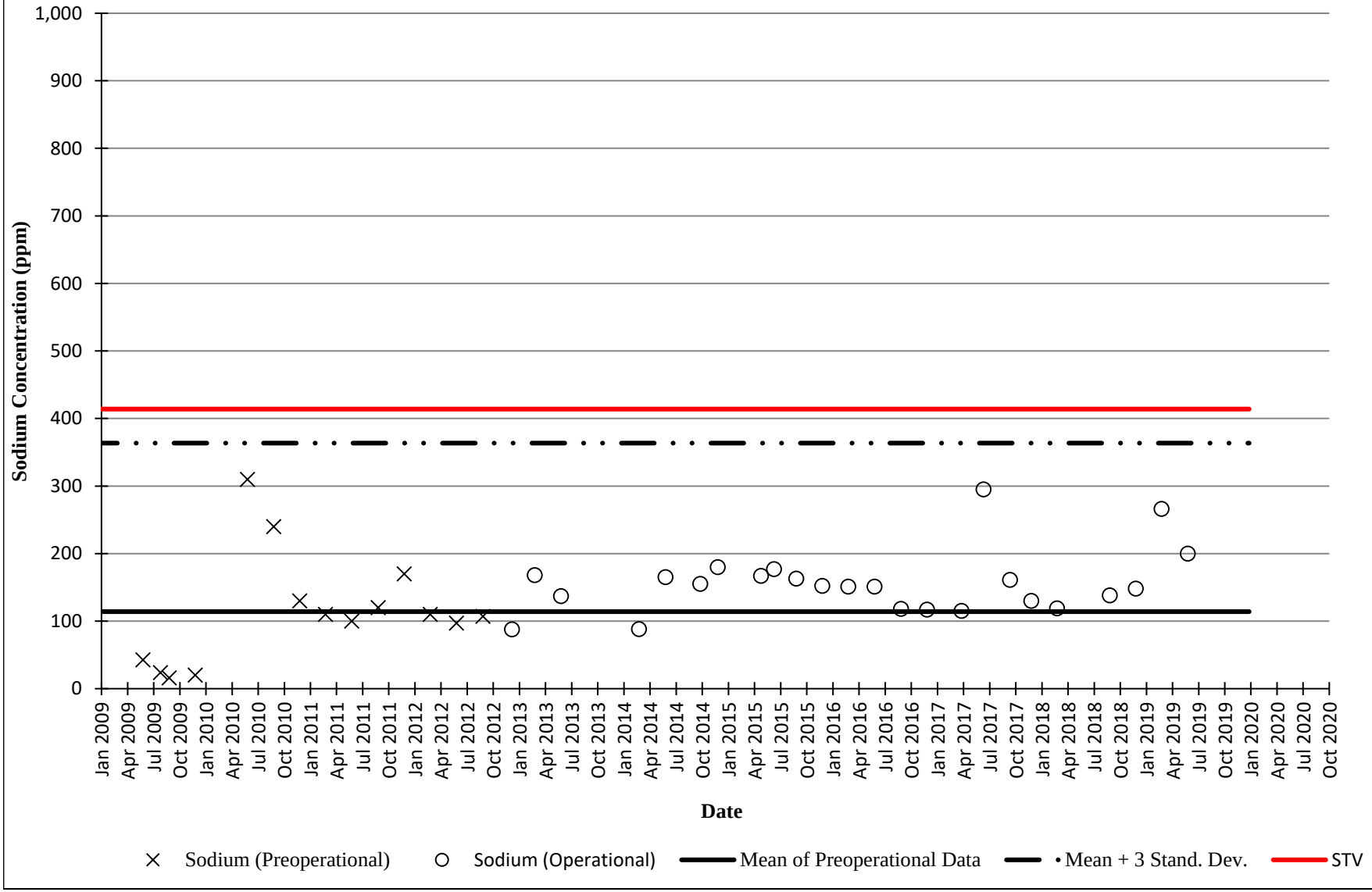
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 27 Existing Water Quality and Statistical Trigger - TKN



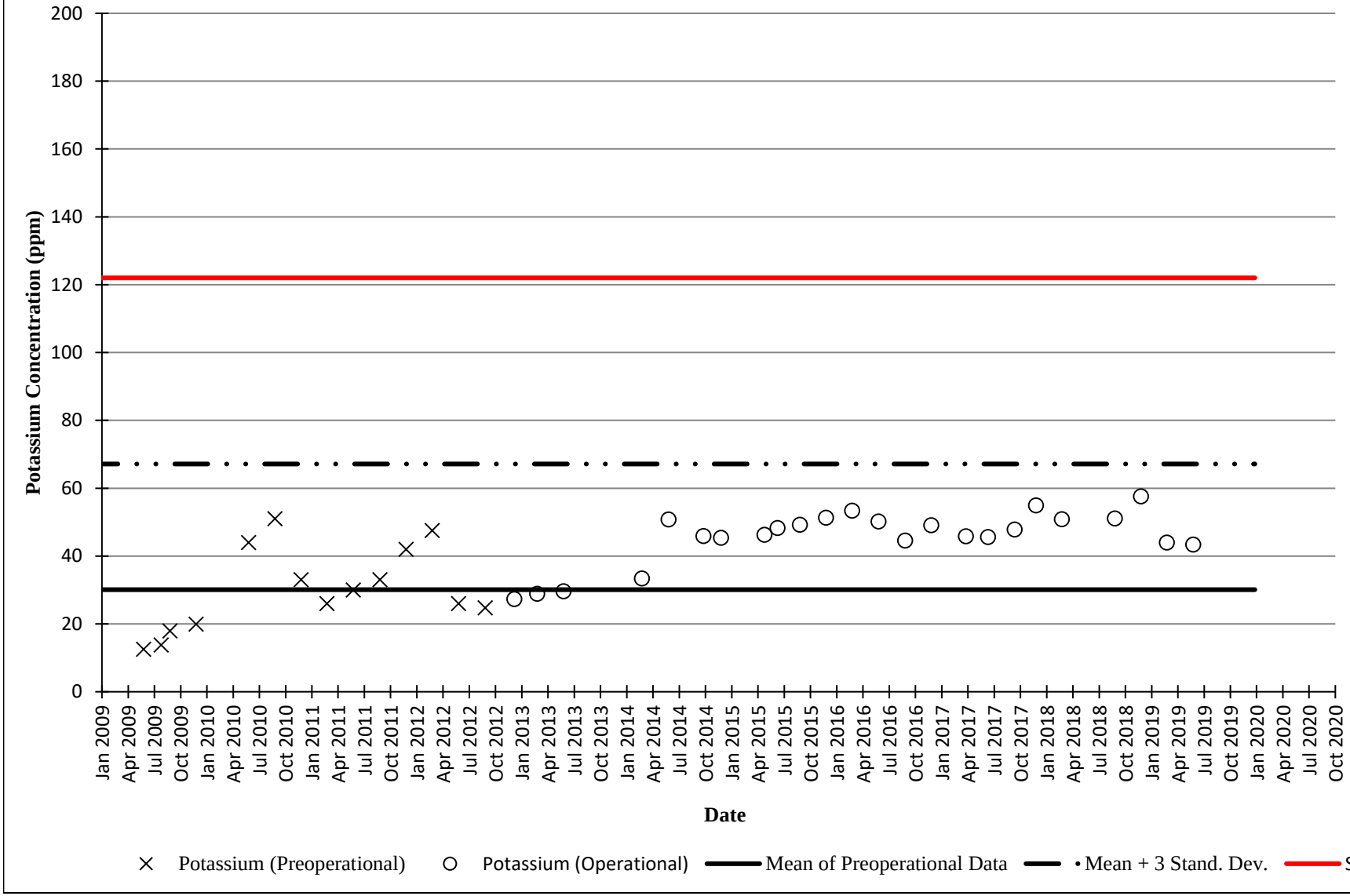
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 27 Existing Water Quality and Statistical Trigger - Ammonia as N



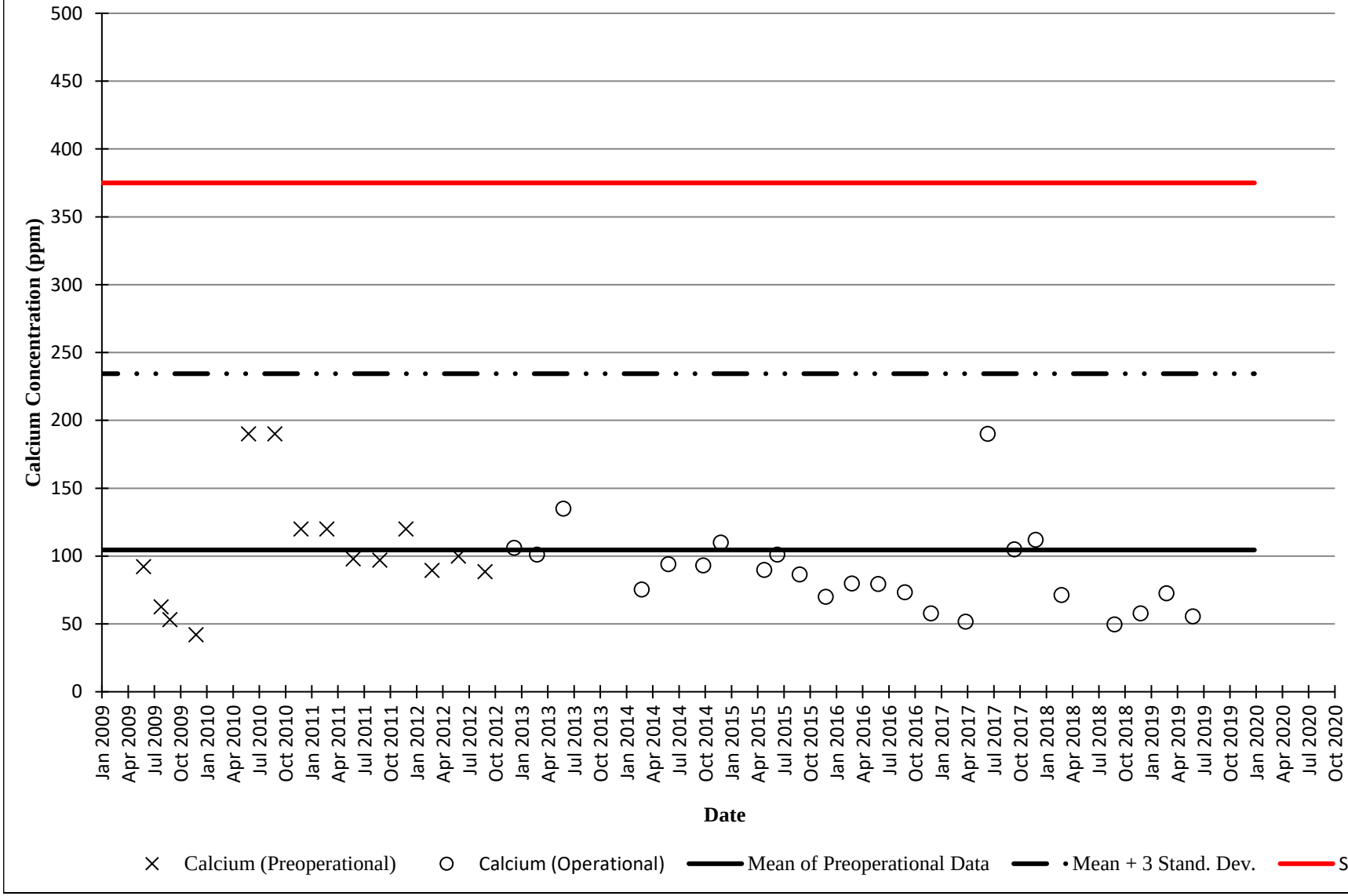
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 27 Existing Water Quality and Statistical Trigger - Sodium



Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 27 Existing Water Quality and Statistical Trigger - Potassium



Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 27 Existing Water Quality and Statistical Trigger - Calcium



Analyte	Units	Dec 2012	Mar 2013	Jun 2013	Mar 2014	Jun 2014	Oct 2014	Dec 2014	May 2015	Jul 2015	Sep 2015	Dec 2015	Mar 2016	Jun 2016	Sep 2016	Dec 2016	Apr 2017	Jun 2017	Sep 2017	Dec 2017	Mar 2018	Sep 2018	Dec 2018	Mar 2019	Jun 2019		
Hardness (Operational)	ppm	300	240	370	290	280	440	550	400	320	300	276	228	280	250	190	250	300	220	173	320	190	350	180	190		
Chloride (Operational)	ppm	255	192	251	324	297	370	427	**433**	**504**	344	406	347	333	363	297	284	420	381	300	2	357	**920**	340	424		
TKN (Operational)	mg/L	10.7	7.12	**17.7**	**15.4**	**13.8**	**14**	**16.2**	**17.6**	**18.5**	**16.4**	**19.1**	**18.6**	**25.2**	**16.9**	**18.1**	**18.6**	**13**	**30.4**	**19.1**	**21.8**	**18.2**	**21.7**	10.1	**19.3**		
Ammonia as N (Operational)	ppm	8	6.94	**13.4**	**11.7**	**12.5**	**13.6**	**16.8**	**17.1**	**19.9**	**10.3**	**18**	**22.5**	**21.2**	**21.8**	**18.5**	**18.4**	**14.5**	**18.3**	**20.4**	**20.3**	**16.1**	**20.1**	**9.8**	**17.5**		
Sodium (Operational)	ppm	81.6	76.1	133	104	145	130	143	**174**	149	127	131	119	126	109	112	115	112	116	115	157	125	**225**	164	**175**		
Potassium (Operational)	ppm	29.3	23.1	28.1	34	37.5	36.1	37	39.8	44.9	39.4	43.8	39	37.3	34.2	37	35	36.6	42.3	41.5	40.3	33.4	40.2	21.3	38.7		
Calcium (Operational)	ppm	108	75.5	90.7	119	124	111	120	142	133	109	111	96.4	110	92.2	73.4	76.8	86.4	82.6	71	114	72.6	124	70.6	72.8		

Well 27i Preoperational Data																			Mean	Mean	M+3sd	M+3sd	STV	STV
Analyte	Units	Jun 2009	Aug 2009	Sep 2009	Dec 2009	Jun 2010	Sep 2010	Dec 2010	Mar 2011	Jun 2011	Sep 2011	Dec 2011	Mar 2012	Jun 2012	Sep 2012	Mean(M)	stan dev(sd)	M+(3sd)	Jan 2008	Jan 2020	Jan 2008	Jan 2020	Jan 2008	Jan 2020
Hardness (Preoperational)	ppm	180	175	189	187	200	480	350	270	340	360	320	310	350	308	287.07	90.66	559.04	287.07	287.07	**559.04**	**559.04**	**1158.00**	**1158.00**
Chloride (Preoperational)	ppm	105	126	112	104	150	220	250	200	315	310	270	260	260	202.5	206.04	75.34	432.04	206.04	206.04	**432.04**	**432.04**	**1277.00**	**1277.00**
TKN (Preoperational)	mg/L	4.33	4.63	4.54	4.06	4.2	5.4	6.2	4.8	6.3	6.4	7	7.4	7.4	11.59	6.02	2.00	12.02	6.02	6.02	**12.02**	**12.02**	**58.35**	**58.35**
Ammonia as N (Preoperational)	ppm	2.66	3.44	3.78	3.52	3.2	4.4	5	3.6	5.7	5.4	6.2	6.4	6.4	4.78	4.61	1.27	8.42	4.61	4.61	**8.42**	**8.42**	**53.00**	**53.00**
Sodium (Preoperational)	ppm	52.3	19.2	15.1	20.2	54	70	74	62	66	110	110	95	120	79	67.63	34.04	169.76	67.63	67.63	**169.76**	**169.76**	**414.00**	**414.00**
Potassium (Preoperational)	ppm	18.8	15	18.9	15.4	22	28	27	25	32.5	31	34	34	34	24.2	25.70	6.90	46.40	25.70	25.70	**46.40**	**46.40**	**122.00**	**122.00**
Calcium (Preoperational)	ppm	65.8	62.4	67.7	66.1	71	180	120	95	120	120	110	110	120	81.9	99.28	33.01	198.30	99.28	99.28	**198.30**	**198.30**	**375.00**	**375.00**

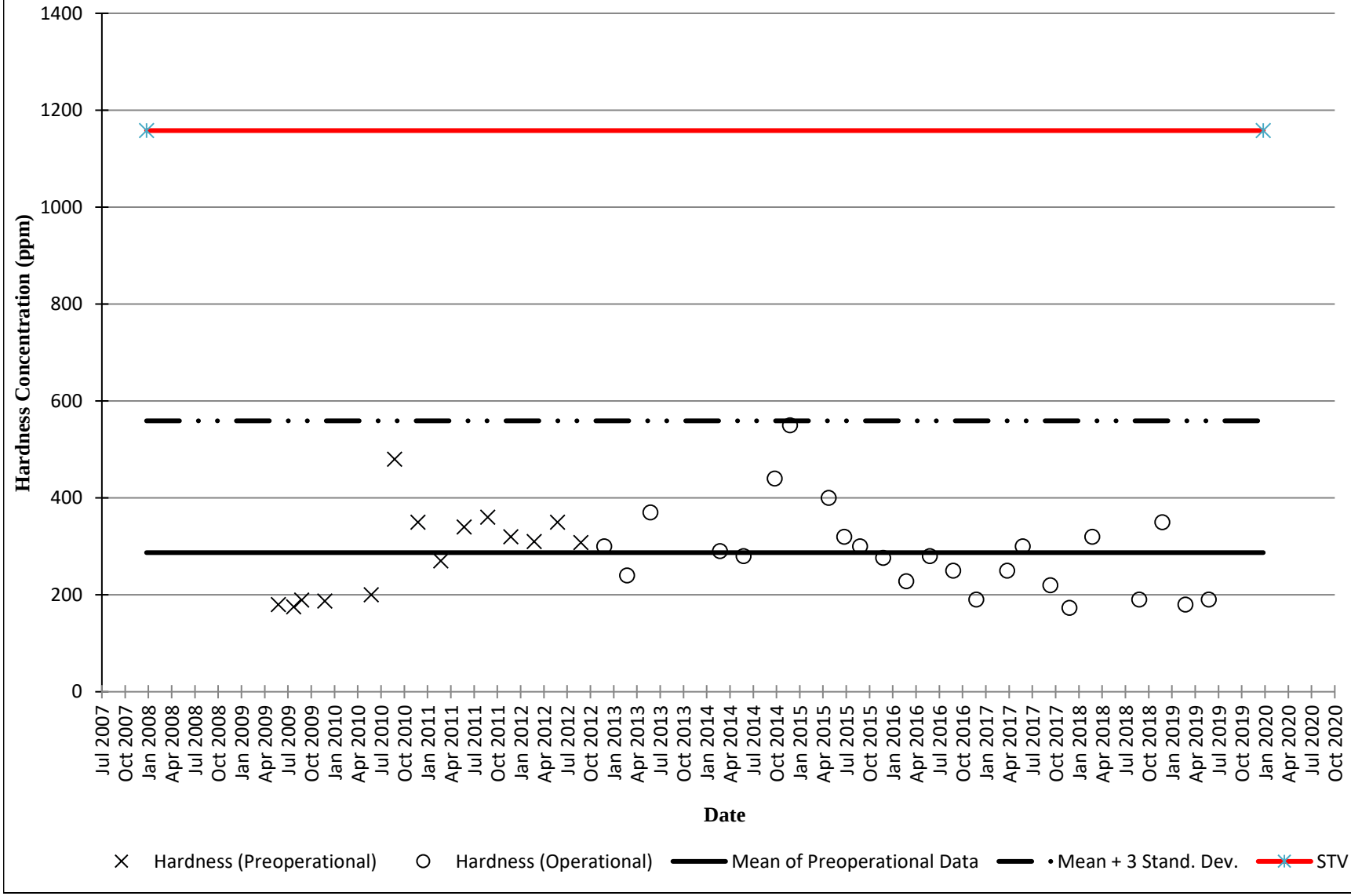
Indicates sample is below detection limit

Inidicates sample is above Mean + 3 Standard Deviations

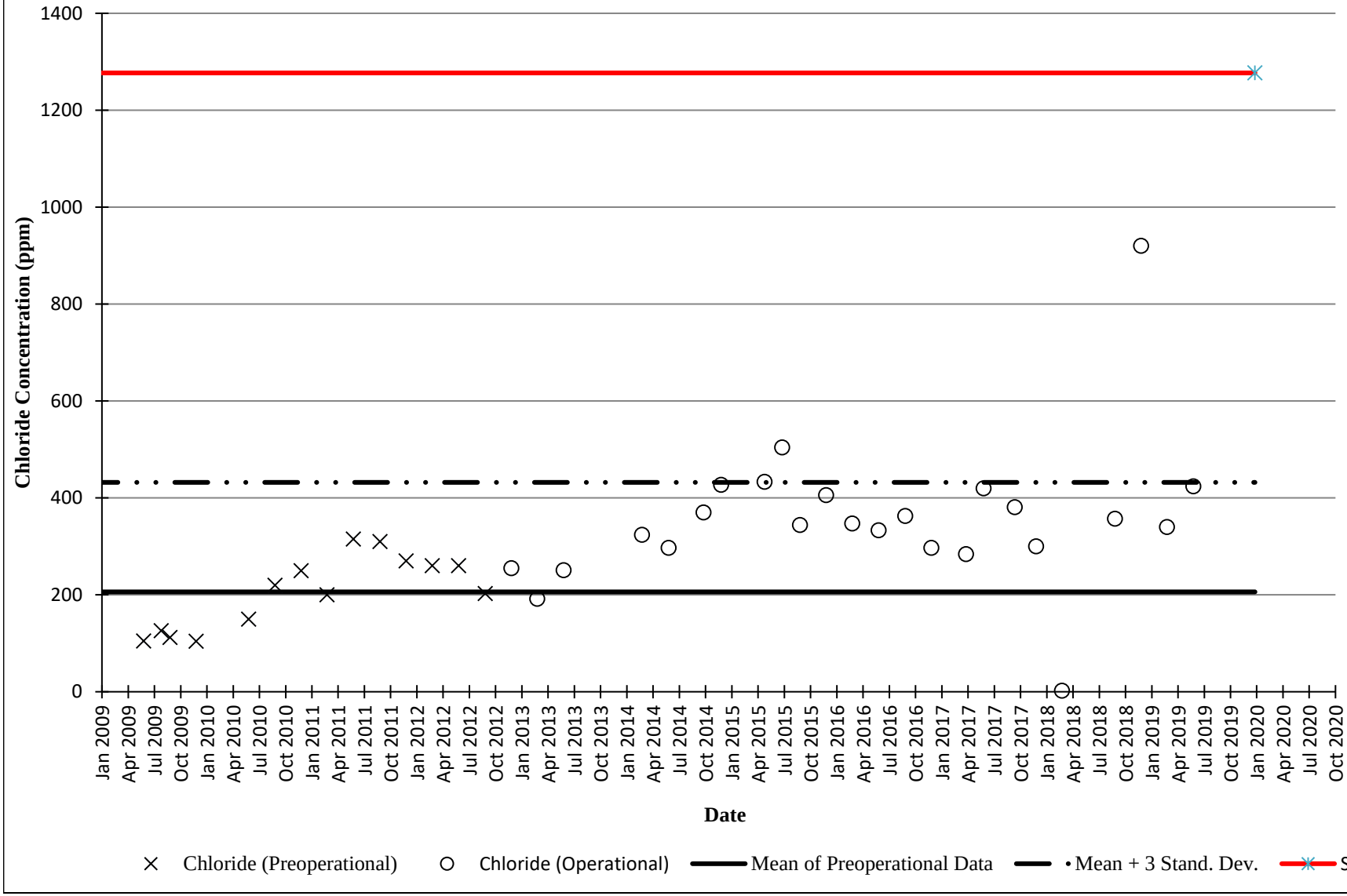
Indicates sample exceeds overall STV

Indicates suspected erroneous data

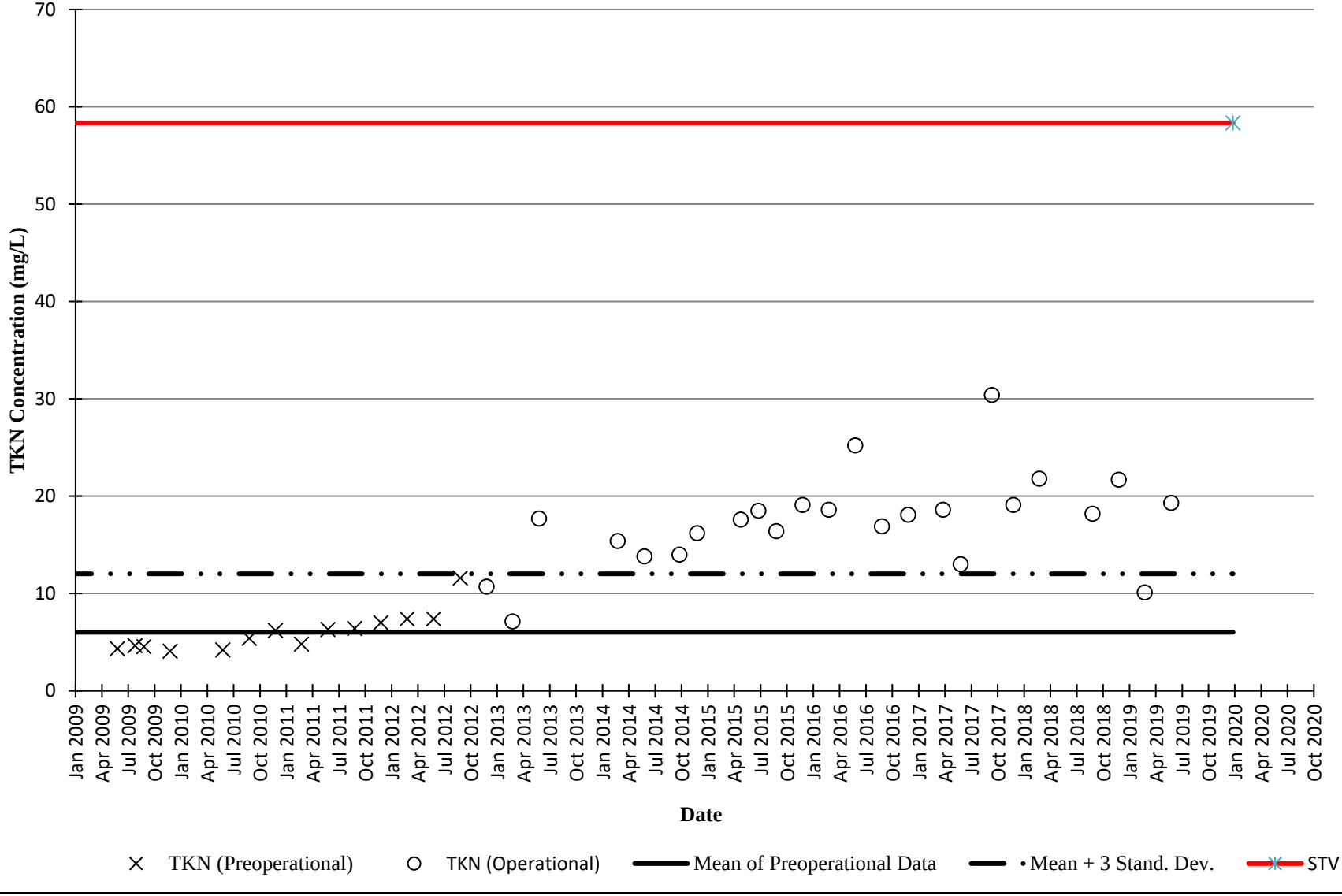
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 27i Existing Water Quality and Statistical Trigger - Hardness



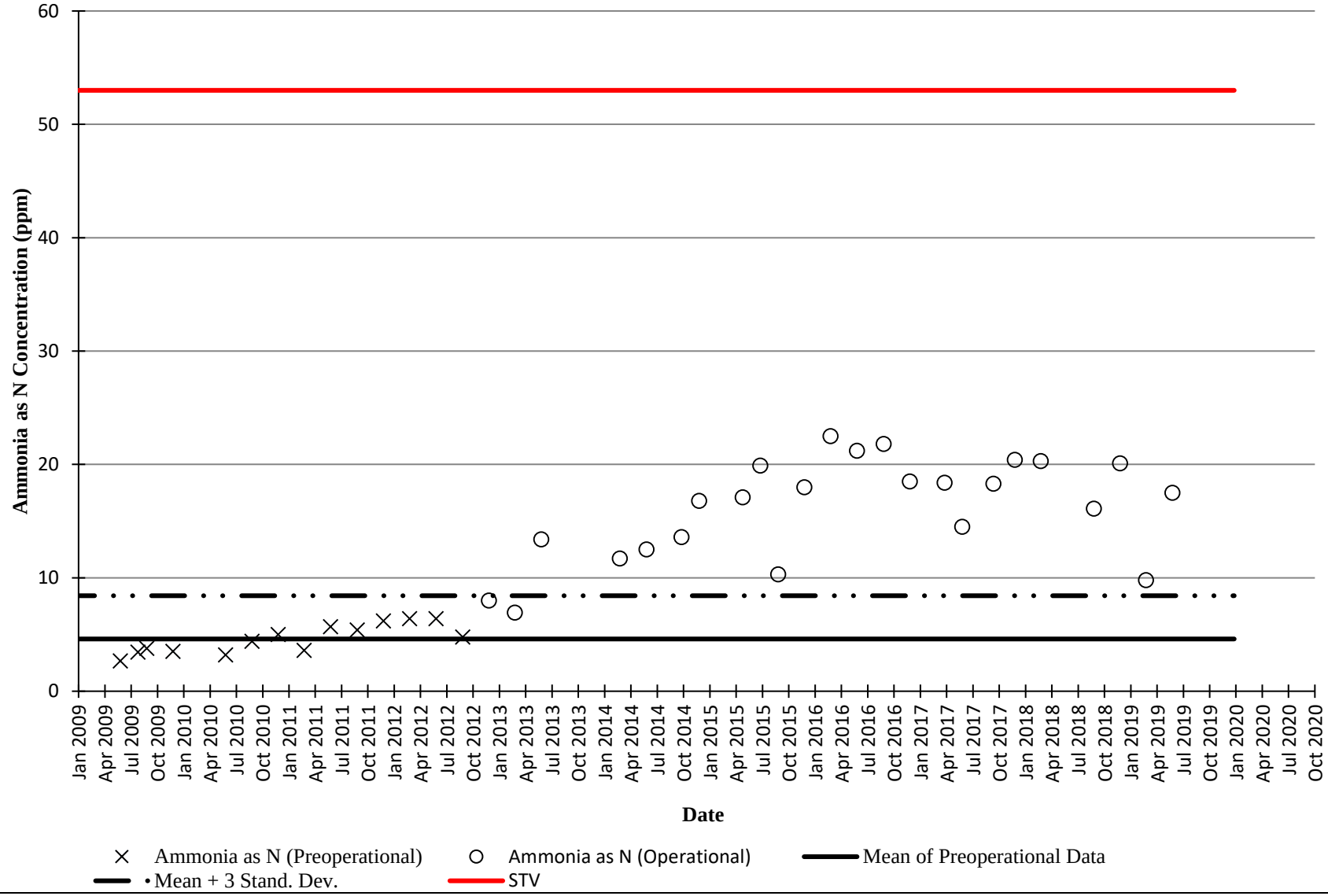
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 27i Existing Water Quality and Statistical Trigger - Chloride



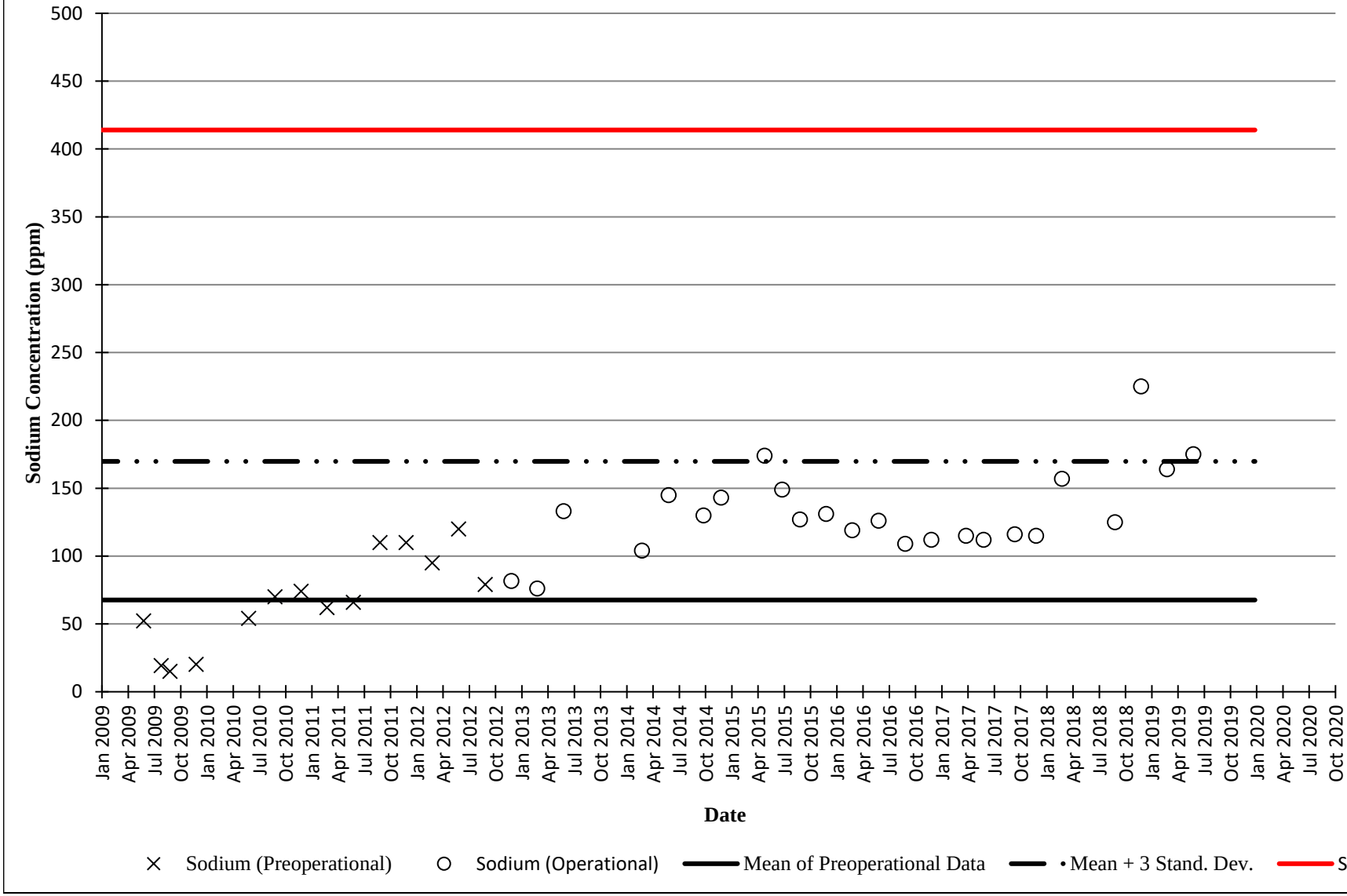
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 27i Existing Water Quality and Statistical Trigger - TKN



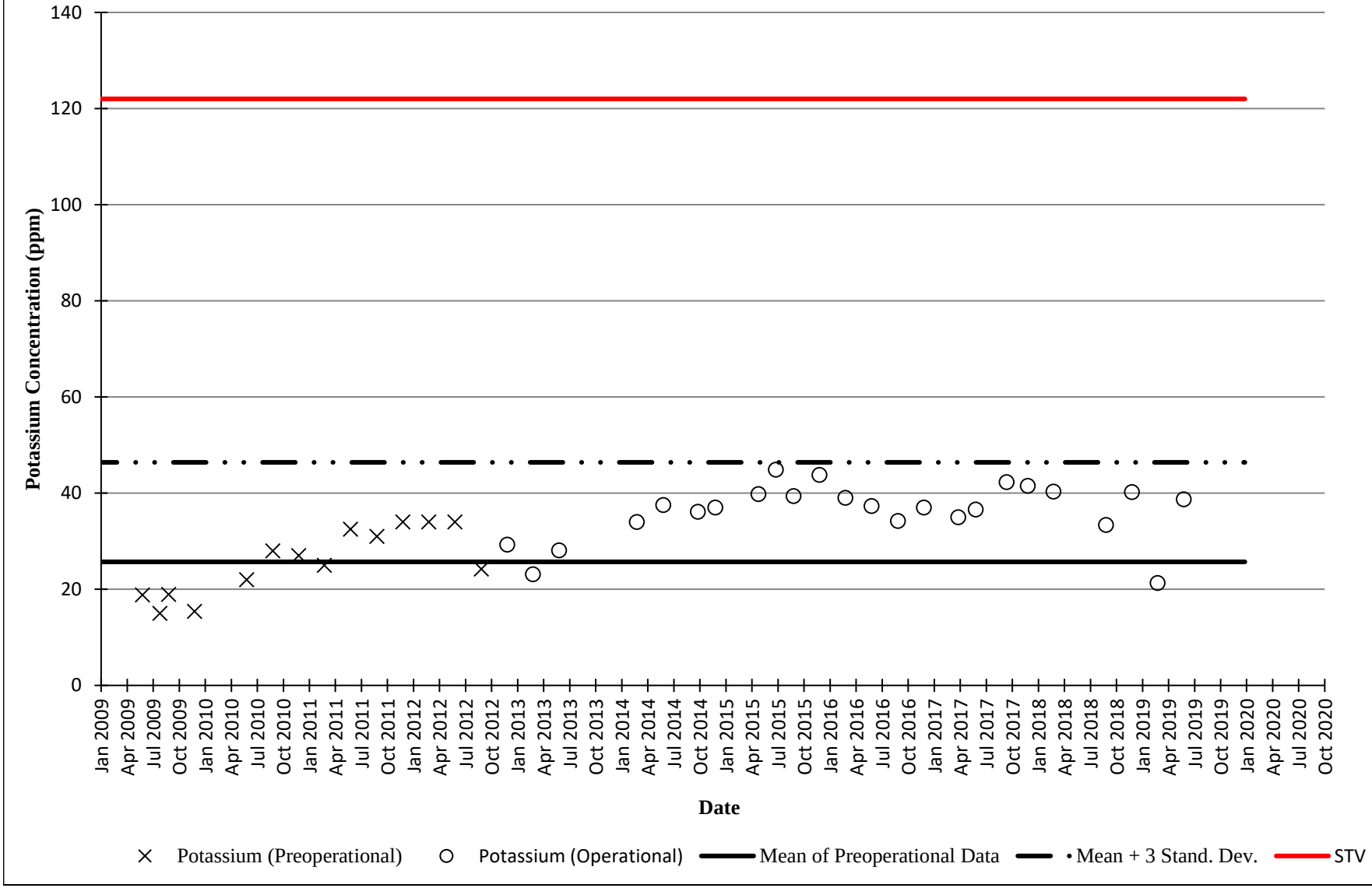
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 27i Existing Water Quality and Statistical Trigger - Ammonia as N



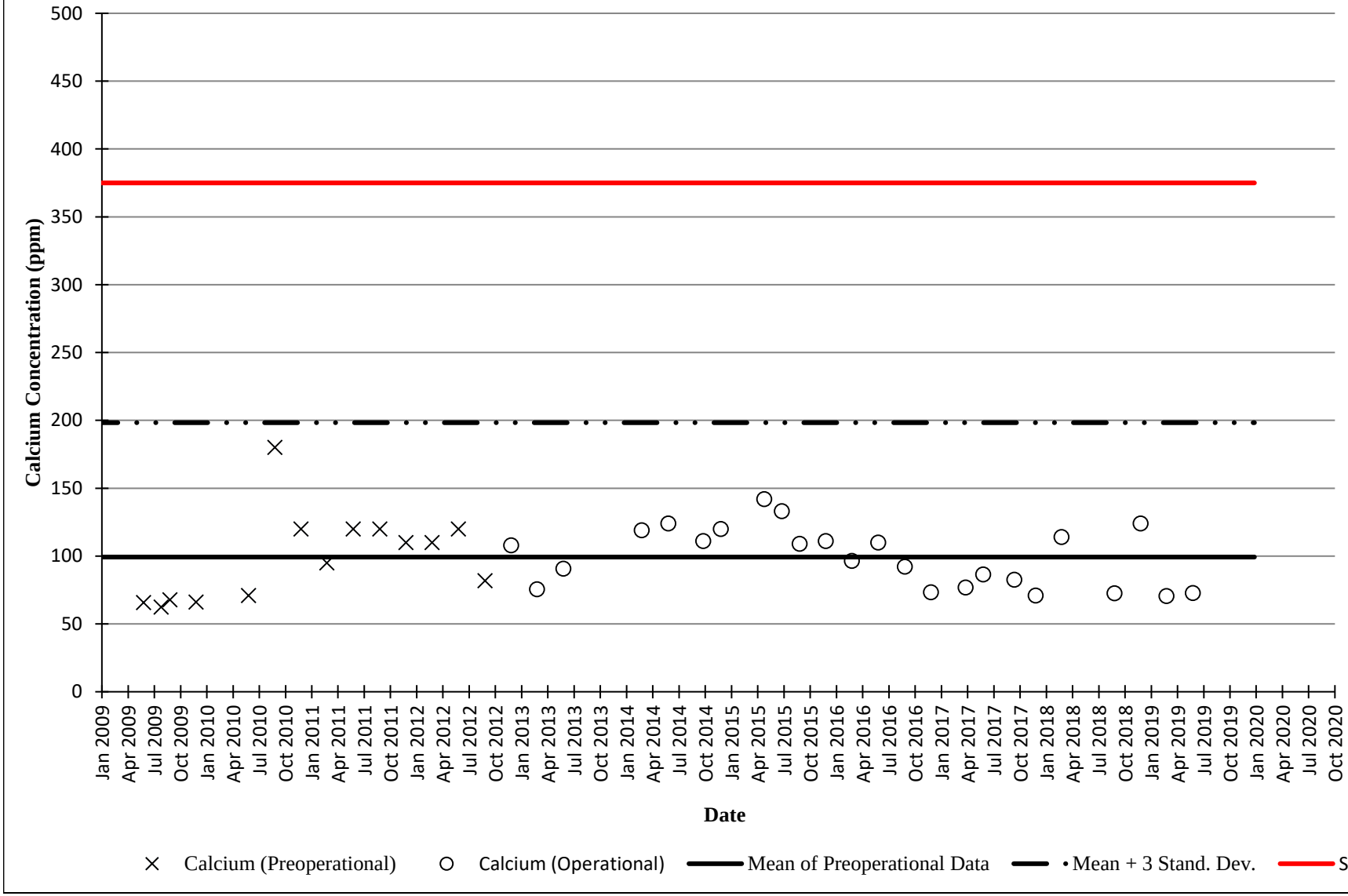
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 27i Existing Water Quality and Statistical Trigger - Sodium



Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 27i Existing Water Quality and Statistical Trigger - Potassium



Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 27i Existing Water Quality and Statistical Trigger - Calcium



Analyte	Units	Dec 2012	Mar 2013	Jun 2013	Mar 2014	Jun 2014	Oct 2014	Dec 2014	May 2015	Jul 2015	Sep 2015	Dec 2015	Mar 2016	Jun 2016	Sep 2016	Dec 2016	Apr 2017	Jun 2017	Sep 2017	Dec 2017	Mar 2018	Sep 2018	Dec 2018	Mar 2019	Jun 2019		
Hardness (Operational)	ppm	520	680	480	380	460	500	380	**1200**	160	300	304	420	310	260	280	260	440	400	180	580	470	430	**1240**	880		
Chloride (Operational)	ppm	202	331	151	274	274	263	225	256	166	312	294	294	267	323	316	183	422	398	322	141	352	259	217	256		
TKN (Operational)	mg/L	31.6	32.3	19.5	29.1	19	21.3	19.8	18.7	9.85	23	25.1	21.7	41	32.5	27.1	5.9	45.4	55.3	36.8	9.3	34.4	28	10.8	20.9		
Ammonia as N (Operational)	ppm	23.6	26.1	17.1	26.1	17.2	20.4	19.7	17.8	10.5	25.6	23.6	26.5	27.7	38.5	27	6.2	29.6	34.8	34.6	8.7	17.4	25.3	8.8	18.2		
Sodium (Operational)	ppm	179	206	100	183	200	224	173	197	80.9	216	233	213	217	214	221	85.8	262	239	234	83	236	206	197	186		
Potassium (Operational)	ppm	54.6	53.8	36	60.5	46.8	52.8	43	44.6	63.2	48.7	55.3	59.6	57.5	55.7	54.1	56.2	76.1	87.4	96.2	57.4	48.6	59.2	58.2	51.2		
Calcium (Operational)	ppm	170	201	158	120	164	130	131	196	62.2	105	106	158	116	95.9	96.6	58.9	200	136	109	262	167	157	**384**	248		

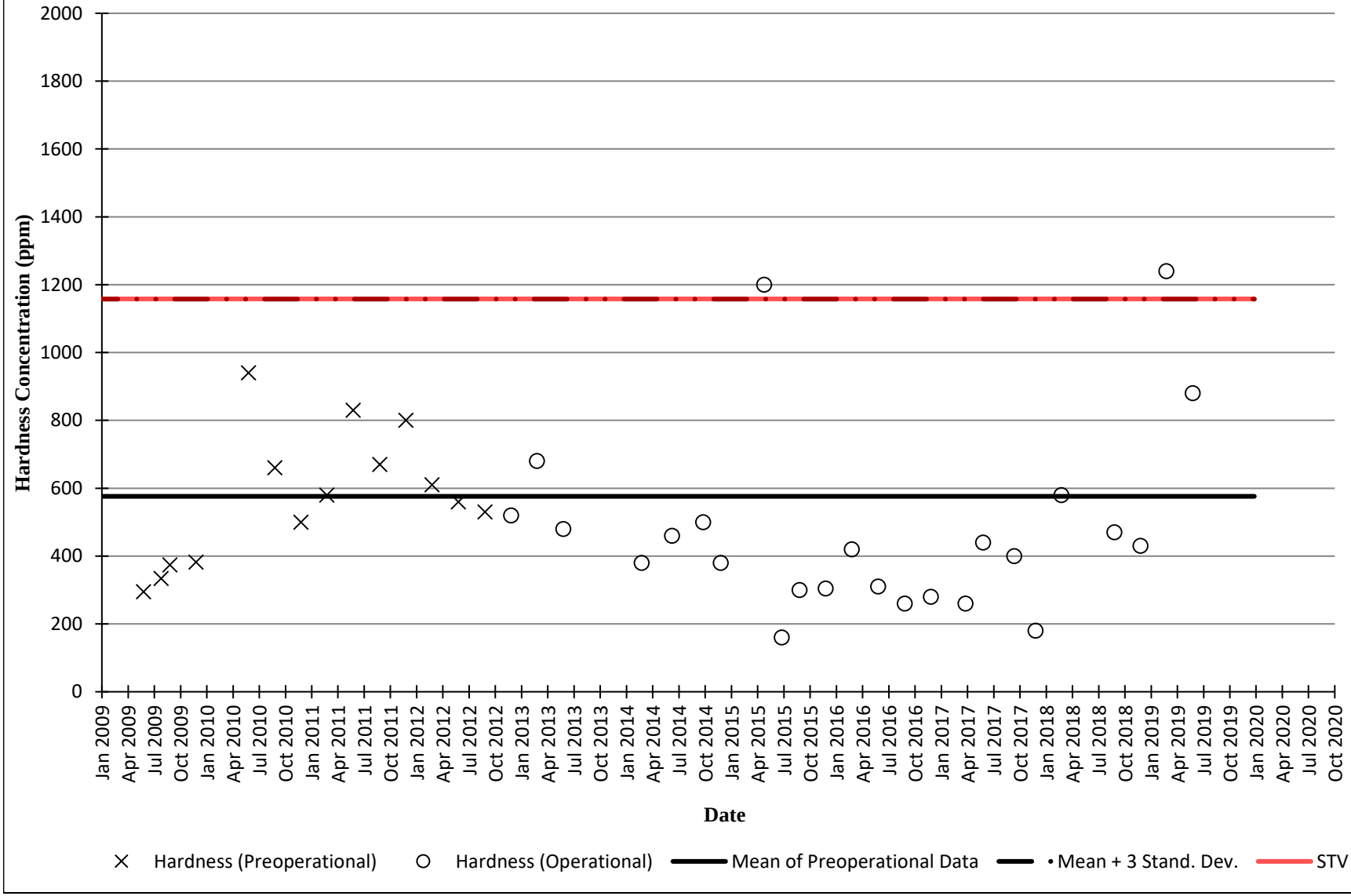
Well 28 Preoperational Data																		Mean	Mean	M+3sd	M+3sd	STV	STV
Analyte	Units	Jun 2009	Aug 2009	Sep 2009	Dec 2009	Jun 2010	Sep 2010	Dec 2010	Mar 2011	Jun 2011	Sep 2011	Dec 2011	Mar 2012	Jun 2012	Sep 2012	Mean(M)	stan dev(sd)	M+(3sd)	Jan 2008	Jan 2020	Jan 2008	Jan 2020	Jan 2008	Jan 2020
Hardness (Preoperational)	ppm	295	334	374	382	940	660	500	580	830	670	800	610	560	530	576.07	193.82	1157.53	576.07	576.07	**1157.53**	**1157.53**	**1158.00**	**1158.00**
Chloride (Preoperational)	ppm	85.6	112	122	123	260	240	250	300	330	170	280	310	300	324	229.04	87.89	492.70	229.04	229.04	**492.70**	**492.70**	**1277.00**	**1277.00**
TKN (Preoperational)	mg/L	10.3	6.04	5.9	7.7	14	16	28	36	27	8.4	25	28	40	39	20.81	12.51	58.35	20.81	20.81	**58.35**	**58.35**	**58.35**	**58.35**
Ammonia as N (Preoperational)	ppm	6.04	4.52	4.66	8.05	5.2	14	26	34	26	8.4	24	26	38	24.4	17.81	11.76	53.09	17.81	17.81	**53.09**	**53.09**	**53.00**	**53.00**
Sodium (Preoperational)	ppm	60.6	22	18.8	27.5	140	190	200	220	230	110	230	240	220	225	152.42	87.11	413.74	152.42	152.42	**413.74**	**413.74**	**414.00**	**414.00**
Potassium (Preoperational)	ppm	33	23.5	28	23.2	58	54	60	72	87	39	74	74	85	59.9	55.04	22.30	121.95	55.04	55.04	**121.95**	**121.95**	**122.00**	**122.00**
Calcium (Preoperational)	ppm	99.3	120	134	137	290	220	180	200	280	230	260	200	120	183	189.52	61.90	375.23	189.52	189.52	**375.23**	**375.23**	**375.00**	**375.00**

Indicates sample is below detection limit

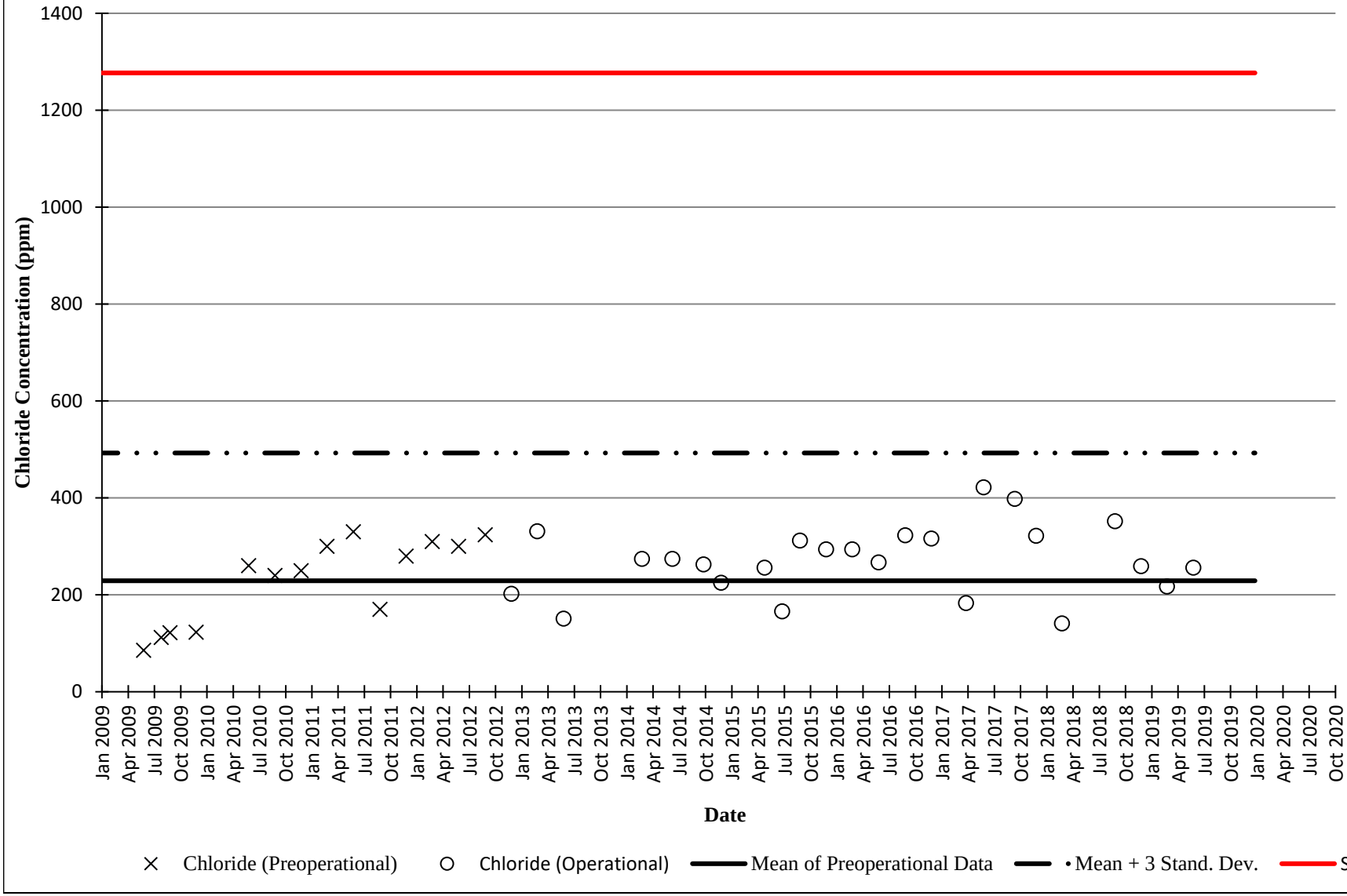
Inidicates sample is above Mean + 3 Standard Deviations

Indicates sample exceeds overall STV

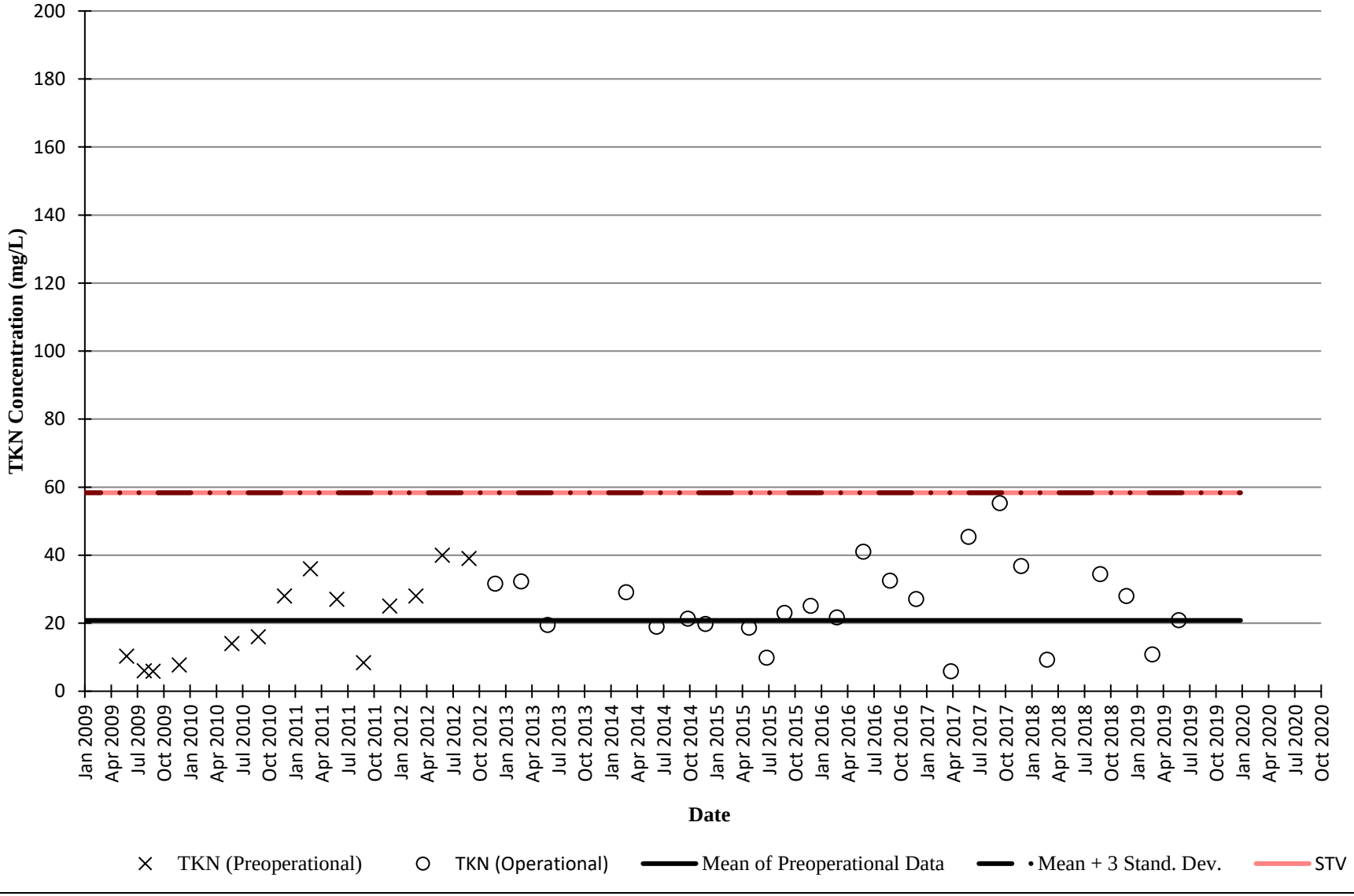
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 28 Existing Water Quality and Statistical Trigger - Hardness



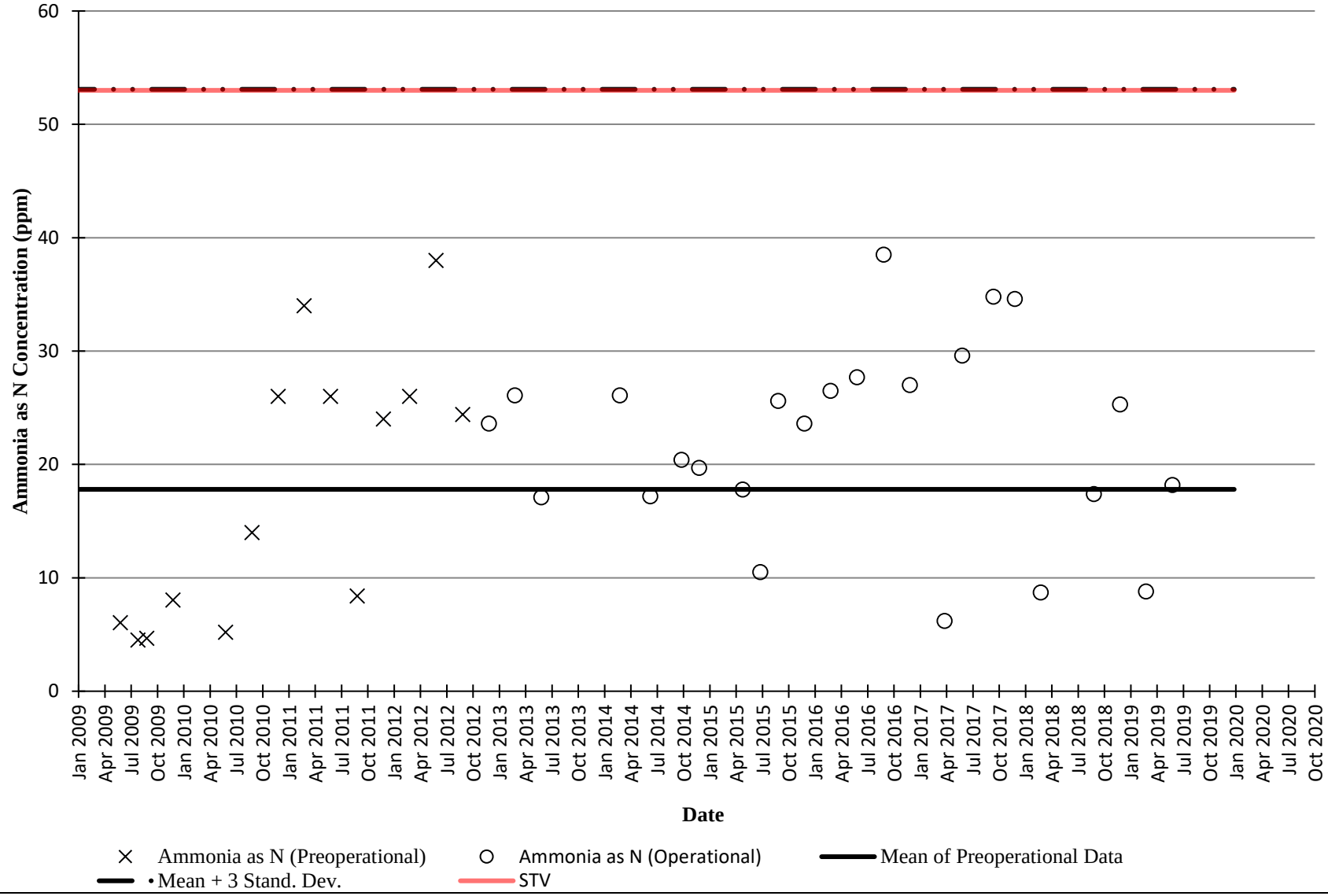
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 28 Existing Water Quality and Statistical Trigger - Chloride



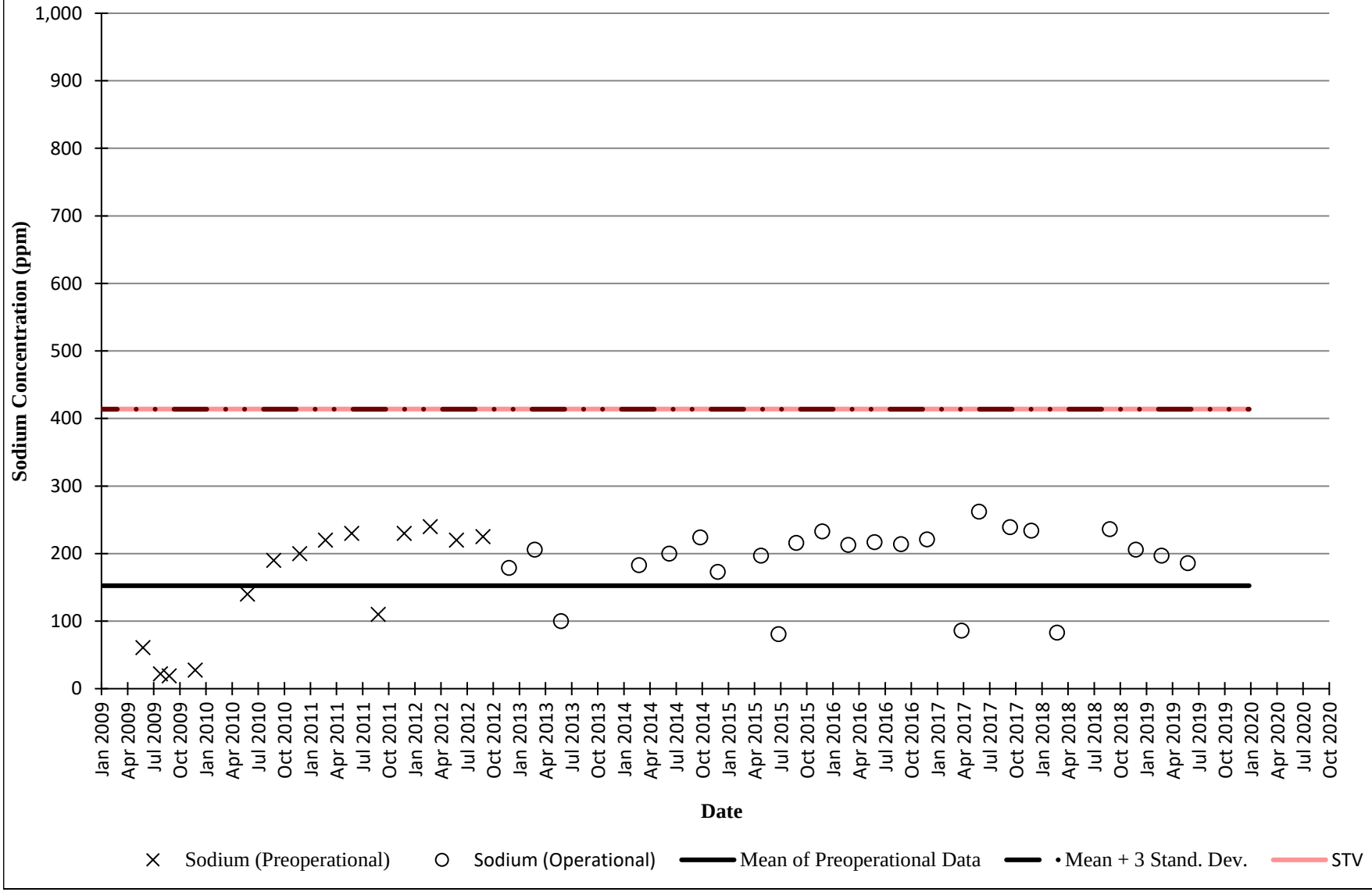
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 28 Existing Water Quality and Statistical Trigger - TKN



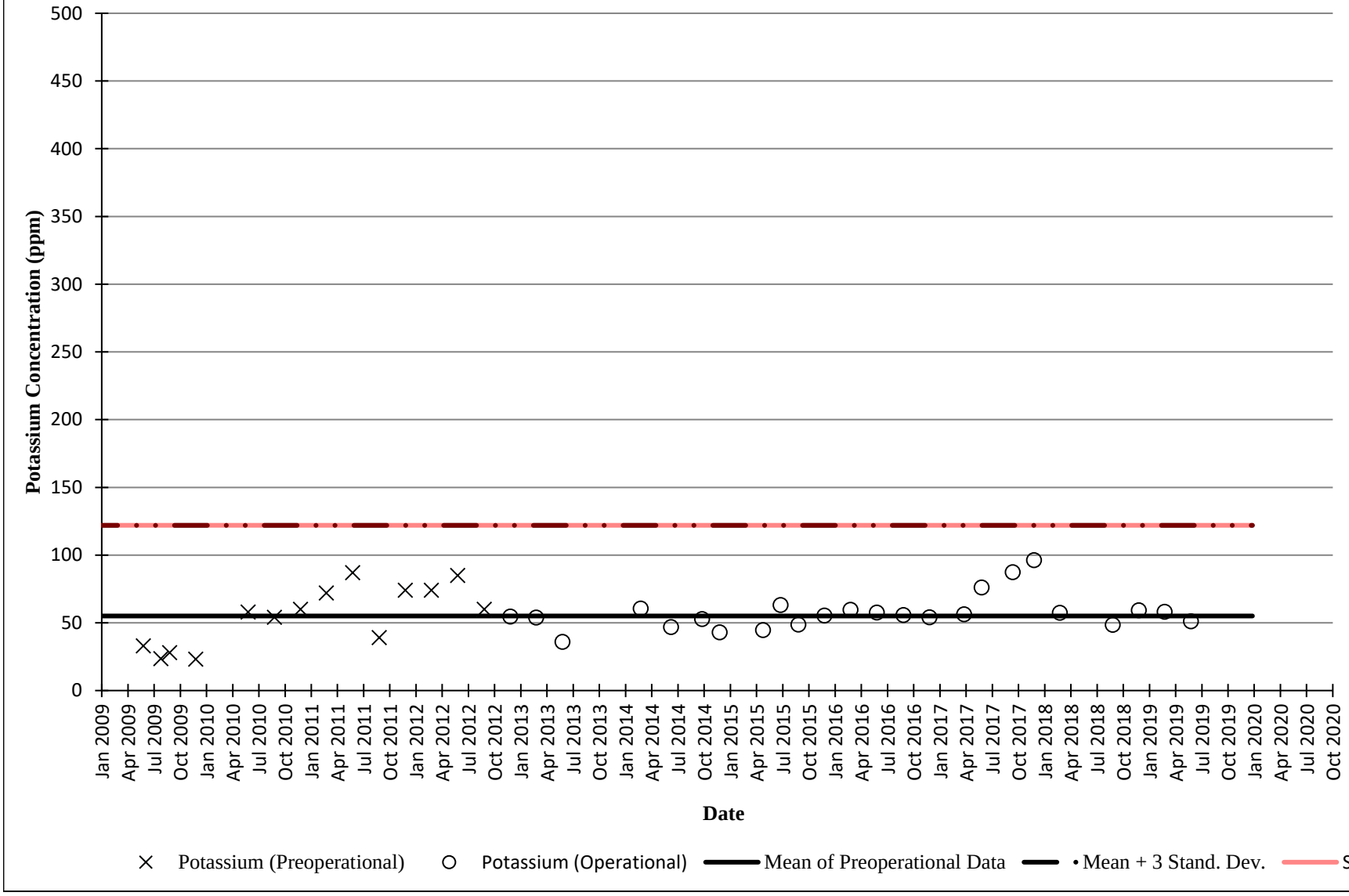
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 28 Existing Water Quality and Statistical Trigger - Ammonia as N



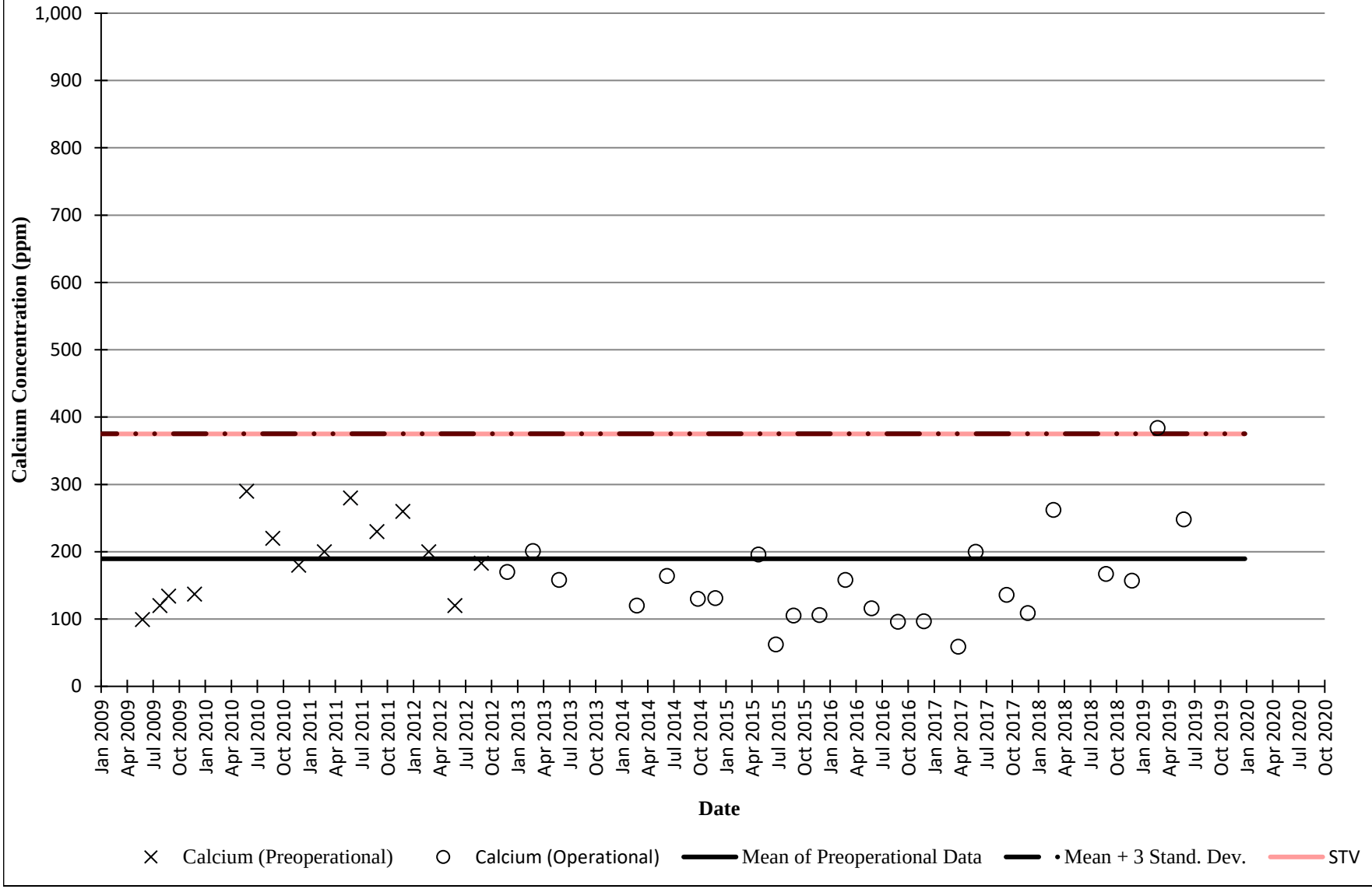
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 28 Existing Water Quality and Statistical Trigger - Sodium



Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 28 Existing Water Quality and Statistical Trigger - Potassium



Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 28 Existing Water Quality and Statistical Trigger - Calcium



Well 28i Operational Data

Analyte	Units	Dec 2012	Mar 2013	Jun 2013	Mar 2014	Jun 2014	Oct 2014	Dec 2014	May 2015	Jul 2015	Sep 2015	Dec 2015	Mar 2016	Jun 2016	Sep 2016	Dec 2016	Apr 2017	Jun 2017	Sep 2017	Dec 2017	Mar 2018	Sep 2018	Dec 2018	Mar 2019	Jun 2019		
Hardness (Operational)	ppm	110	130	100	132	130	**250**	**280**	120	**360**	160	168	180	128	180	160	**390**	132	140	127	113	120	96	92	100		
Chloride (Operational)	ppm	139	**224**	118	**232**	**205**	**224**	**231**	**201**	**266**	**222**	**205**	176	170	**213**	165	**299**	**261**	**215**	**187**	**215**	172	174	**248**	**251**		
TKN (Operational)	mg/L	26	23.1	10.9	24.3	14.5	11.4	6.81	11	21.6	12.1	13	7.2	14.7	5.6	4.7	**31.3**	5.7	9.2	4.3	8	24.8	**32.5**	3.8	12.2		
Ammonia as N (Operational)	ppm	19.7	20.2	9.06	20.1	13.1	9.28	7.58	11.3	22.4	13.8	13.5	9.24	11	6.4	5.6	**31.2**	7.8	5.4	3.6	7.1	6.8	12.3	7.3	11.4		
Sodium (Operational)	ppm	96.4	102	67.3	109	92.5	97.1	86	86.5	**219**	111	95.3	68.8	89.2	75.2	62.6	**219**	92.2	78.3	84.8	92.8	85.2	88.5	85.2	114		
Potassium (Operational)	ppm	77.8	81.8	80.4	85.2	71.7	76.5	66.7	64.2	56.4	73.4	73.5	59.8	59.2	41.4	46.4	60	58	47.7	49.8	57.5	40.5	54.4	42.7	62.6		
Calcium (Operational)	ppm	24.2	30.7	37.1	49.6	45.4	53.9	62.3	55	**138**	60.4	58.1	47	53.7	61	50.5	**111**	44	45.9	53.2	49.2	41.5	35.5	35.3	39.6		

Well 28i Preoperational Data

Analyte	Units	Jun 2009	Aug 2009	Sep 2009	Dec 2009	Jun 2010	Sep 2010	Dec 2010	Mar 2011	Jun 2011	Sep 2011	Dec 2011	Mar 2012	Jun 2012	Sep 2012	Mean(M)	stan dev(sd)	M+(3sd)
Hardness (Preoperational)	ppm	124	152	150	120	110	180	170	150	120	120	80	110	130	104	130.00	27.31	211.93
Chloride (Preoperational)	ppm	97	108	100	109	130	140	110	96	140	140	150	110	100	136	119.00	19.24	176.72
TKN (Preoperational)	mg/L	5.4	3.54	3.98	5.6	12	14	13	9.8	1.4	15	18	14	11	18.3	10.36	5.51	26.89
Ammonia as N (Preoperational)	ppm	3.51	2.62	2.66	6	11	13	11	9	14	14	17	13	10	11.2	9.86	4.55	23.52
Sodium (Preoperational)	ppm	68.2	19.2	16.2	25.3	60	69	74	59	84	87	82	67	57	69.6	59.82	23.32	129.79
Potassium (Preoperational)	ppm	41.6	30.3	36.6	28.6	54	53	60	46	63	64	73	96	65	61.1	55.16	18.02	109.23
Calcium (Preoperational)	ppm	46	56.1	55	43.3	40	65	62	53	43	41	29	40	44	32.3	46.41	10.53	77.99

Mean Jan 2008	Mean Jan 2020
130.00	130.00
119.00	119.00
10.36	10.36
9.86	9.86
59.82	59.82
55.16	55.16
46.41	46.41

M+3sd Jan 2008	M+3sd Jan 2020
211.93	**211.93**
176.72	**176.72**
26.89	**26.89**
23.52	**23.52**
129.79	**129.79**
109.23	**109.23**
77.99	**77.99**

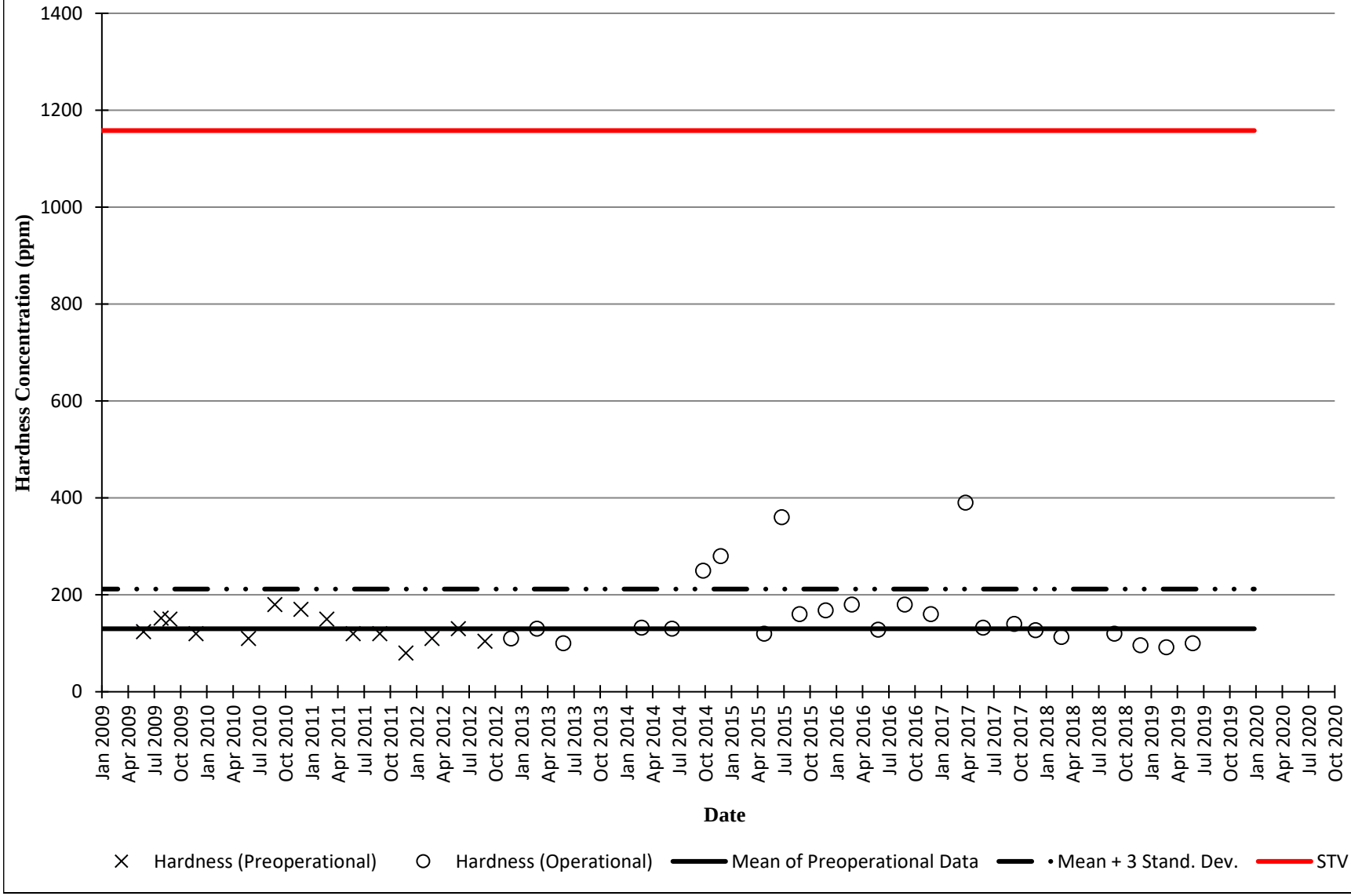
STV Jan 2008	STV Jan 2020
1158.00	**1158.00**
1277.00	**1277.00**
58.35	**58.35**
53.00	**53.00**
414.00	**414.00**
122.00	**122.00**
375.00	**375.00**

Indicates sample is below detection limit

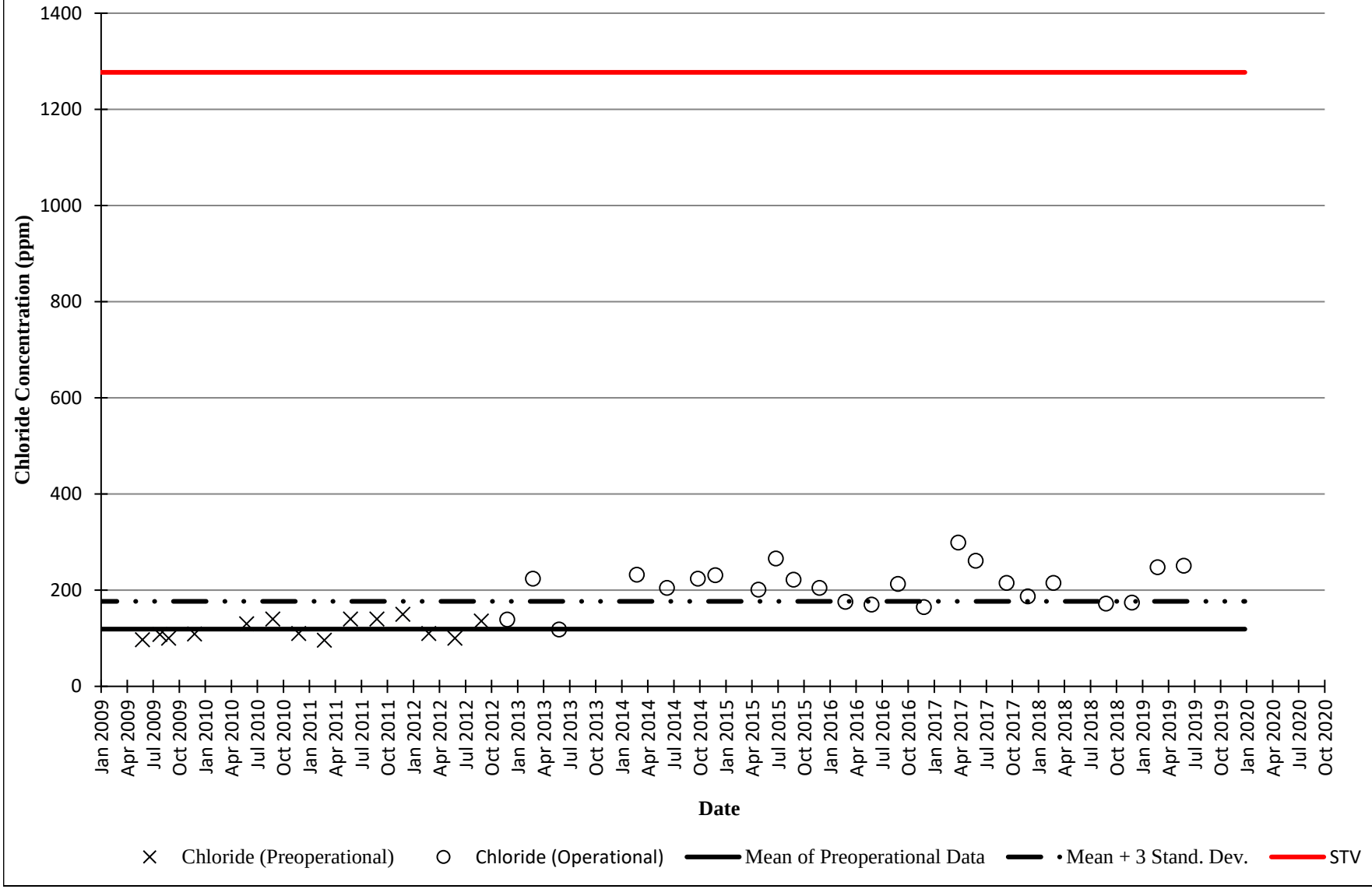
Indicates sample is above Mean + 3 Standard Deviations

Indicates sample exceeds overall STV

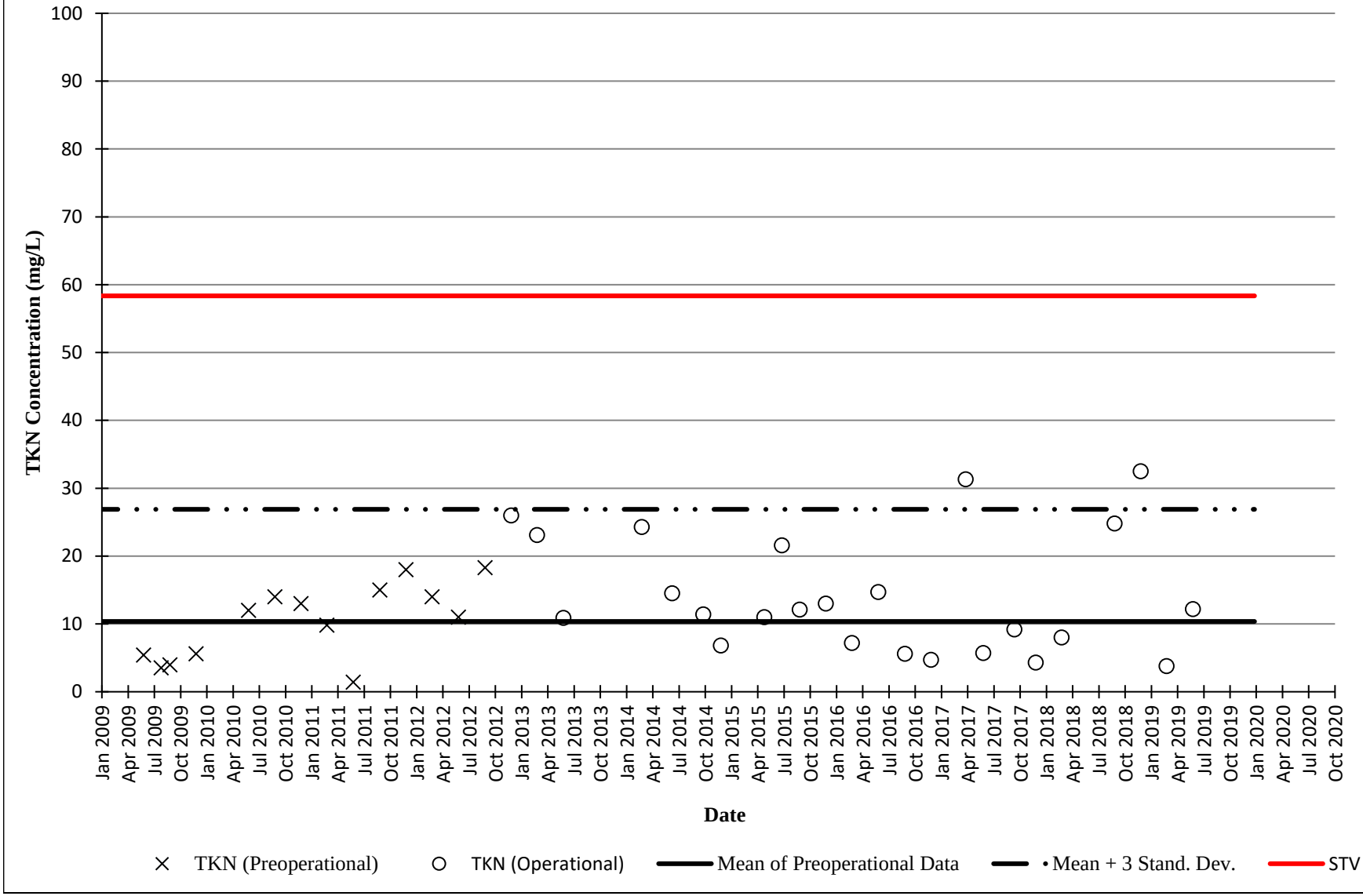
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 28i Existing Water Quality and Statistical Trigger - Hardness



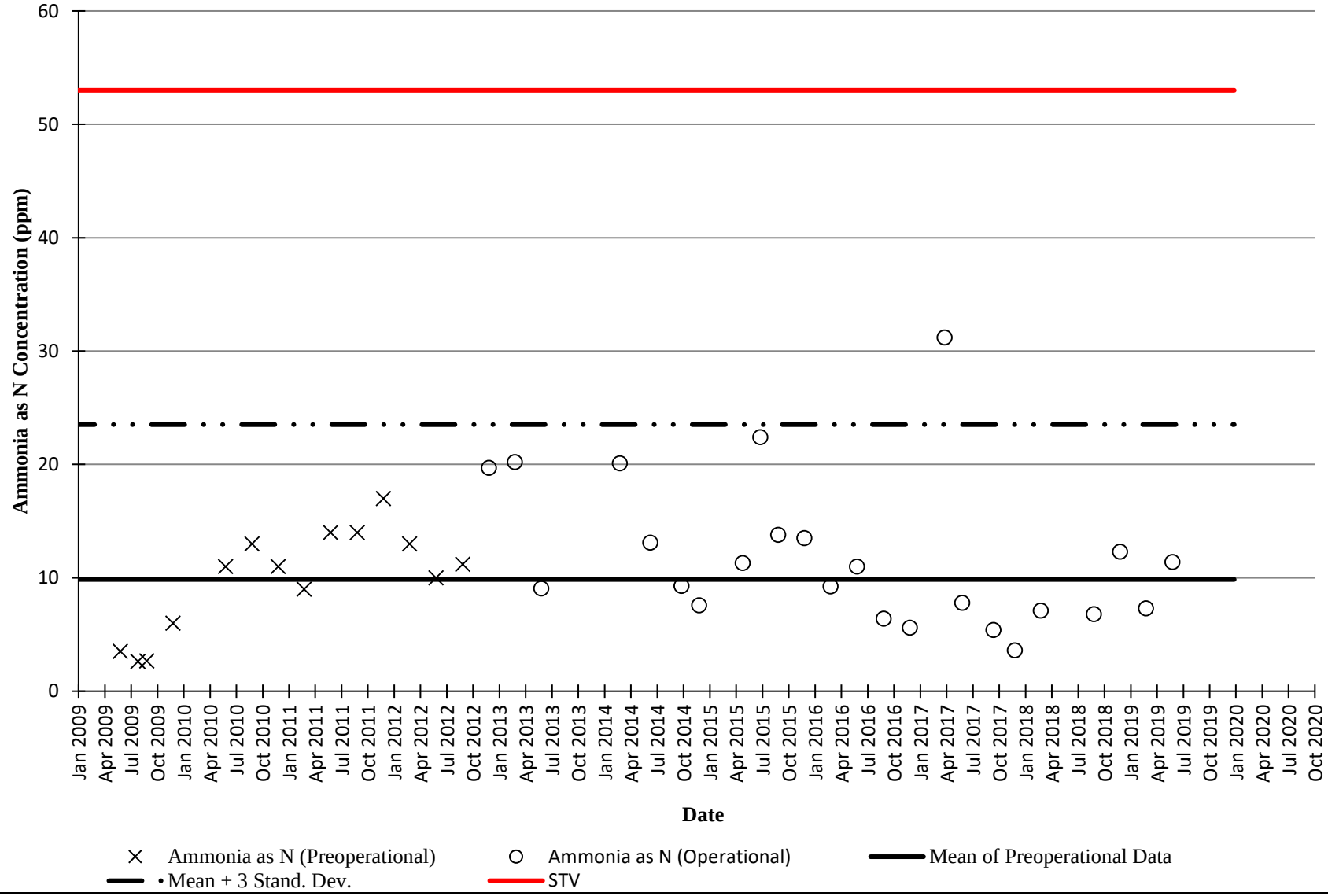
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 28i Existing Water Quality and Statistical Trigger - Chloride



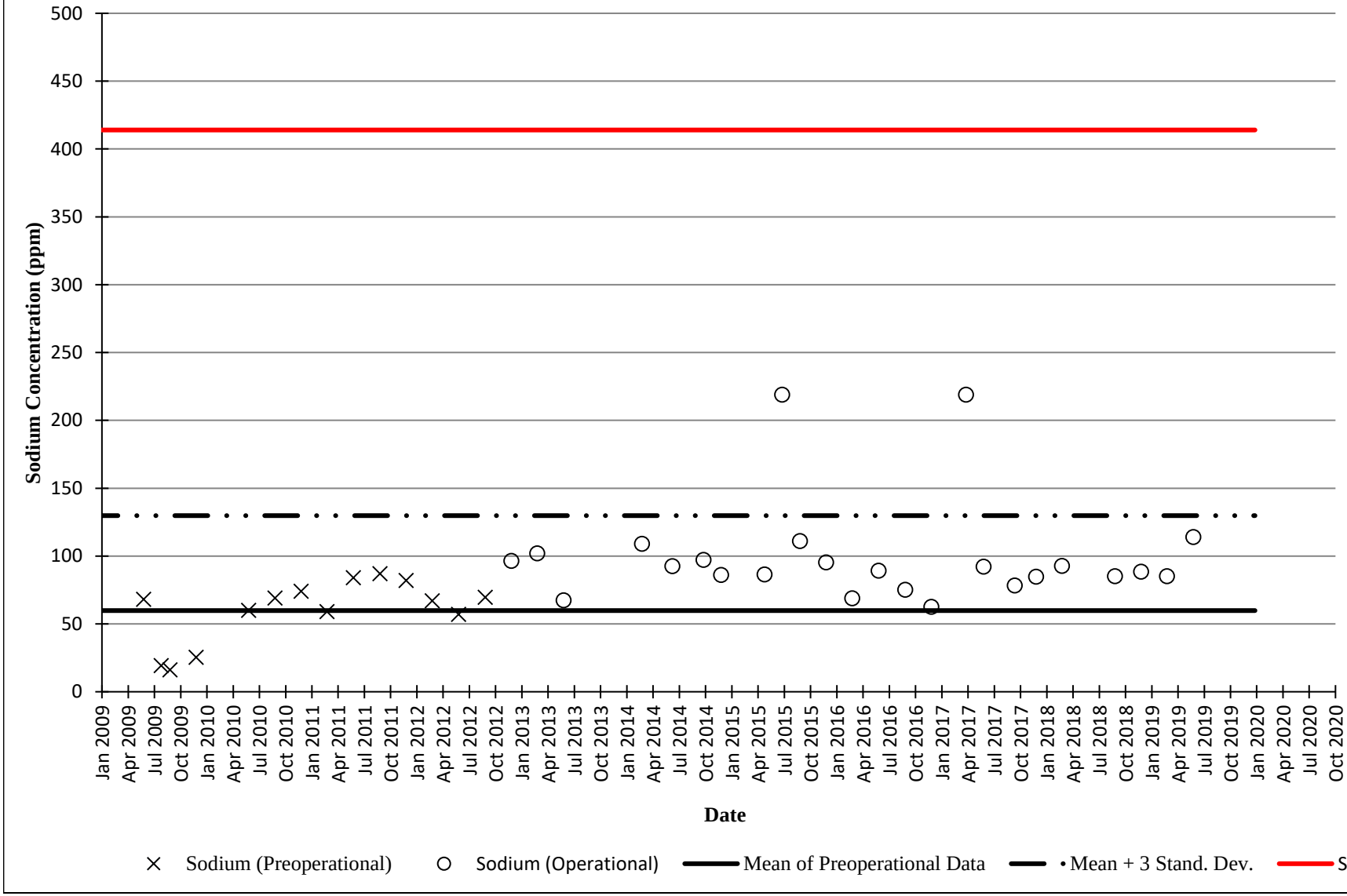
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 28i Existing Water Quality and Statistical Trigger - TKN



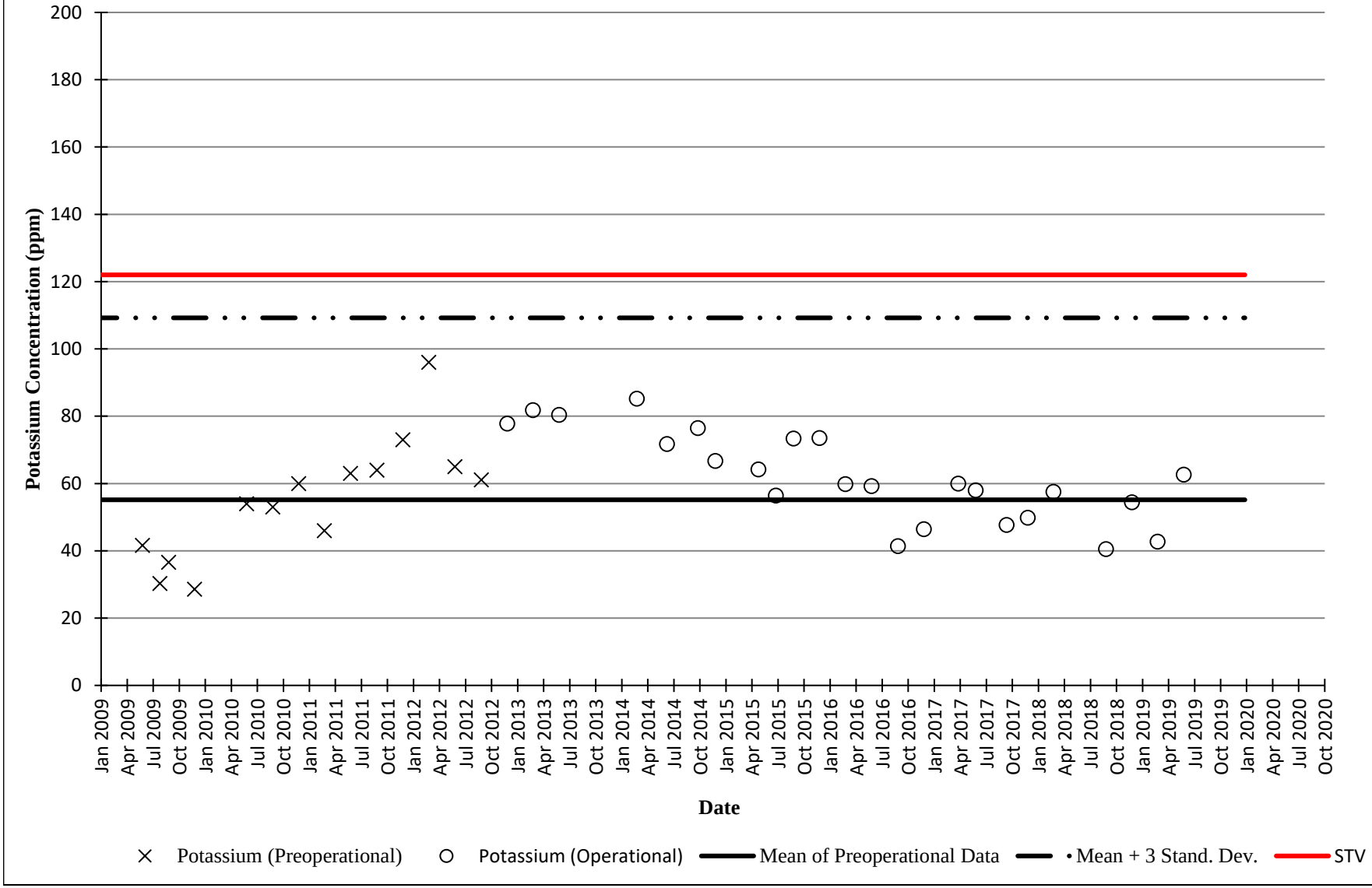
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 28i Existing Water Quality and Statistical Trigger - Ammonia as N



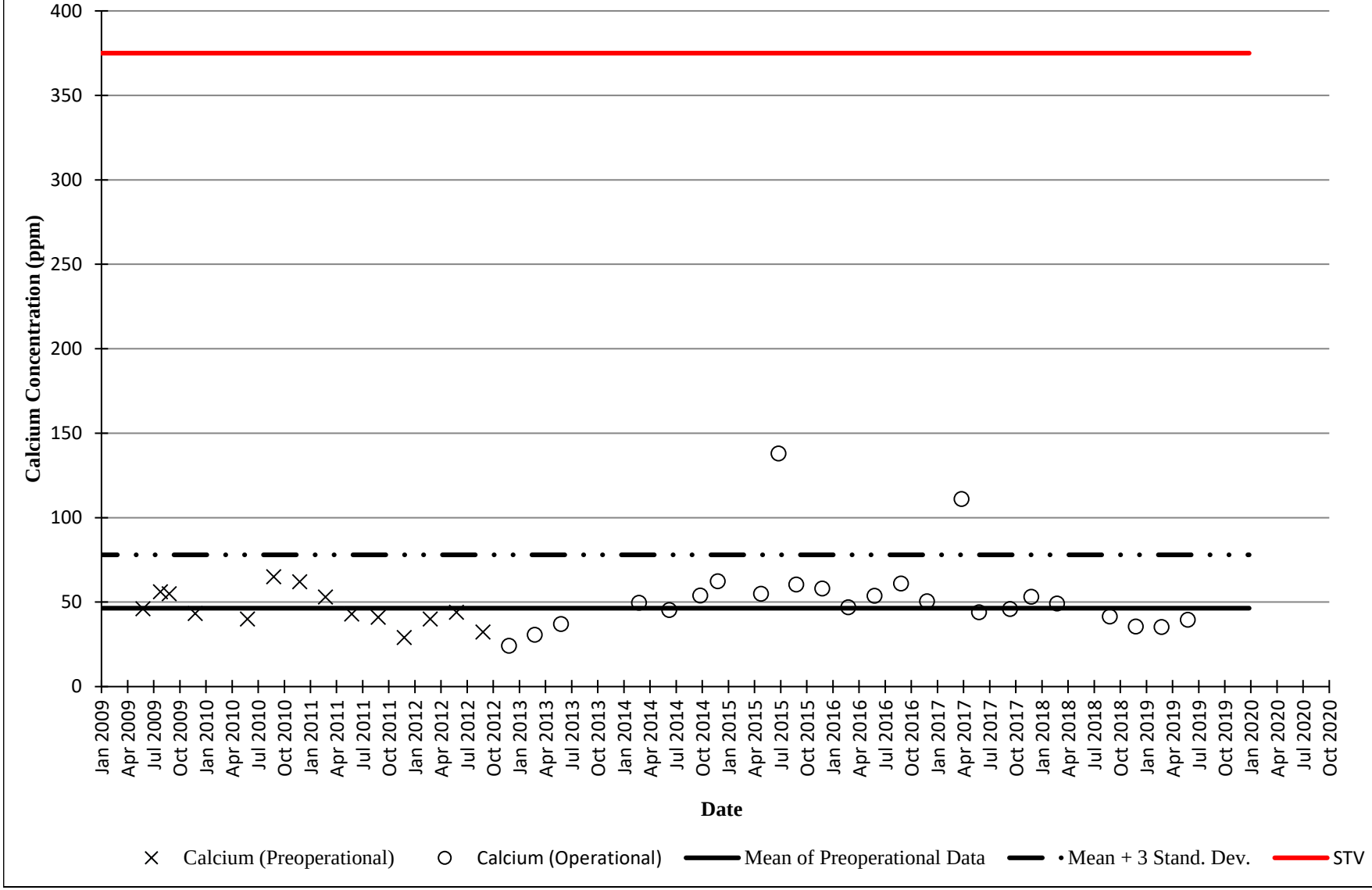
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 28i Existing Water Quality and Statistical Trigger - Sodium



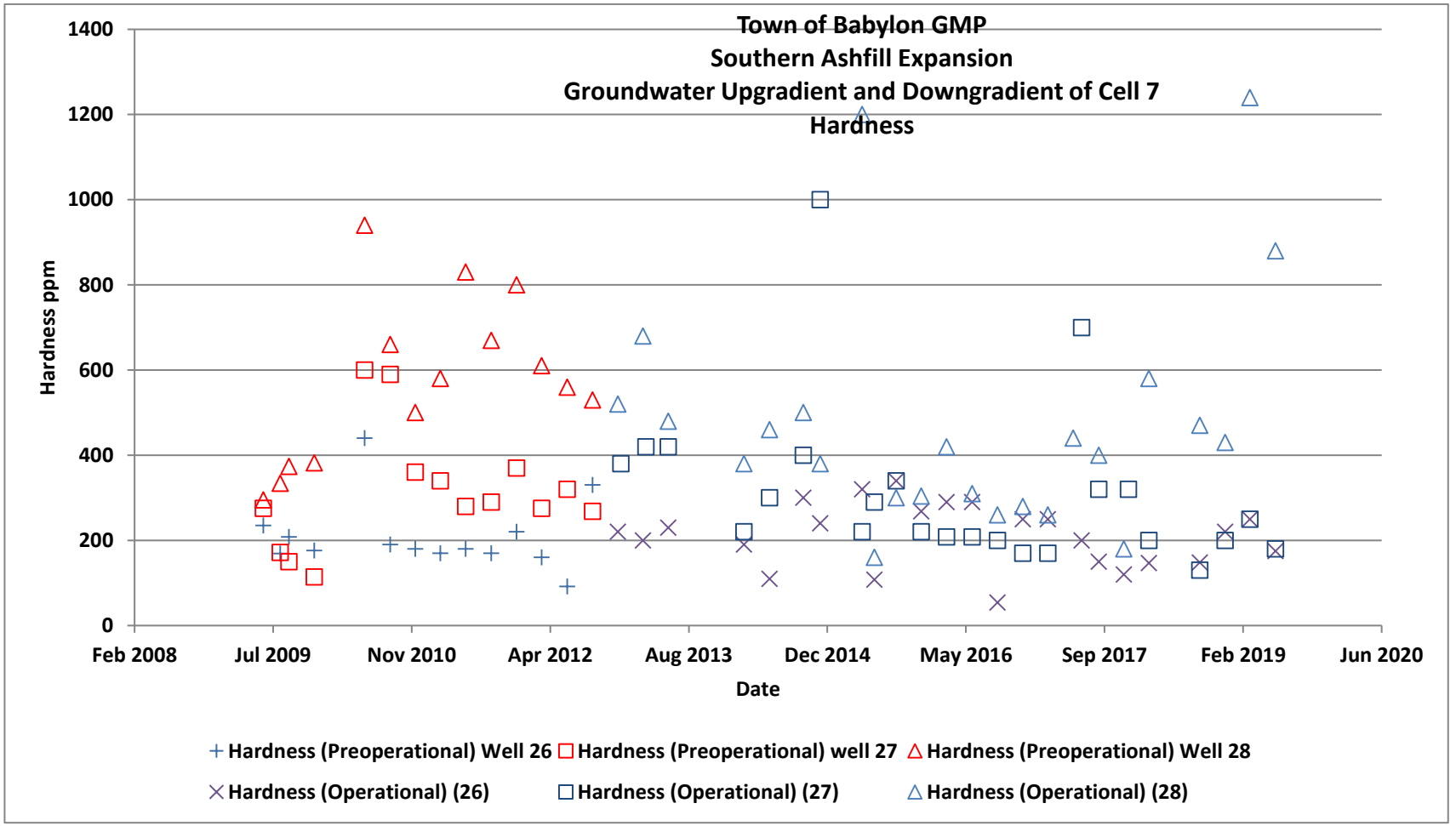
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 28i Existing Water Quality and Statistical Trigger - Potassium

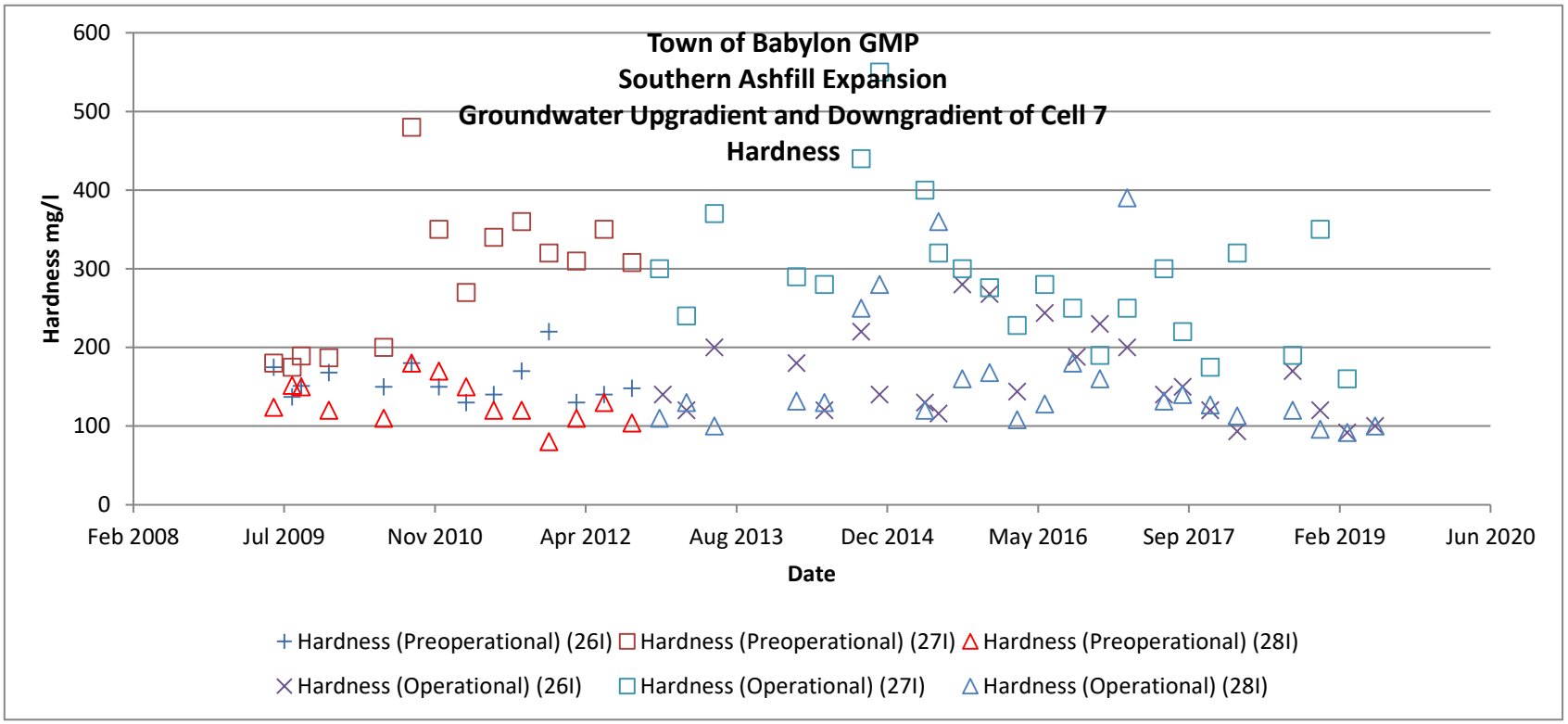


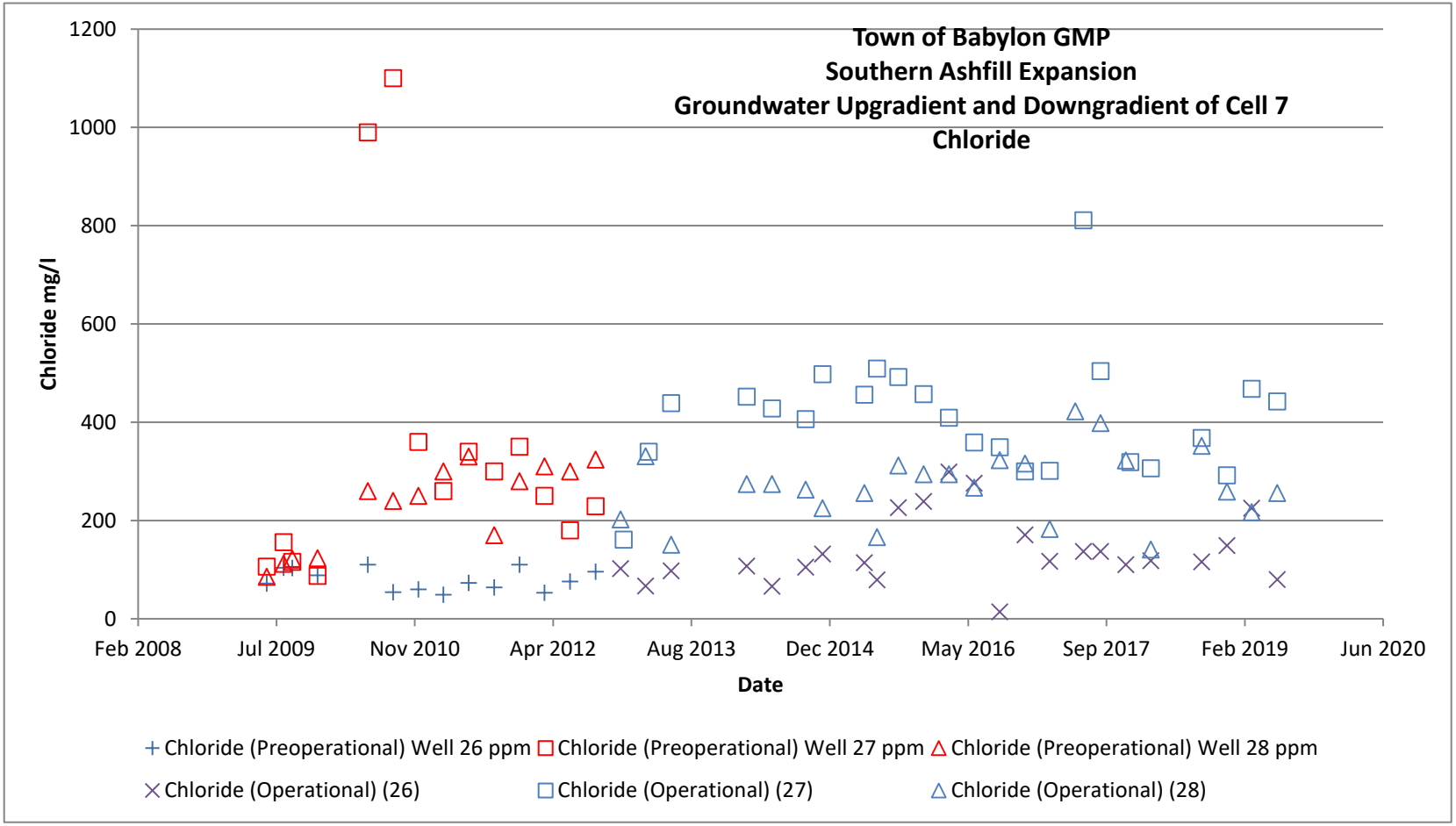
Town of Babylon Southern Ashfill Expansion
Groundwater Monitoring Program
Well 28i Existing Water Quality and Statistical Trigger - Calcium

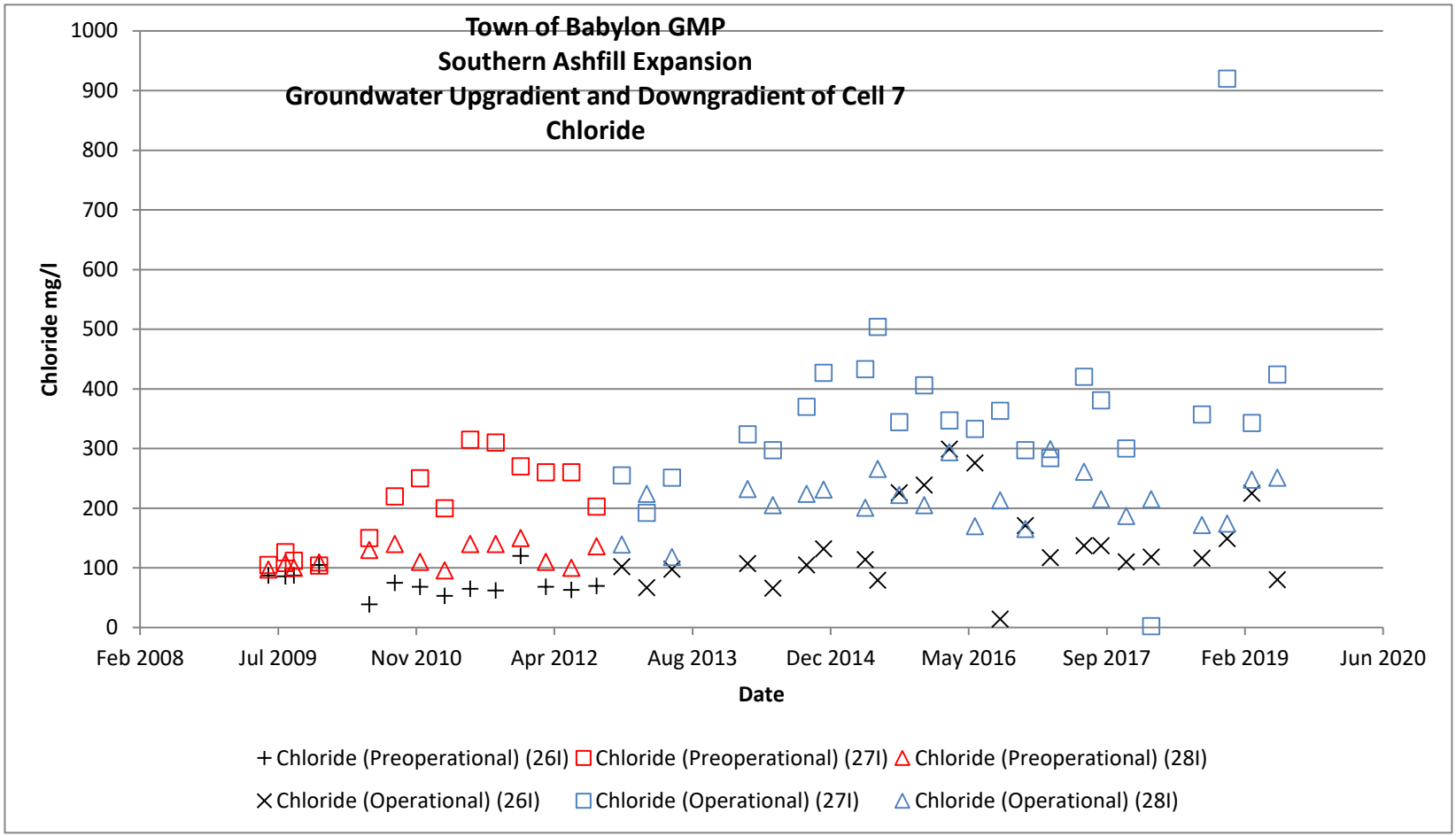


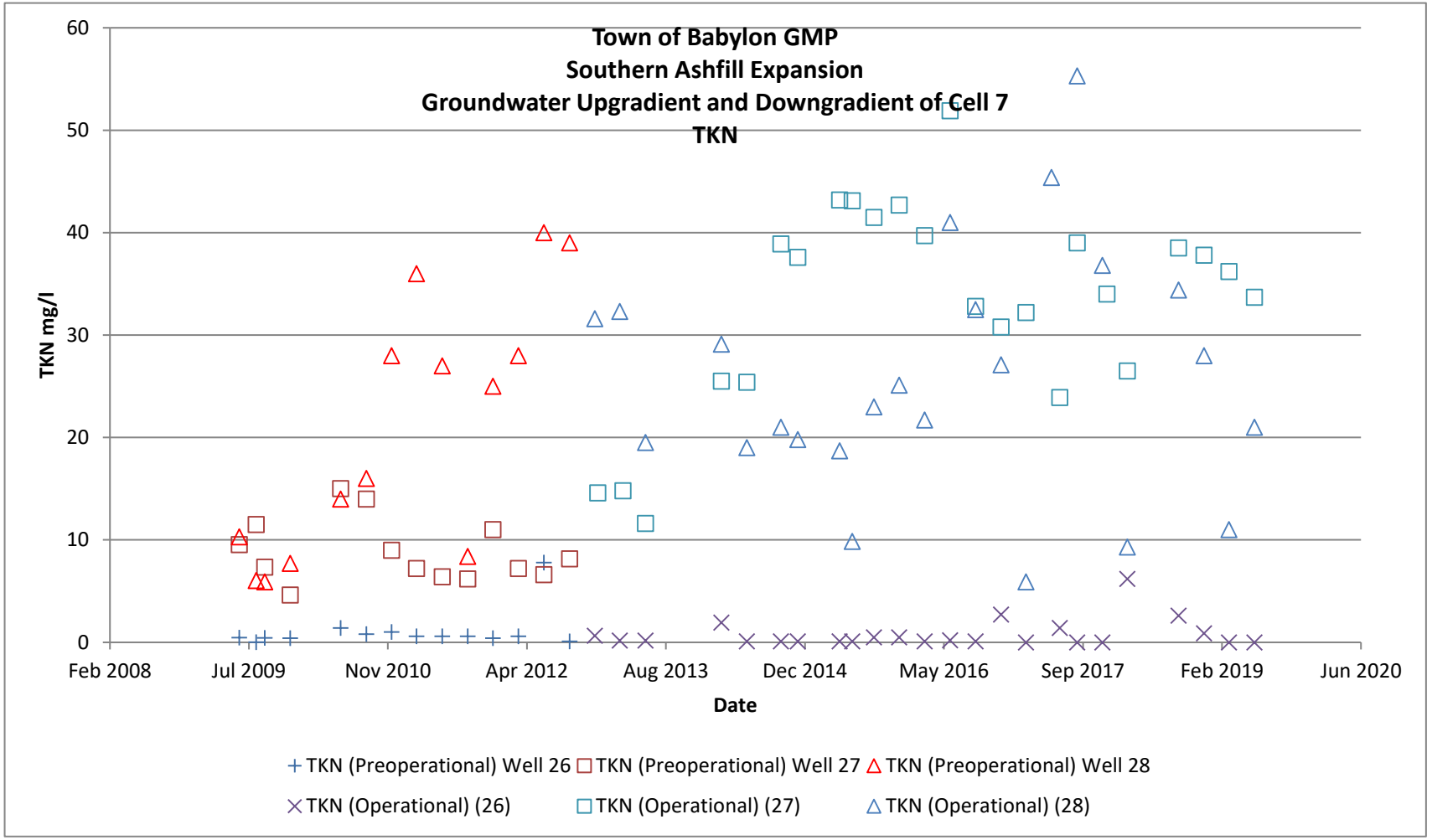
The following charts illustrate the historical value of leachate indicators observed up and downgradient of Cell 7.

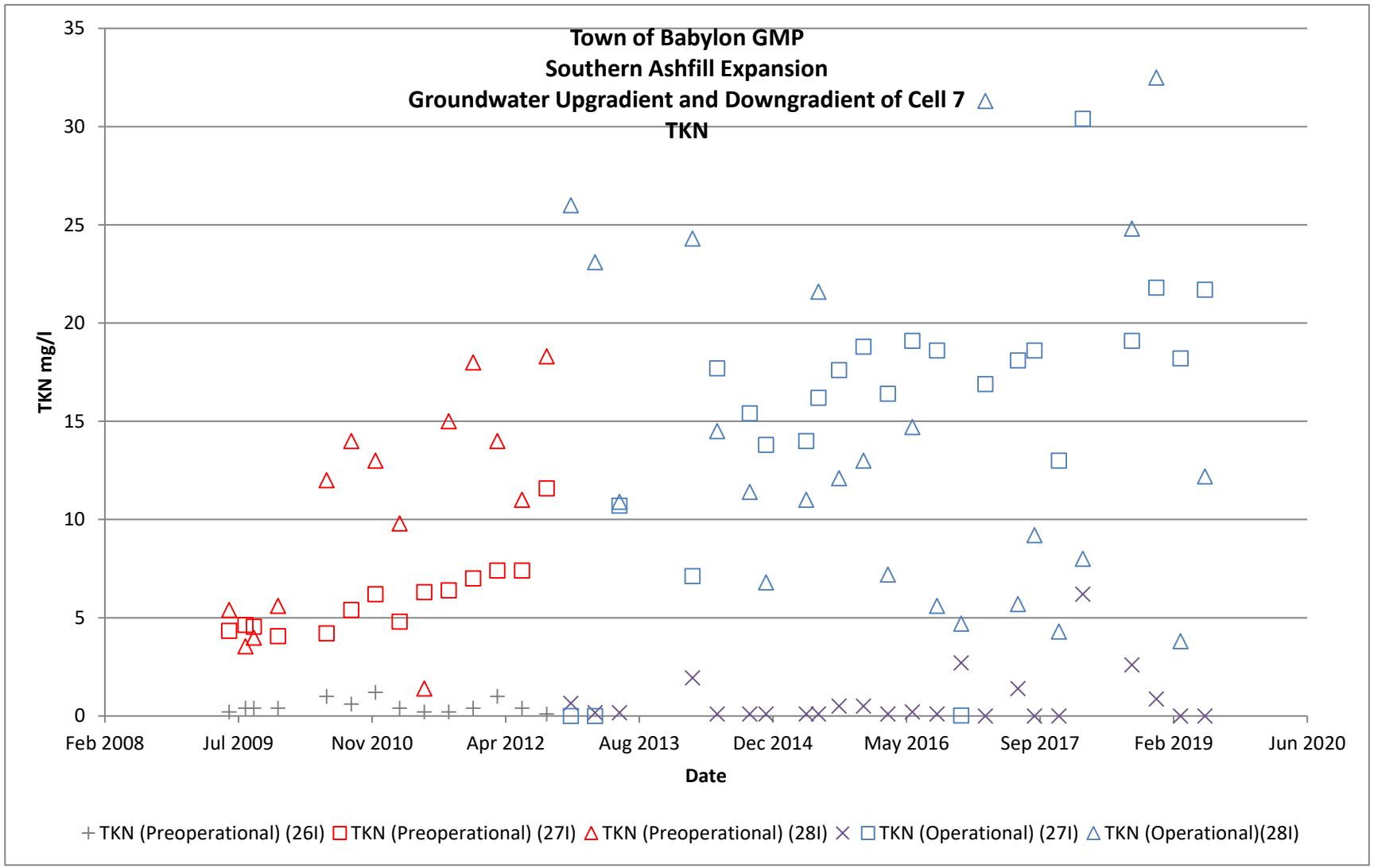

Town of Babylon GMP
Southern Ashfill Expansion
Groundwater Upgradient and Downgradient of Cell 7
Hardness
Hardness ppm
1400
1200
1000
800
600
400
200
0
Feb 2008
Jul 2009
Nov 2010
Apr 2012
Aug 2013
Dec 2014
May 2016
Sep 2017
Feb 2019
Jun 2020
Date
Hardness (Preoperational) Well 26
Hardness (Preoperational) well 27
Hardness (Preoperational) Well 28
Hardness (Operational) (26)
Hardness (Operational) (27)
Hardness (Operational) (28)

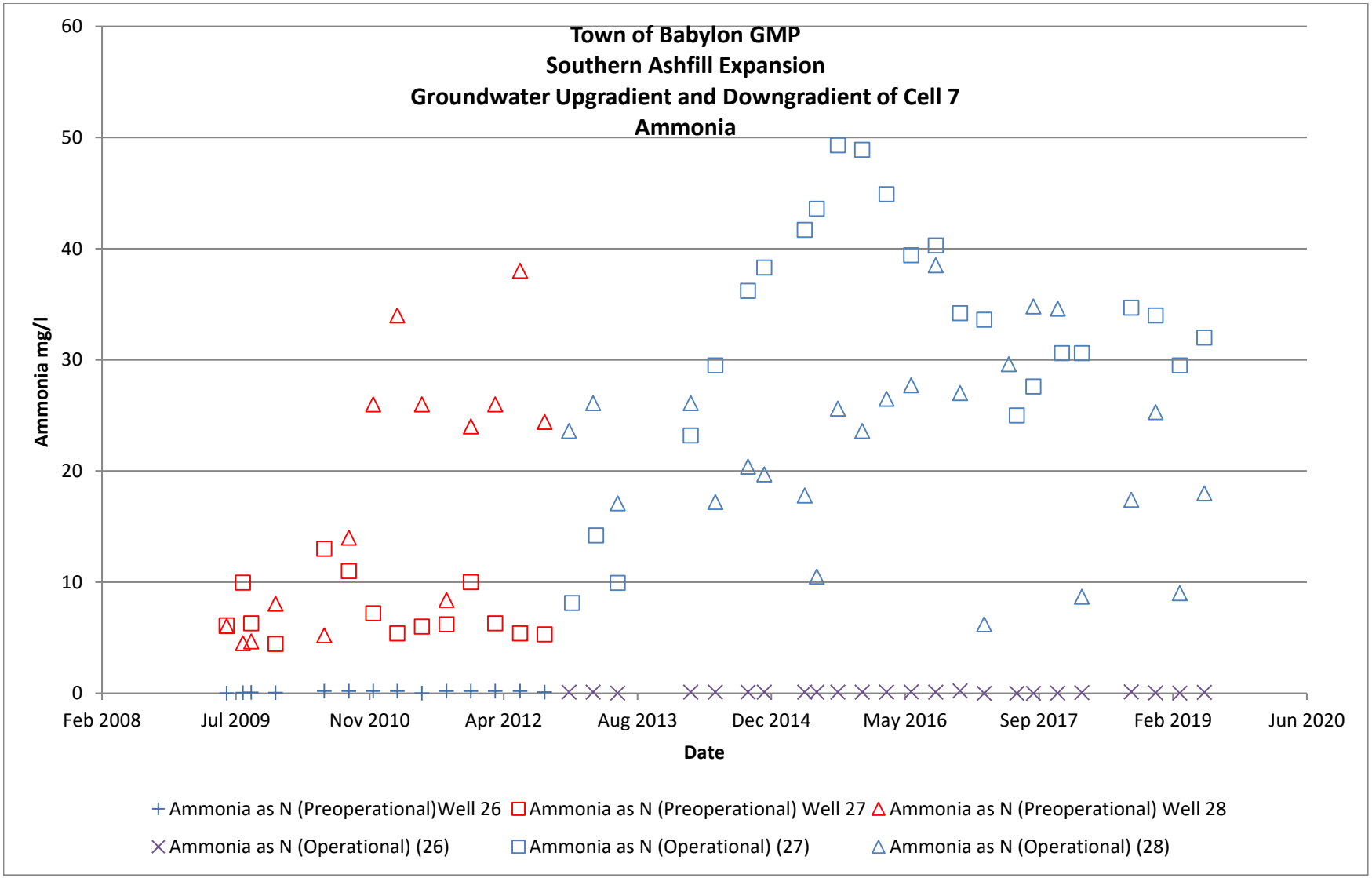

Town of Babylon GMP
Southern Ashfill Expansion
Groundwater Upgradient and Downgradient of Cell 7
Hardness
Hardness mg/l
600
500
400
300
200
100
0
Feb 2008
Jul 2009
Nov 2010
Apr 2012
Aug 2013
Dec 2014
May 2016
Sep 2017
Feb 2019
Jun 2020
Date
Hardness (Preoperational) (26I)
Hardness (Preoperational) (27I)
Hardness (Preoperational) (28I)
Hardness (Operational) (26I)
Hardness (Operational) (27I)
Hardness (Operational) (28I)

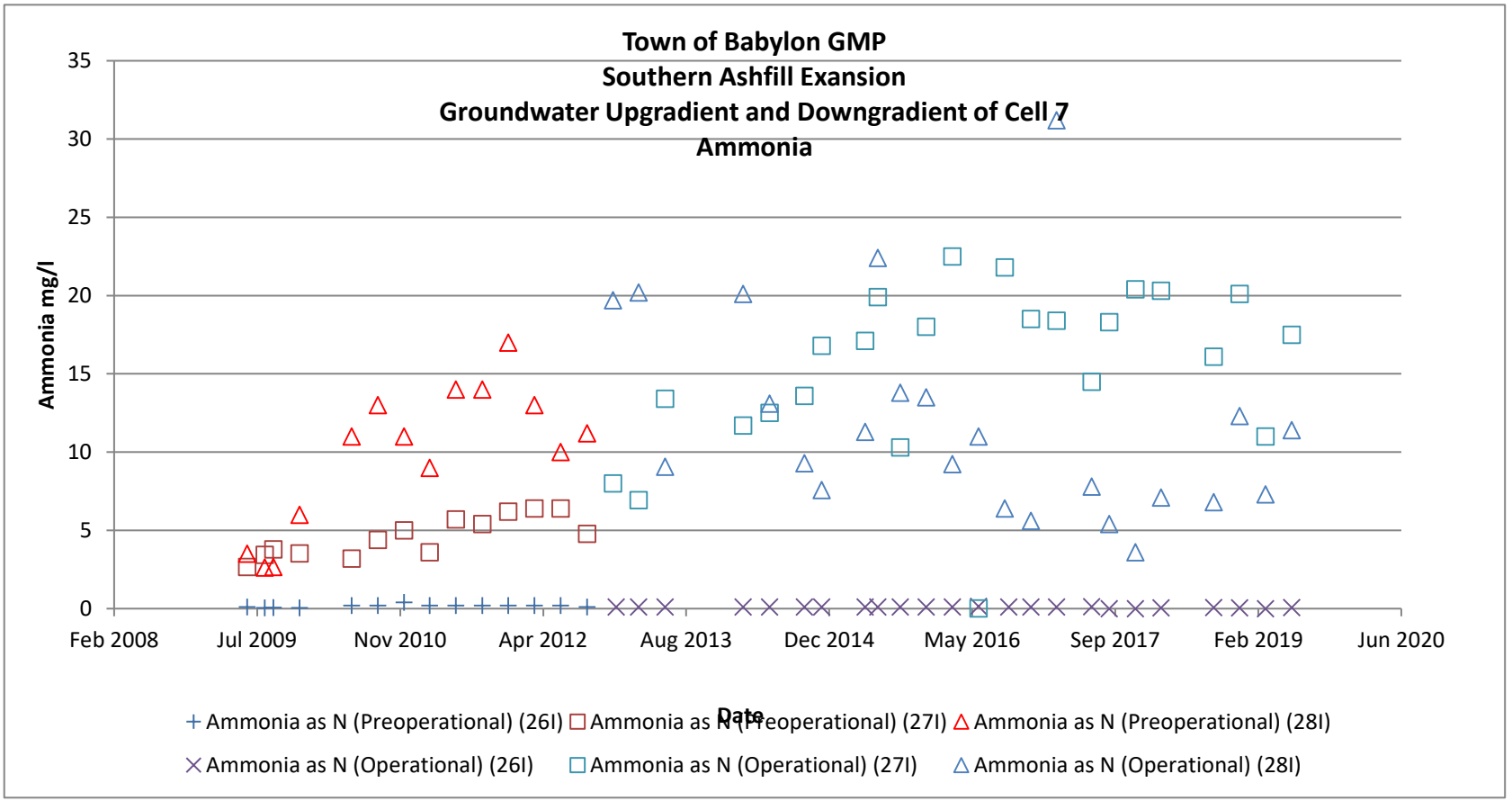

Town of Babylon GMP
Southern Ashfill Expansion
Groundwater Upgradient and Downgradient of Cell 7
Chloride
Chloride mg/l
1200
1000
800
600
400
200
0
Feb 2008
Jul 2009
Nov 2010
Apr 2012
Aug 2013
Dec 2014
May 2016
Sep 2017
Feb 2019
Jun 2020
Date
Chloride (Preoperational) Well 26 ppm
Chloride (Preoperational) Well 27 ppm
Chloride (Preoperational) Well 28 ppm
Chloride (Operational) (26)
Chloride (Operational) (27)
Chloride (Operational) (28)

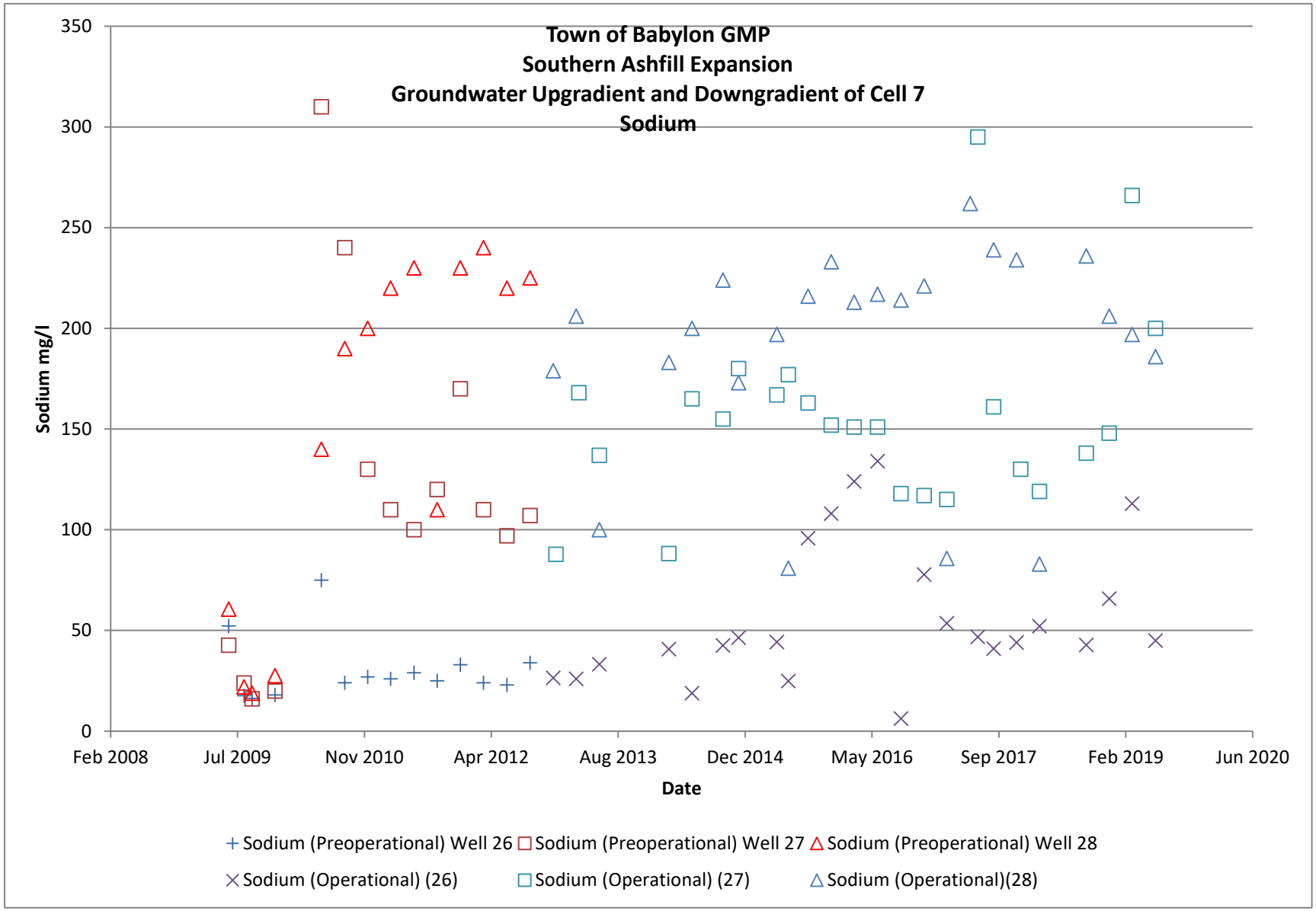

Town of Babylon GMP
Southern Ashfill Expansion
Groundwater Upgradient and Downgradient of Cell 7
Chloride
Chloride mg/l
1000
900
800
700
600
500
400
300
200
100
0
Feb 2008
Jul 2009
Nov 2010
Apr 2012
Aug 2013
Dec 2014
May 2016
Sep 2017
Feb 2019
Jun 2020
Date
Chloride (Preoperational) (26I)
Chloride (Preoperational) (27I)
Chloride (Preoperational) (28I)
Chloride (Operational) (26I)
Chloride (Operational) (27I)
Chloride (Operational) (28I)

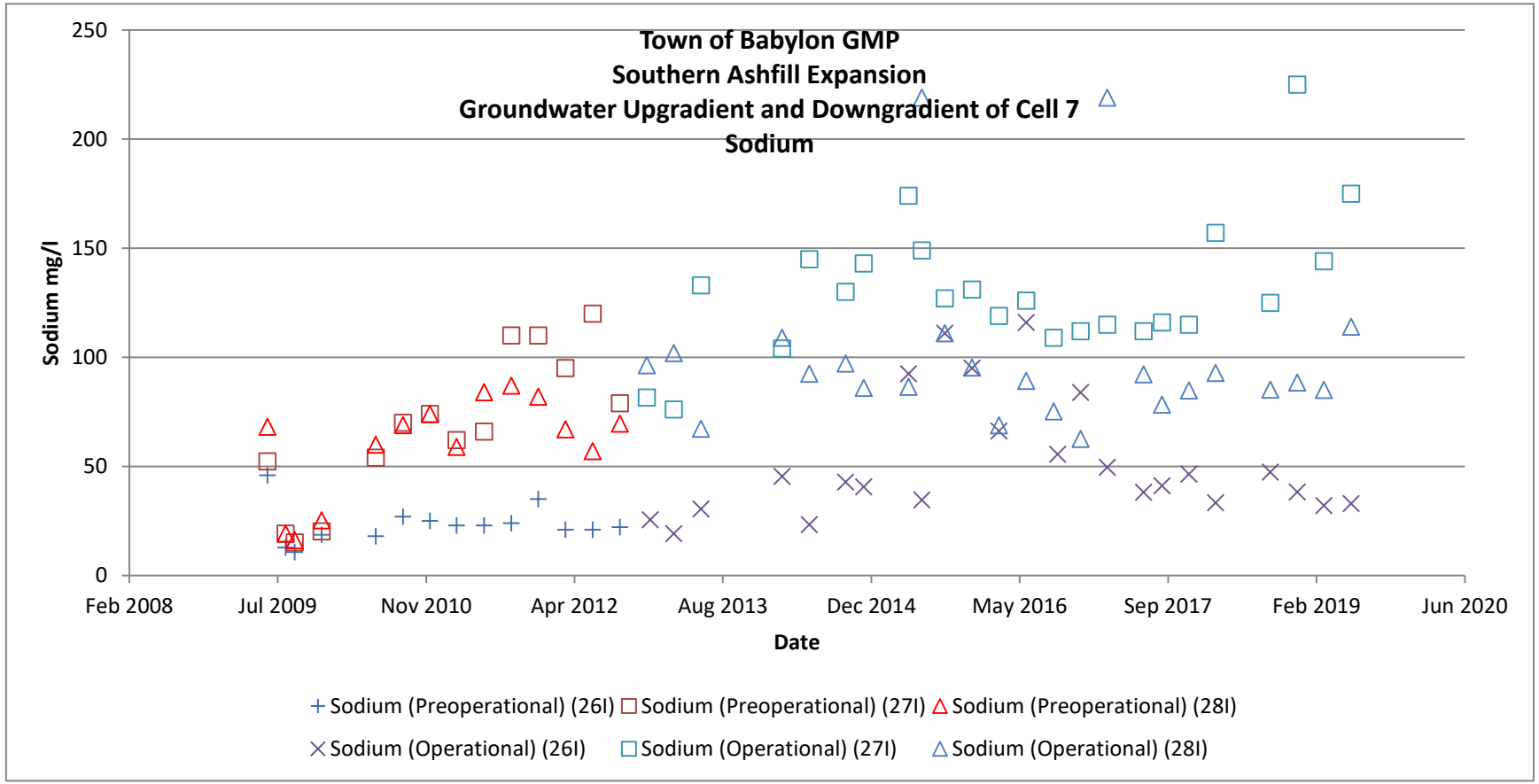

Town of Babylon GMP
Southern Ashfill Expansion
Groundwater Upgradient and Downgradient of Cell 7
TKN
TKN mg/l
60
50
40
30
20
10
0
Feb 2008
Jul 2009
Nov 2010
Apr 2012
Aug 2013
Dec 2014
May 2016
Sep 2017
Feb 2019
Jun 2020
Date
TKN (Preoperational) Well 26
TKN (Preoperational) Well 27
TKN (Preoperational) Well 28
TKN (Operational) (26)
TKN (Operational) (27)
TKN (Operational) (28)

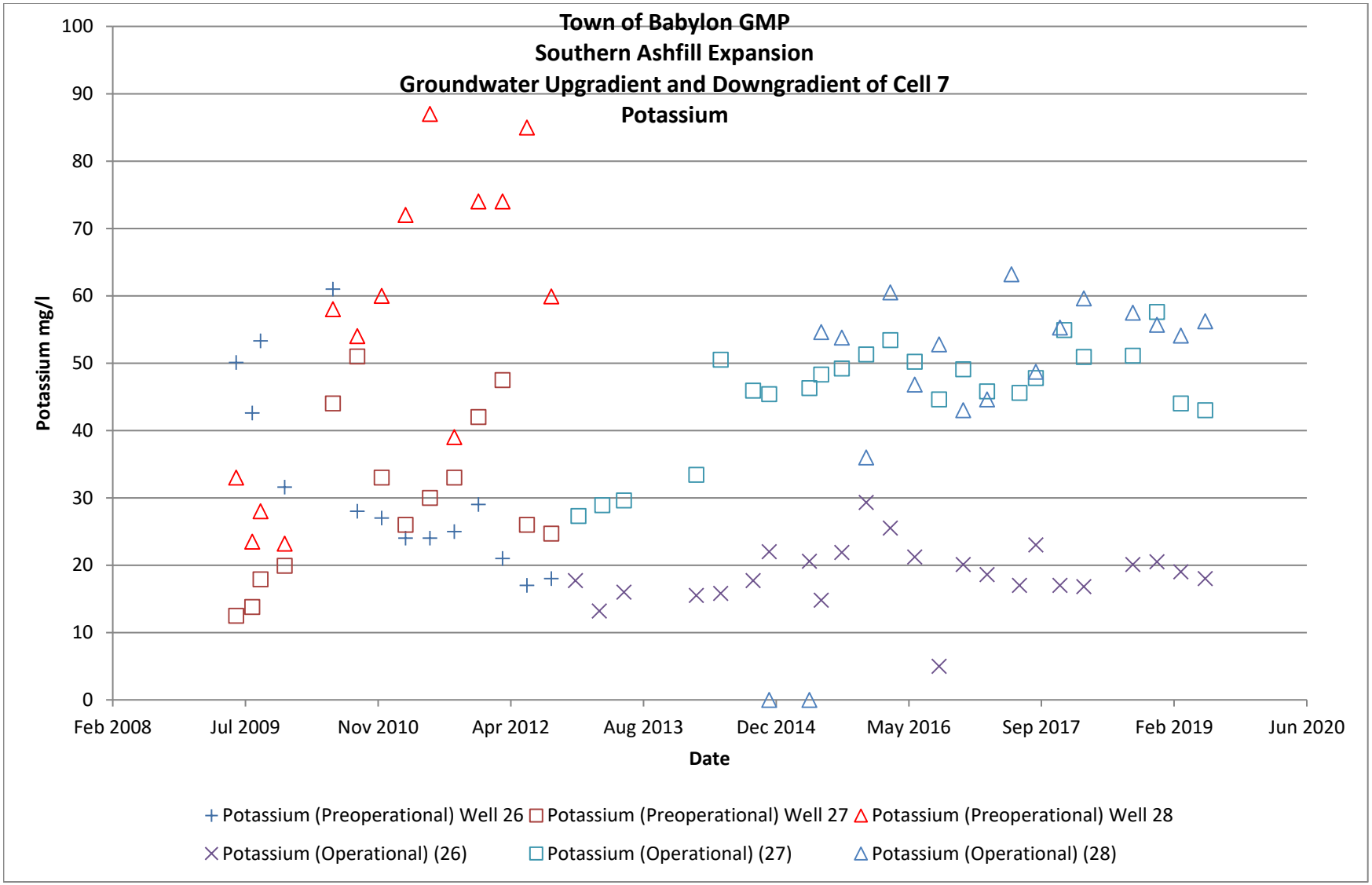

Town of Babylon GMP
Southern Ashfill Expansion
Groundwater Upgradient and Downgradient of Cell 7
TKN
TKN mg/l
35
30
25
20
15
10
5
0
Feb 2008
Jul 2009
Nov 2010
Apr 2012
Aug 2013
Dec 2014
May 2016
Sep 2017
Feb 2019
Jun 2020
Date
TKN (Preoperational) (26I)
TKN (Preoperational) (27I)
TKN (Preoperational) (28I)
TKN (Operational) (27I)
TKN (Operational)(28I)

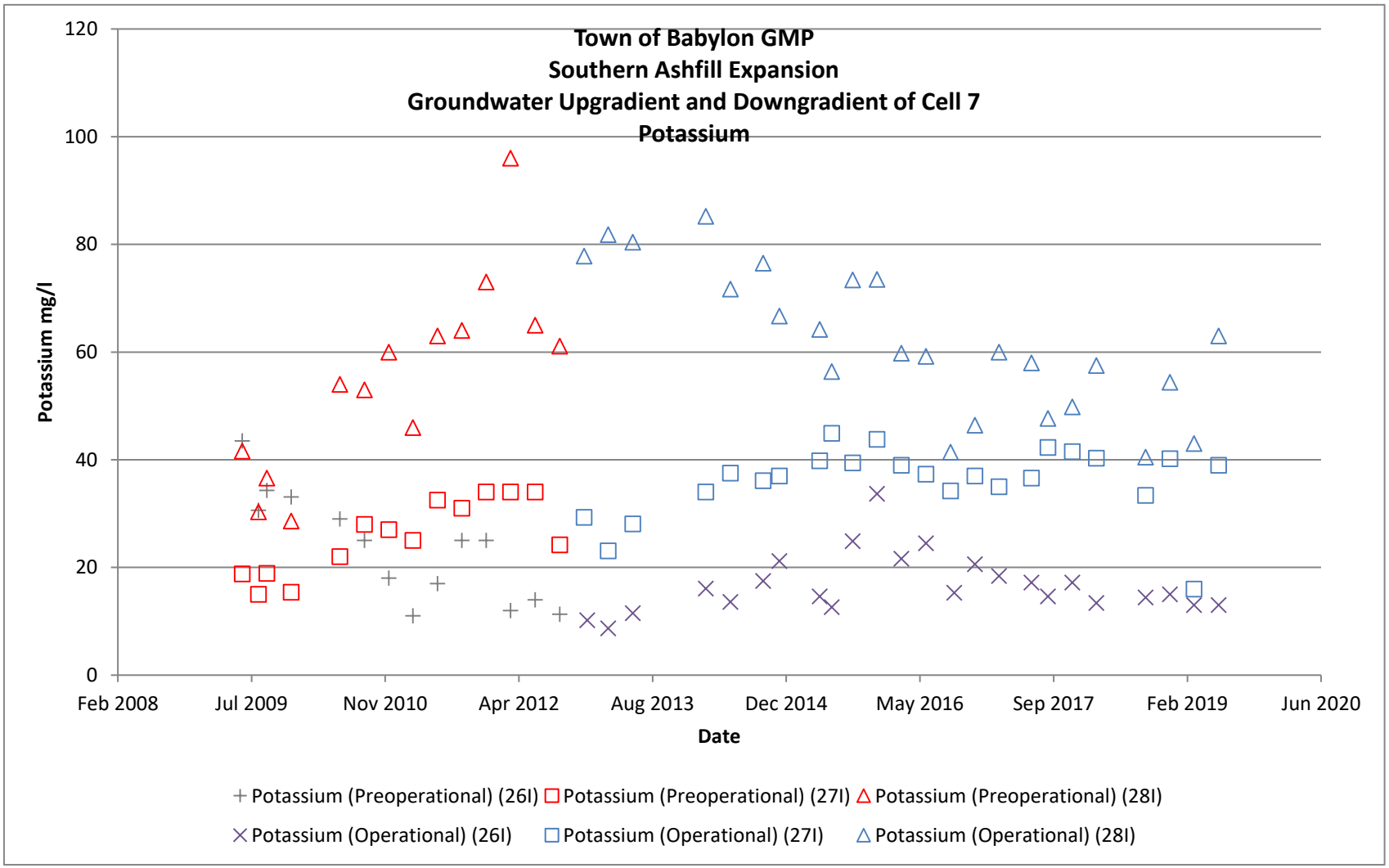

Town of Babylon GMP
Southern Ashfill Expansion
Groundwater Upgradient and Downgradient of Cell 7
Ammonia
Ammonia mg/l
60
50
40
30
20
10
0
Feb 2008
Jul 2009
Nov 2010
Apr 2012
Aug 2013
Dec 2014
May 2016
Sep 2017
Feb 2019
Jun 2020
Date
Ammonia as N (Preoperational)Well 26
Ammonia as N (Preoperational) Well 27
Ammonia as N (Preoperational) Well 28
Ammonia as N (Operational) (26)
Ammonia as N (Operational) (27)
Ammonia as N (Operational) (28)

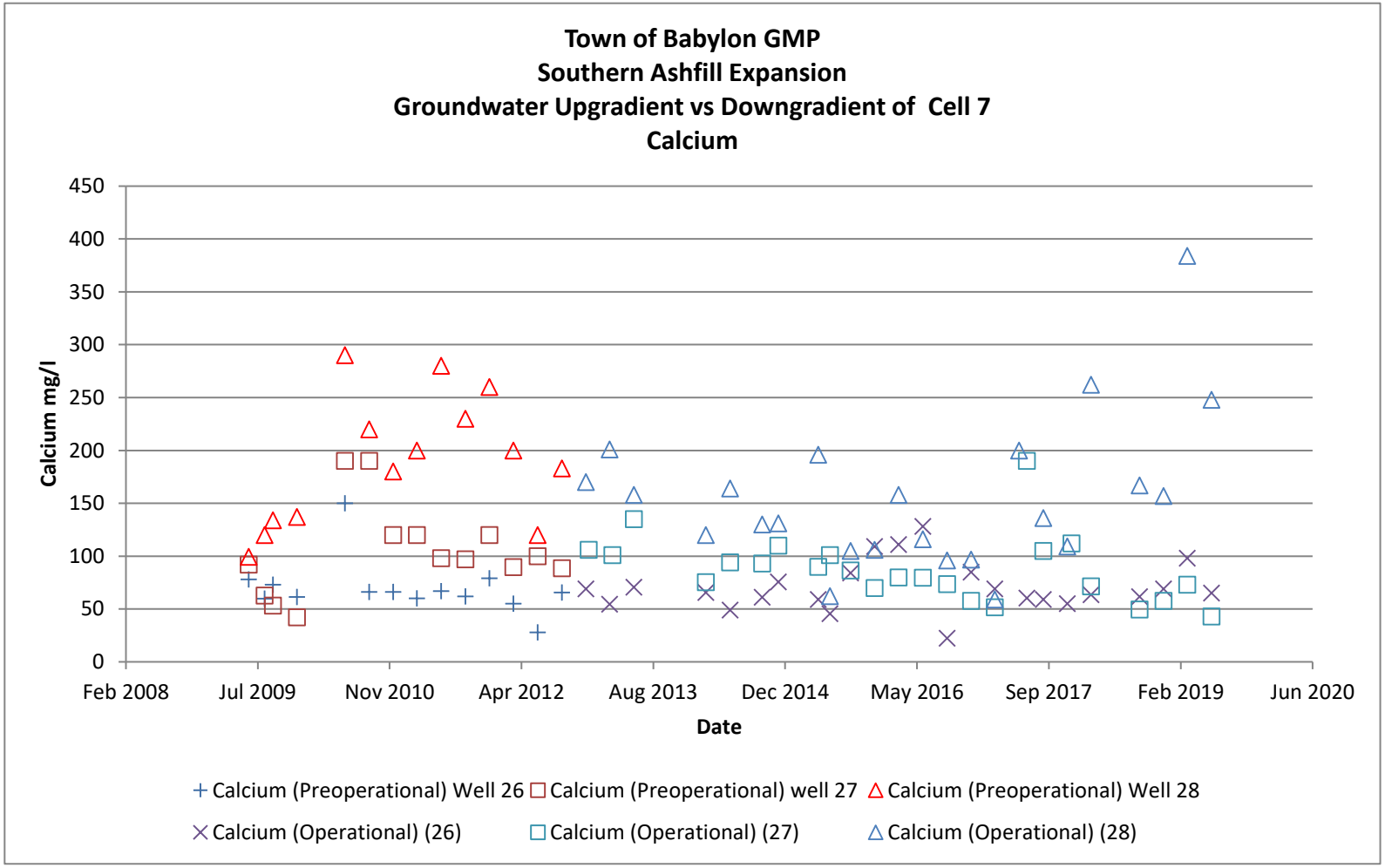

Town of Babylon GMP
Southern Ashfill Exansion
Groundwater Upgradient and Downgradient of Cell 7
Ammonia
Ammonia mg/l
35
30
25
20
15
10
5
0
Feb 2008
Jul 2009
Nov 2010
Apr 2012
Aug 2013
Dec 2014
May 2016
Sep 2017
Feb 2019
Jun 2020
Date
Ammonia as N (Preoperational) (26I)
Ammonia as N (Preoperational) (27I)
Ammonia as N (Preoperational) (28I)
Ammonia as N (Operational) (26I)
Ammonia as N (Operational) (27I)
Ammonia as N (Operational) (28I)

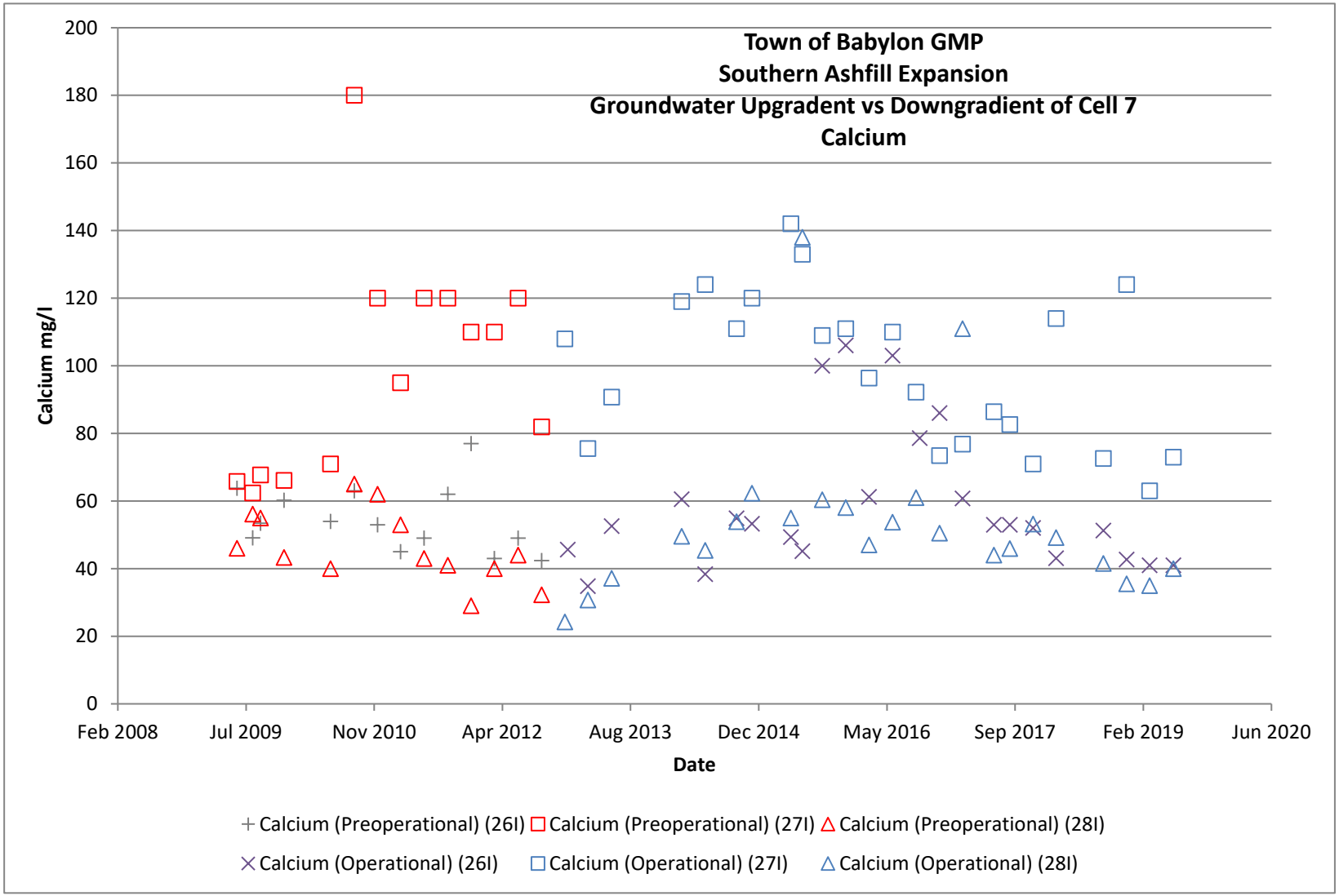

Town of Babylon GMP
Southern Ashfill Expansion
Groundwater Upgradient and Downgradient of Cell 7
Sodium
Sodium mg/l
350
300
250
200
150
100
50
0
Feb 2008
Jul 2009
Nov 2010
Apr 2012
Aug 2013
Dec 2014
May 2016
Sep 2017
Feb 2019
Jun 2020
Date
Sodium (Preoperational) Well 26
Sodium (Preoperational) Well 27
Sodium (Preoperational) Well 28
Sodium (Operational) (26)
Sodium (Operational) (27)
Sodium (Operational)(28)


Town of Babylon GMP
Southern Ashfill Expansion
Groundwater Upgradient and Downgradient of Cell 7
Sodium
Sodium mg/l
250
200
150
100
50
0
Feb 2008
Jul 2009
Nov 2010
Apr 2012
Aug 2013
Dec 2014
May 2016
Sep 2017
Feb 2019
Jun 2020
Date
Sodium (Preoperational) (26I)
Sodium (Preoperational) (27I)
Sodium (Preoperational) (28I)
Sodium (Operational) (26I)
Sodium (Operational) (27I)
Sodium (Operational) (28I)


Town of Babylon GMP
Southern Ashfill Expansion
Groundwater Upgradient and Downgradient of Cell 7
Potassium
Potassium mg/l
100
90
80
70
60
50
40
30
20
10
0
Feb 2008
Jul 2009
Nov 2010
Apr 2012
Aug 2013
Dec 2014
May 2016
Sep 2017
Feb 2019
Jun 2020
Date
Potassium (Preoperational) Well 26
Potassium (Preoperational) Well 27
Potassium (Preoperational) Well 28
Potassium (Operational) (26)
Potassium (Operational) (27)
Potassium (Operational) (28)


Town of Babylon GMP
Southern Ashfill Expansion
Groundwater Upgradient and Downgradient of Cell 7
Potassium
Potassium mg/l
120
100
80
60
40
20
0
Feb 2008
Jul 2009
Nov 2010
Apr 2012
Aug 2013
Dec 2014
May 2016
Sep 2017
Feb 2019
Jun 2020
Date
Potassium (Preoperational) (26I)
Potassium (Preoperational) (27I)
Potassium (Preoperational) (28I)
Potassium (Operational) (26I)
Potassium (Operational) (27I)
Potassium (Operational) (28I)


Town of Babylon GMP
Southern Ashfill Expansion
Groundwater Upgradient vs Downgradient of Cell 7
Calcium
Calcium mg/l
450
400
350
300
250
200
150
100
50
0
Feb 2008
Jul 2009
Nov 2010
Apr 2012
Aug 2013
Dec 2014
May 2016
Sep 2017
Feb 2019
Jun 2020
Date
Calcium (Preoperational) Well 26
Calcium (Preoperational) well 27
Calcium (Preoperational) Well 28
Calcium (Operational) (26)
Calcium (Operational) (27)
Calcium (Operational) (28)


Town of Babylon GMP
Southern Ashfill Expansion
Groundwater Upgradent vs Downgradient of Cell 7
Calcium
Calcium mg/l
200
180
160
140
120
100
80
60
40
20
0
Feb 2008
Jul 2009
Nov 2010
Apr 2012
Aug 2013
Dec 2014
May 2016
Sep 2017
Feb 2019
Jun 2020
Date
Calcium (Preoperational) (26I)
Calcium (Preoperational) (27I)
Calcium (Preoperational) (28I)
Calcium (Operational) (26I)
Calcium (Operational) (27I)
Calcium (Operational) (28I)

Review of the overall dataset at this facility reveals variability in the STV's over a very small geographic area. It was also noted that the STV's at the upgradient monitoring points are generally less than at downgradient locations. Discrepancies associated with baseline data became more pronounced after construction of the ash facility (but before deposition of ash). The presence of leachate indicators prior to operation of the Cell 7 facility can be observed on the graphs provided in this report that compare upgradient and downgradient data. These graphs illustrate a notable spike in most indicators in June 2010 (approximately 1 year after construction of the cell 7 facility). Ash was not introduced to Cell 7 until November 2012.

The above observations and review of the graphs provided in these semiannual reports indicate the presence of a source of leachate indicators impacting these monitoring points prior to the introduction of ash at Cell 7. When one catalogs existing and historical land uses upgradient of the Cell 7 facility, numerous potential sources of indicators are present. These include but are not limited to a former landfill, scrap metal recycling yard, the former location of the "car hill" (Town of Babylon recycling operation), a prior temporary salt storage location for roadway de-icing, waste to energy plant, the old and new Northern U ashfills and miscellaneous industrial uses. Additionally, organic material/sediment at the bottom of Lake Wyandanch that was disturbed during construction of the Cell 7 ashfill remaining below the liner system can be associated with TKN/NH3 observances downgradient of the facility[4]. Based upon the above analysis and observations, TOBDEC stated in the December 2014 GMP report that these pre existing sources are likely to result in intermittent "hits" of leachate indicators at the monitoring points established for the Cell 7 GMP, and that these sources should continue to impact the results at monitoring points up and downgradient of Cell 7 throughout the life of the facility.

It has also been observed that leachate from the Babylon ashfills is comprised of high values of all indicators selected in the draft GMP. Therefore, any breach of the liner system should result in the detection of all leachate indicators downgradient of the facility. TOBDEC suggested that future breaches of the STV will only be considered problematic if most or all indicators are observed above their STV. The draft GMP prepared for Cell 7 did not account for these unforeseen interferences with the monitoring program and the addendum to the GMP reexamined the GMP program and data accrued by the GMP.

The addendum to the GMP (P.W. Grosser, 2015) concurred with the above analysis and expectations for future groundwater sampling at the Cell 7 facility and provided updated protocols for the GMP based upon the data accrued and conditions observed to date. In summary the 2015 addendum to the GMP found/recommended:

- The operational groundwater monitoring protocol presented in the original GMP remains a reliable means to detect a release of leachate at Cell 7.
- Groundwater downgradient of the Cell 7 facility has been highly variable due to Lake Wyandanch's pre-existing use for stormwater impoundment and other

[4] Conversation with Mr. John Rhyner, P.W. Grosser Consulting. November 14, 2014.

historical land uses upgradient of the Cell 7 facility. These factors will continue to influence the groundwater quality of the area.

- The pre-existing influences do not preclude the ability to identify a leachate release.
- STV's calculated for an individual well from its own data will vary with the variability present in groundwater quality between the wells.
- Continued breaching of individual STV's should be expected and only a downgradient well sample where all leachate indicators exceed their STV might indicate a leachate release.
- STV's should be reviewed in conjunction with Piper plots as criteria to trigger contingency actions.
- A single STV equal to the highest STV calculated at the downgradient wells be established for each indicator.
- Utilization of a Piper diagram demonstrates unique geochemical fingerprints for leachate, groundwater and stormwater.
- The final list of leachate indicators are chloride, hardness, calcium, potassium and sodium. TKN and ammonia are not considered reliable indicators since their concentrations are not significantly different from leachate and the presence of a prior source (Lake Wyandanch) which may be contributing to ongoing residual influence on operational data. Either TKN or ammonia should continue to be monitored for continuity. Manganese should be eliminated as an indicator due to its concentration in groundwater and leachate being similar and the presence of anomalous spikes.
- Groundwater sampling for Cell 7 may proceed if precipitation of no greater than 0.25 inch has been recorded within the preceding week.

Upon review of the March and June 2019 GMP data for the Cell 7 facility:

- The average leakage rate for January-June 2019 at Cell 7 is 3.83 gallons/acre/day.
- As previously noted the updated leachate indicator STV's for the downgradient monitoring points as provided in the GMP addendum are: hardness 1158 mg/l, chloride 1277 mg/l, sodium 414 mg/l, potassium 122 mg/l and calcium 375 mg/l. TKN and ammonia are no long classified as leachate indicators but will continue to be observed. Their updated STV's are TKN 58 mg/l and ammonia 53 mg/l.
- Hardness and Calcium exceeded their STV for March 2019 at GM-28 and were below their STV for June 2019. This was the first exceedance of an STV since March 2015 when hardness exceeded its STV at GM-28. These results did not trigger any of the action/notification thresholds outlined in the GMP Addendum referenced above and illustrate the occurrence of a "random spike" as discussed in previous reports and memorialized in the GMP Addendum. No other STV was breached during this monitoring period.
- Numerous indicators have exceeded their preoperational sampling range (mean plus 3 (sd)) at the upgradient wells (Wells 26 and 26I).
    - At GM-26:
        - Chloride and sodium exceeded their mean plus 3(sd) for parts of 2015, 2016. Chloride exceeded its mean plus 3(SD) for December 2018 and March 2019, sodium for March 2019.

        - Elevated sulfate at GM26 during December 2018 shifted the Piper plot at the bottom right triangle of the diagram. The fingerprint of the data plot at the combined portion of the diagram was not impacted. The Piper plot remained within its historical configuration for March and June 2019.
    - At GM-26I :
        - Hardness and calcium exceeded their mean plus 3(sd) values for parts of 2015 and 2016. Chloride exceeded its mean plus 3(sd) values for parts of 2015-2017.
        - Sodium exceeded its mean plus 3(sd) value for March 2015 and September 2015 through March 2017.
        - The Piper plot remains in its historical configuration for March and June 2019.

At the downgradient well clusters:

- At monitoring point GM-27:
    - No leachate indicator has exceeded their STV at GM-27 during the GMP.
    - TKN and ammonia are no longer included as leachate indicators, however each continue to be monitored for continuity. TKN and ammonia continue to exceed their mean plus 3(SD) value.
    - Hardness exceeded its mean plus 3(SD) for December 2014 and has not exceeded its mean plus 3(SD) value since.
    - Piper plot for 27 continues to remain within its historical configuration.
- At monitoring point 27I:
    - No leachate indicator has exceeded their STV at 27I during the GMP.
    - Chloride exceeded the mean plus 3(SD) value for December 2018 and March and June 2015.
    - Sodium exceeded its mean plus 3(sd) for June 2019, December 2018 and March 2015.
    - TKN and ammonia have exceeded their mean plus 3(SD) value since June 2013 (TKN did not exceed its m-3SD for March 2019) It is noted that these parameters are no longer classified as leachate indicators for the GMP and are monitored solely for continuity.
    - Piper plot for 27I continues to remain within its historical configuration.
- At monitoring point 28:
    - Hardness and calcium exceeded their STV for March 2019 and for June 2019 were below their STV. Hardness previously exceeded its STV at this monitoring point in June 2015. This is the first time calcium exceeded its MCL for the GMP. No action or notification thresholds were triggered by the March 2019 result.
    - No other indicators have been observed exceeding their STV at this monitoring location.
    - The Piper diagram remains within the general area delineated for well 28. Elevated sulfate in March 2018 produced the only overt breach into the stormwater fingerprint included on the diagram.
- At monitoring point 28I:
    - No leachate indicator has exceeded their STV at 28I during the GMP.

    - Chloride was observed above its mean plus 3(SD) value for March and June 2019. Chloride has been observed intermittently above its mean plus 3(SD) value since March 2014.
    - Sodium and calcium were observed above their mean plus 3(SD) values for June 2015 and March 2017.
    - Hardness was observed above its mean plus 3(SD) during September 2014, December 2014, June 2015 and March 2017 sampling.
    - TKN exceeded its mean plus 3(SD) during April 2017 and December 2018. TKN is no longer classified as an indicator and is monitored solely for continuity.
    - The Piper diagram for 28I remains within its historical configuration.
- Review of the tables and graphs comparing upgradient and downgradient monitoring points:
    - As noted in previous reports an increase in leachate indicators is noted in preoperational data circa 2008/2009, coinciding with the filling in of Lake Wyandanch during construction of the Cell 7 ash facility.
    - Leachate indicators from up gradient monitoring points (well cluster 26/26I) include a number of values exceeding pre-operational data. Leachate indicators from the downgradient monitoring points generally remain within preoperational thresholds and thereby do not exhibit evidence indicating a failure to the liner system.

The addendum to the Grosser GMP recommends the use of trilinear plot(s) in conjunction with comparison of leachate indicators to the established STV's to assess the possibility of a leachate release from the Cell 7 facility. The premise behind this requirement is that ashfill leachate and groundwater each possess separate and unique geochemical fingerprints. A Piper diagram could then assist in determining if leachate from Cell 7 has impacted groundwater downgradient of the facility. Figure 1 is a Piper Diagram presented in the Addendum to the GMP (P.W. Grosser, 2015) that summarizes the geochemical fingerprints of groundwater at each downgradient well cluster, leachate and stormwater. Figures 2-5 include the data used by P.W Grosser consulting to create this diagram and data accrued since preparation of the diagram. AS provided in the above bullets, the geochemical fingerprint of the two downgradient monitoring points remains intact.

To preclude the possibility of stormwater substantially impacting the concentration of leachate indicators in groundwater at their monitoring points the Grosser monitoring plan includes a requirement that the Cell 7 groundwater wells not be sampled if precipitation exceeds .25 inch for 1 week prior to sampling.

Sampling at Cell 7 for March and June 2019 also included 1,4 dioxane and PFAS/PFOA's. Their results are attached to this section and appendix 1 (1,4 dioxane).

In summary, groundwater data accrued during operational phase sampling indicate the presence of random non Cell 7 sources of leachate indicators observed at values generally less than the established STV. Piper diagrams were updated for the monitoring points for

the Cell 7 facility after the June 2019 sampling. Piper diagrams for the downgradient well clusters (GM 27/27I and GM-28/28I) did not indicate substantive changes to the geochemical fingerprint of groundwater downgradient of the facility. The Piper plot at GM 28 for March 2018 (figure 4, solid gold circle) displayed a shift that appeared to be the result of elevated values of sulfate and calcium. The Piper plots after March 2018 at GM 28 returned to their traditional fingerprint or pattern on the Piper diagram and it was noted that values for sulfate and calcium returned to their normal or historical range. Based upon the analysis of data accrued at Cell 7 discussed above it can reasonably be concluded that the liner system at Cell 7 is functioning as designed.

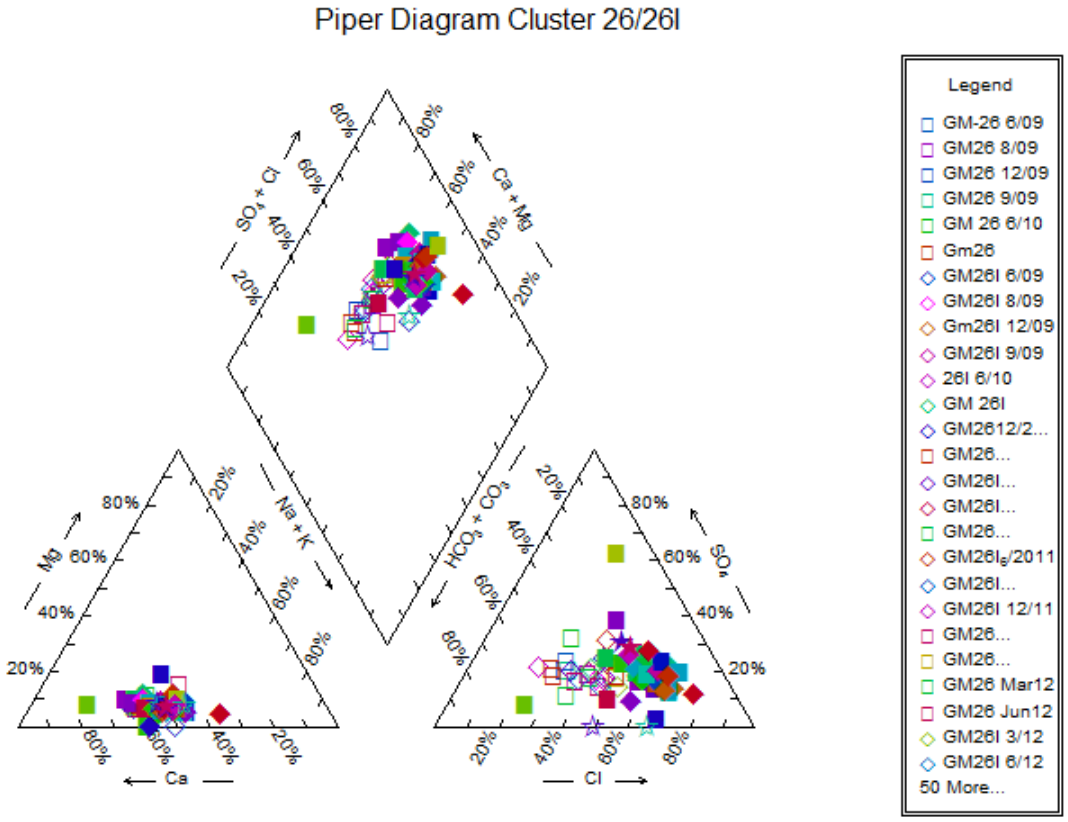


Figure 2. Piper Diagram. Hollow square (GM 26 preoperational), Hollow diamond (GM26I preoperational). Solid square (operational GM26). Solid diamond (GM26I operational). Solid star March and June 2019 GM26I. Hollow star March and June 2019 GM-26.

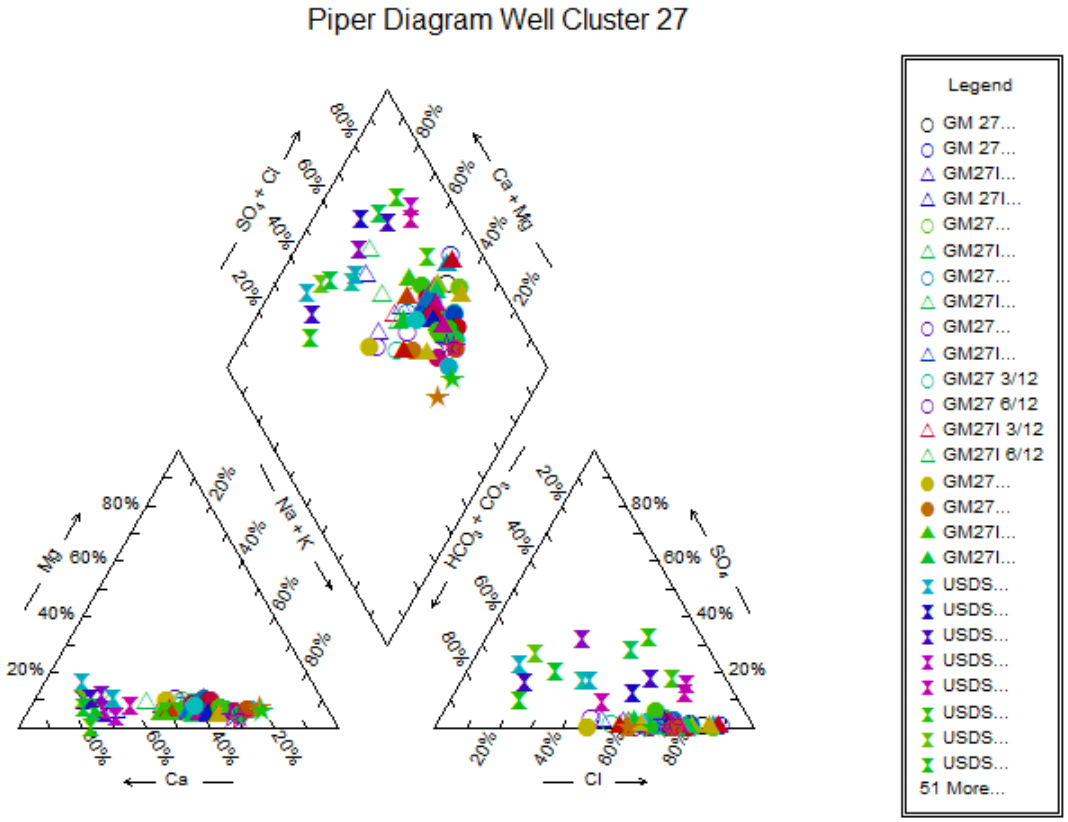


Figure 3. Piper diagram displaying pre operational and operational phase groundwater data from well cluster 27. Hollow circle (GM 27 preoperational), Hollow delta (GM27I preoperational). Solid circle (operational GM27). Solid delta (GM27I operational). Solid star March and June 2019 GM27. Hollow star March and June 2019 GM-27I. Solid hourglass USDS/stormwater data.

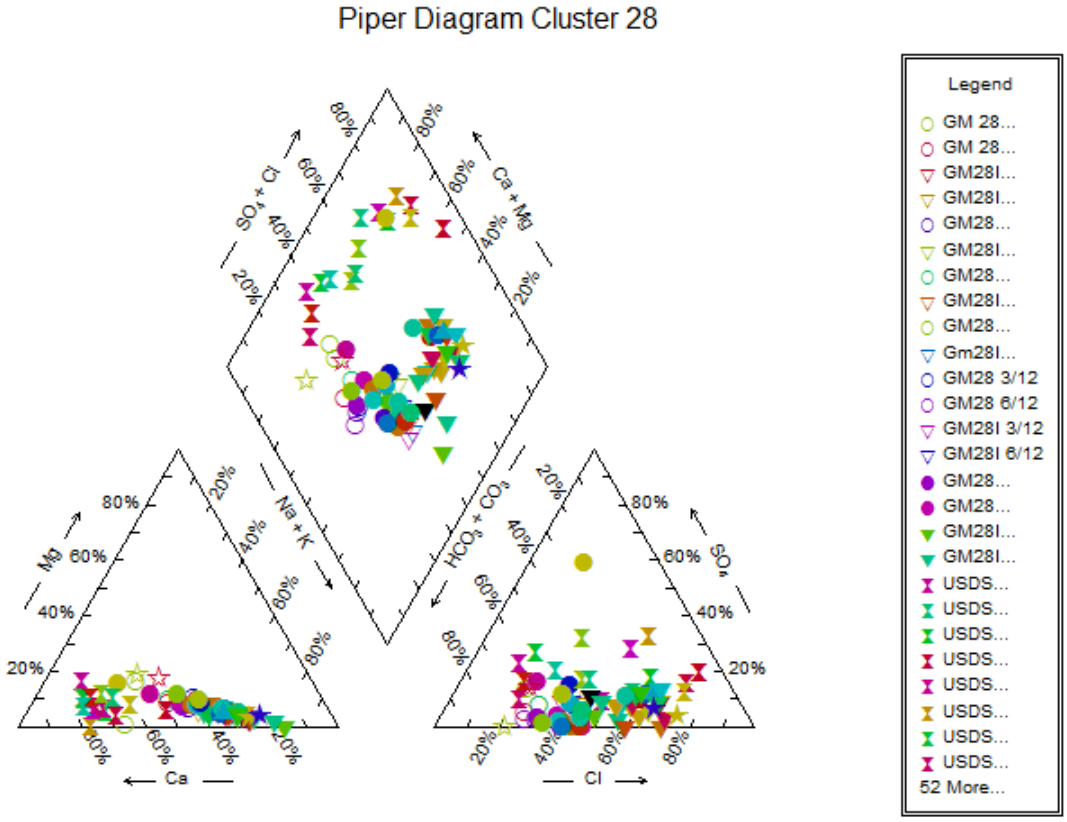


Figure 4. Piper diagram displaying pre operational and operational phase groundwater data from well cluster 28. Hollow circle (GM 28 preoperational), Hollow del (GM28I preoperational). Solid circle (operational GM28). Solid del (GM28I operational). Solid star March and June 2019 GM28I. Hollow star March and June 2019 GM-28. Solid hourglass USDS/stormwater data.

.

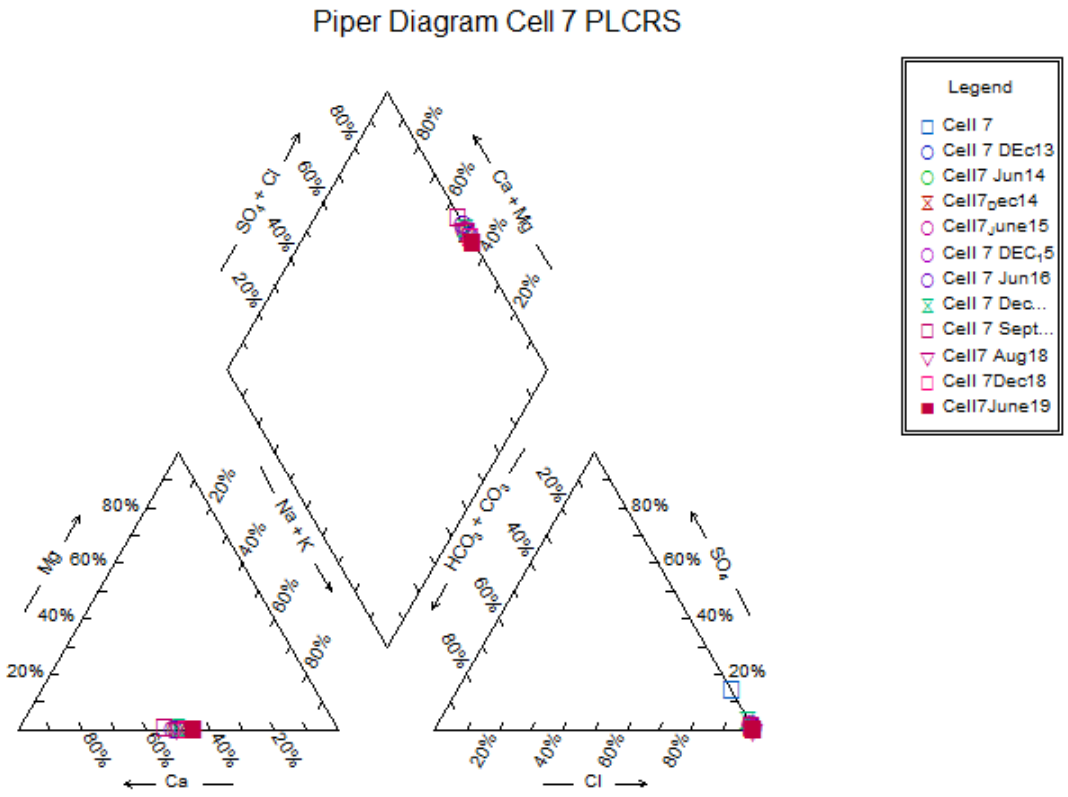


Figure 5. Piper diagram of leachate from the Cell 7 ash facility.

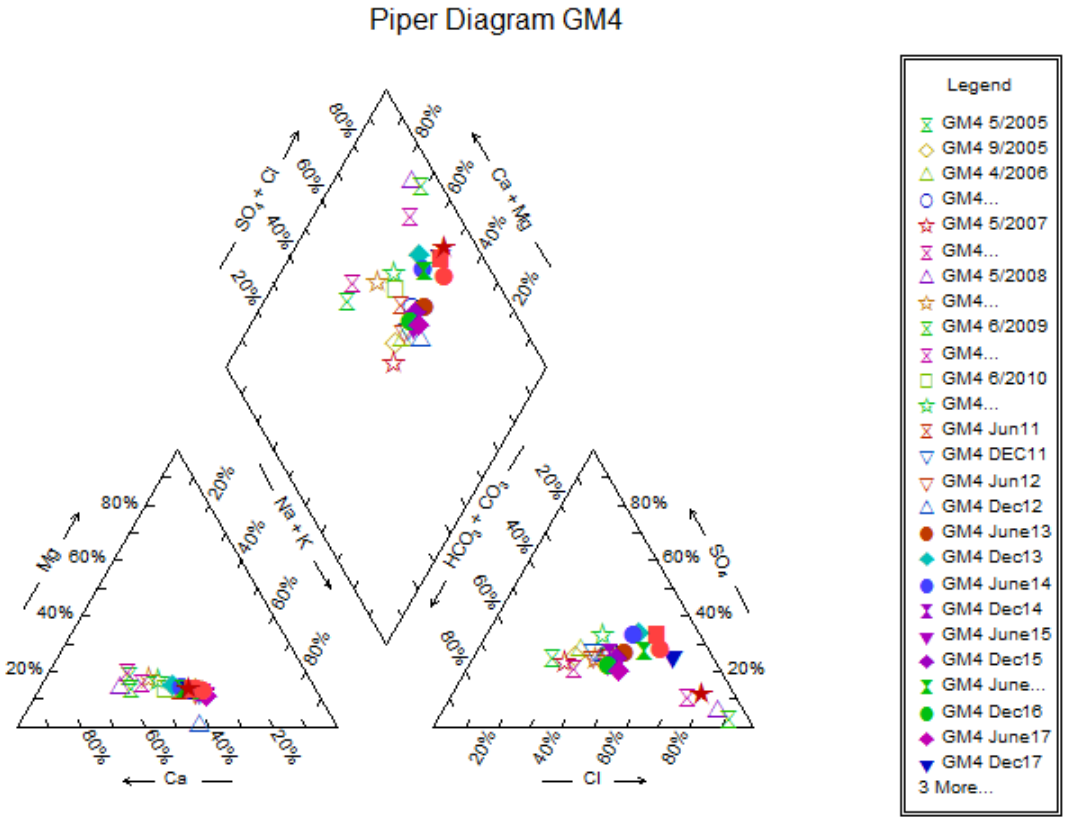


Figure 6. Piper Diagram of GM-4. Solid red star – June 2019

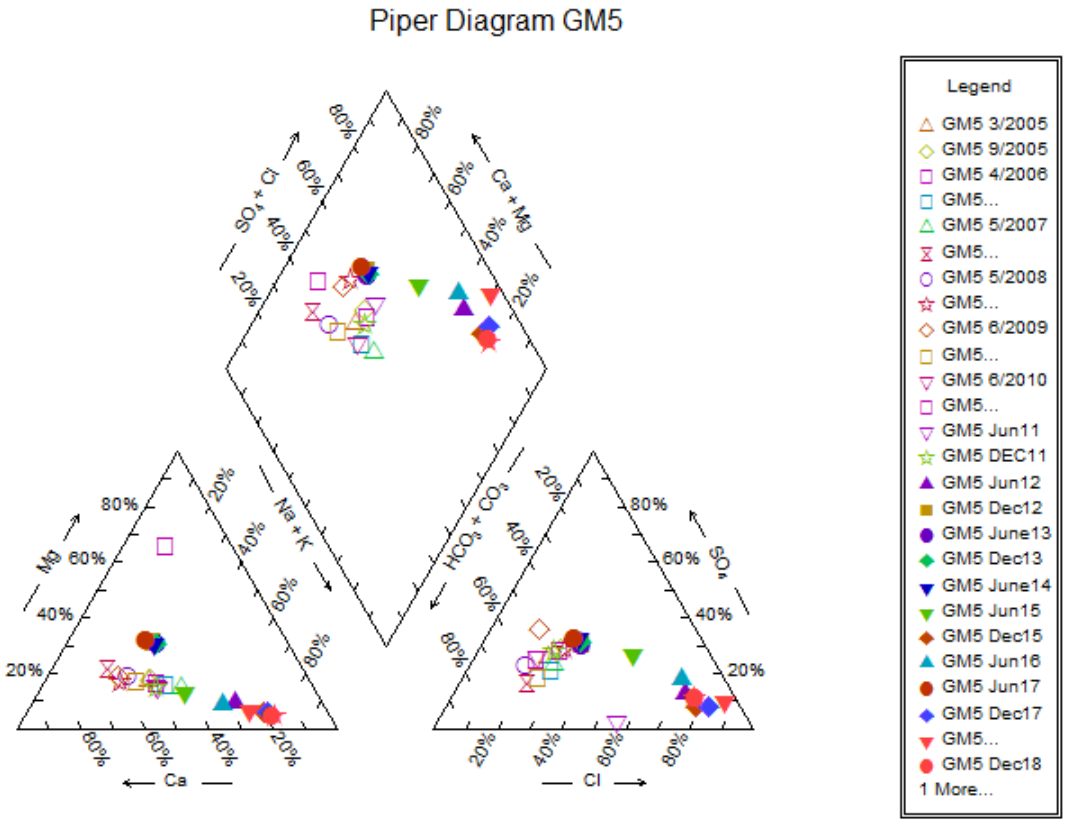


Figure 7. Piper Diagram GM-5. Red Star-June 2019.

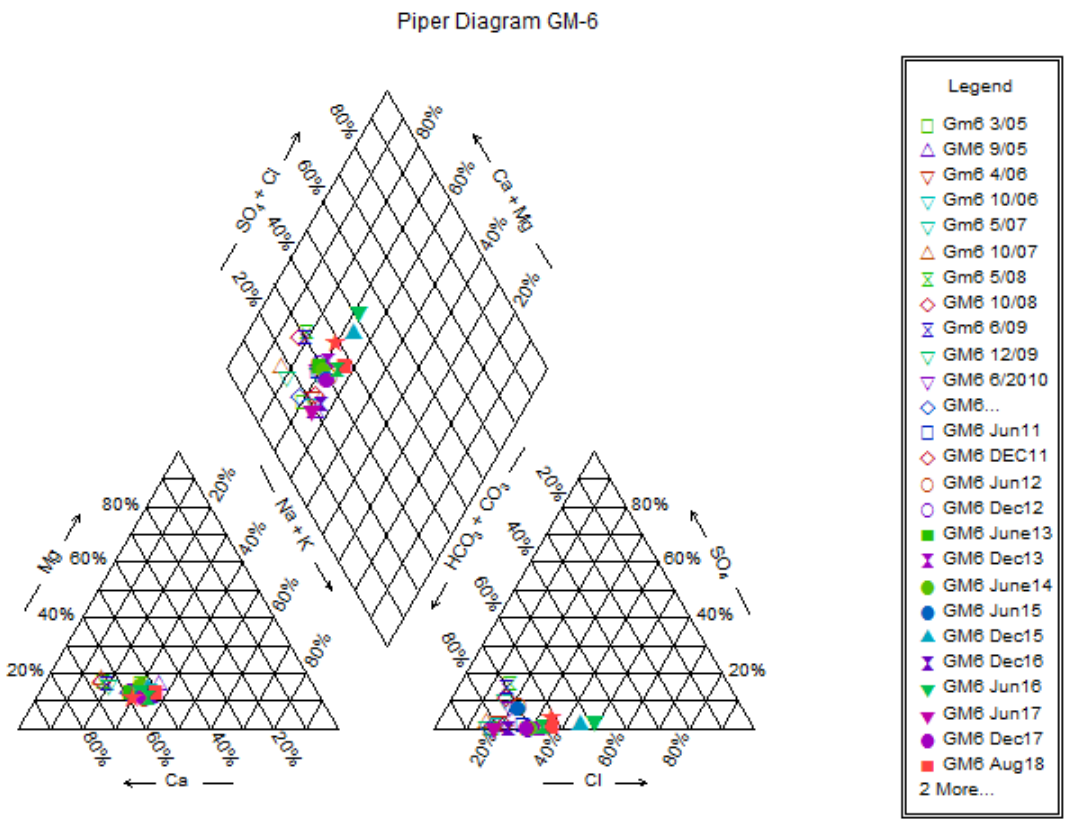


Figure 8. Piper Diagram GM-6. Red star – June 2019.

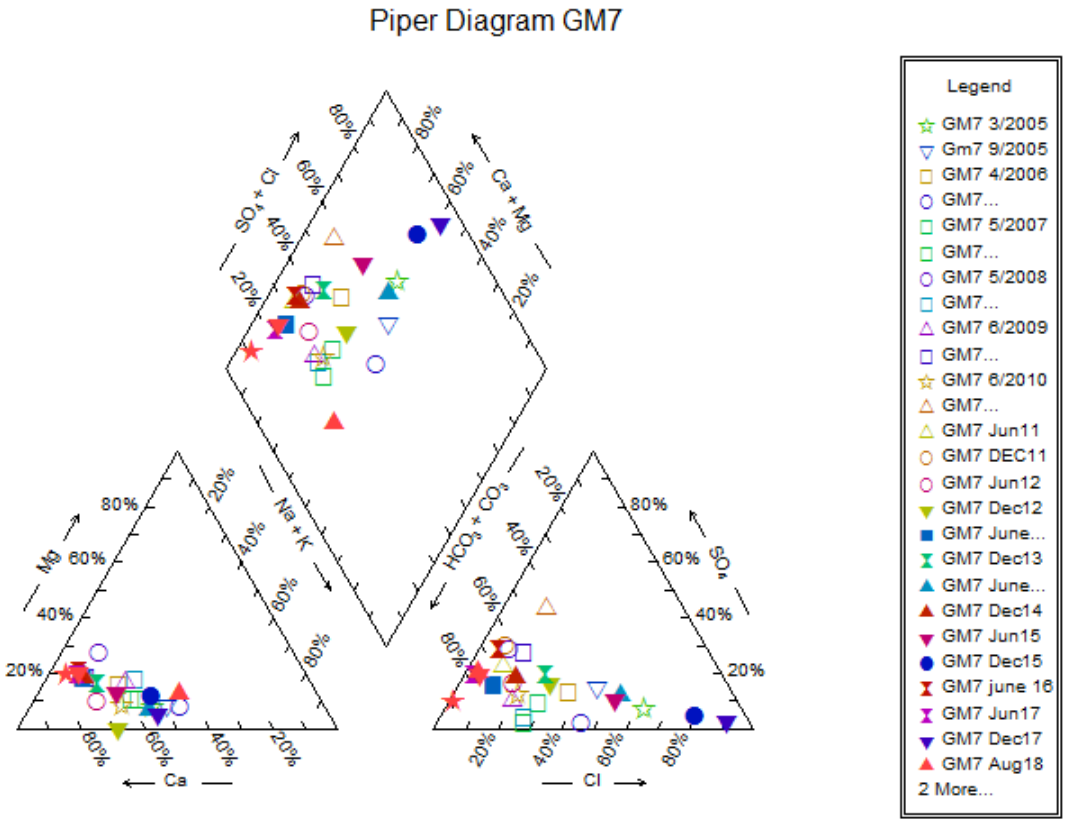


Figure 9. Piper Diagram GM-7. Red star-June 2019.

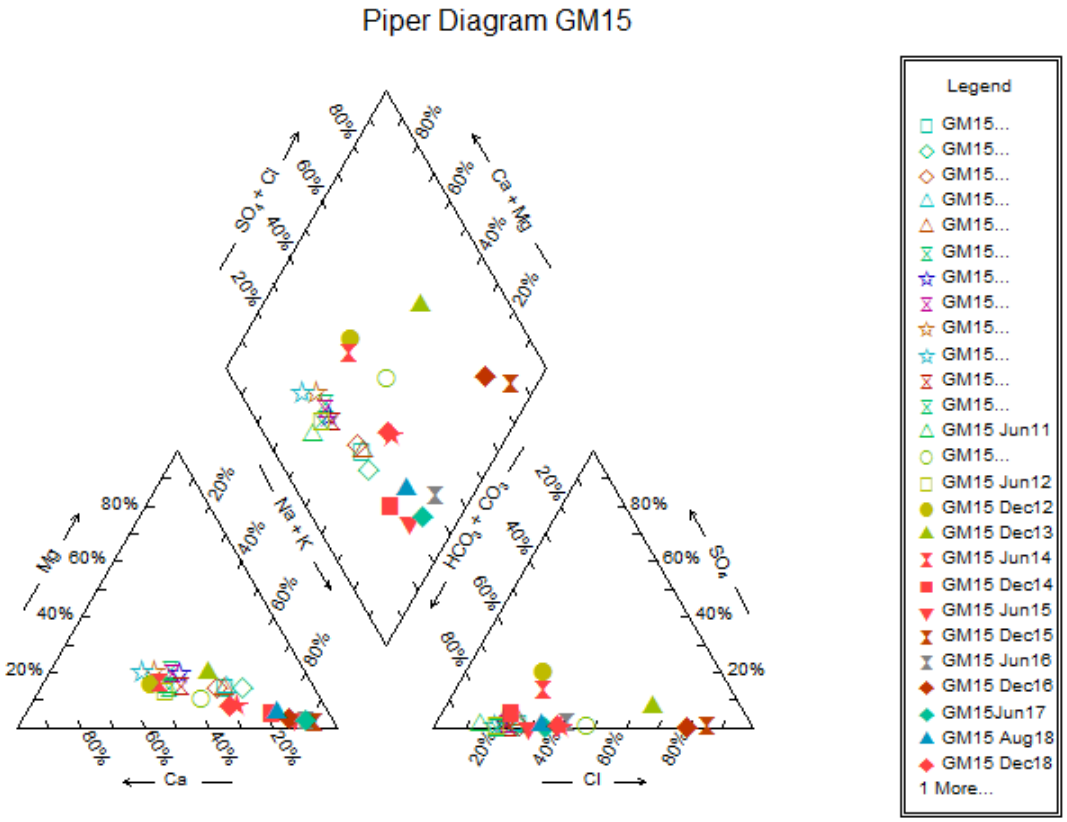


Figure 10. Piper diagram GM-15. Red Star-June 2019.

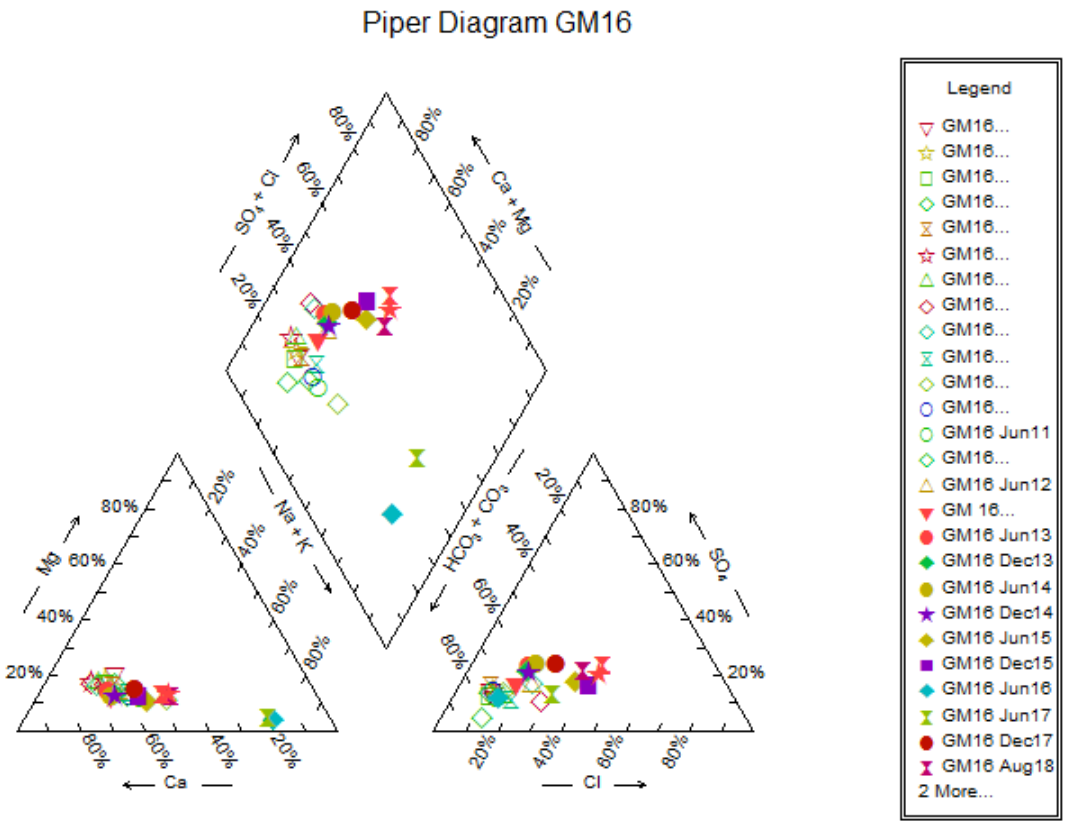


Figure 11. Piper diagram GM-16. Red star-June 2019.

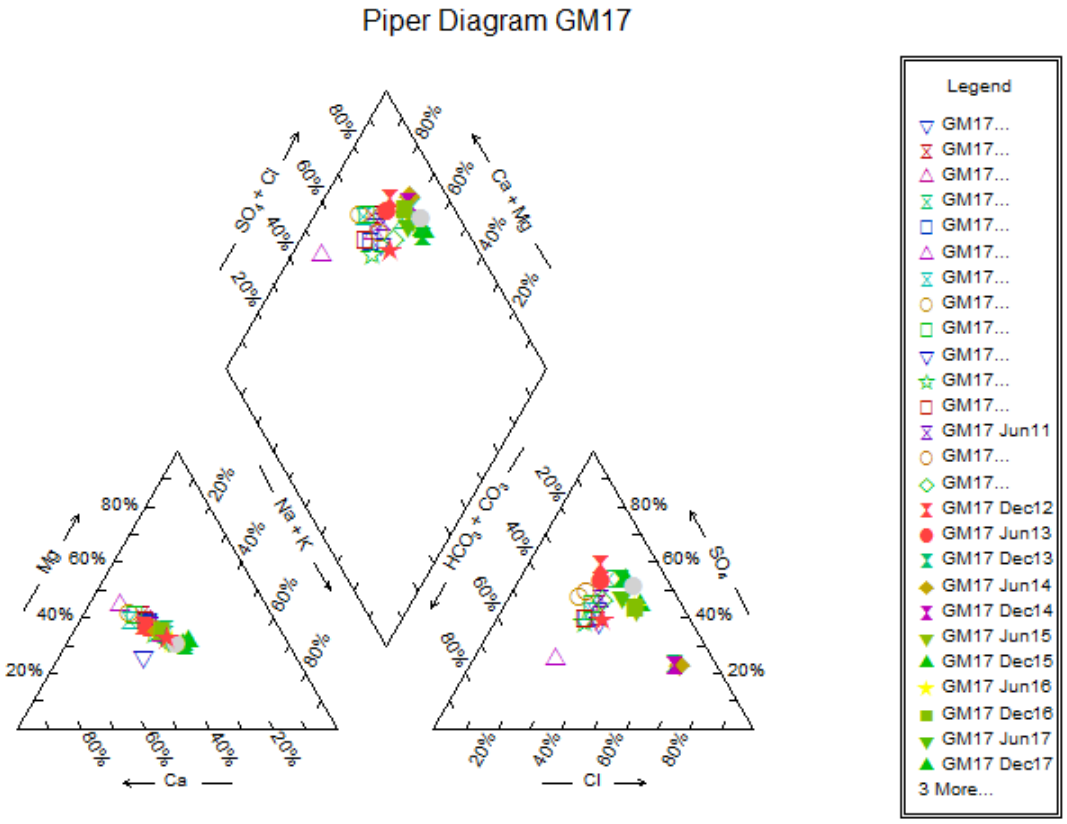


Figure 12. Piper diagram GM-17. Red star-June 2019.

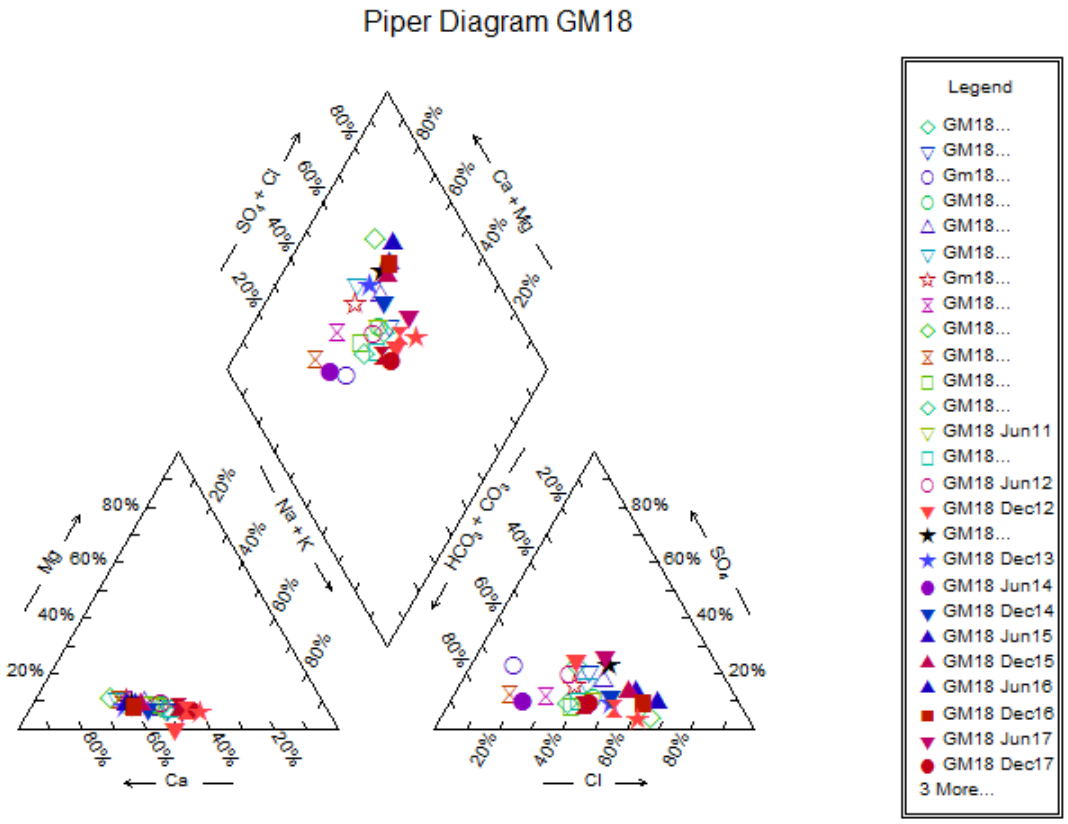


Figure 13. Piper diagram GM-18. Red star-June 2019.

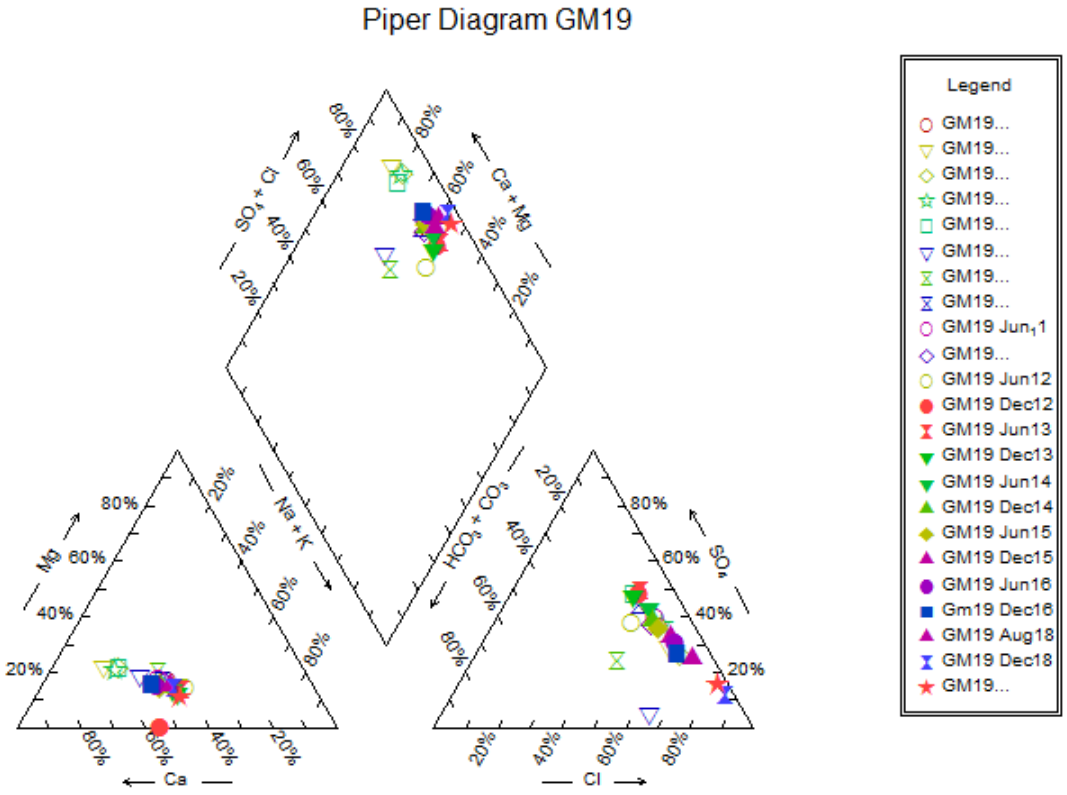


Figure 14. Piper diagram GM-19. Red star-June 2019.

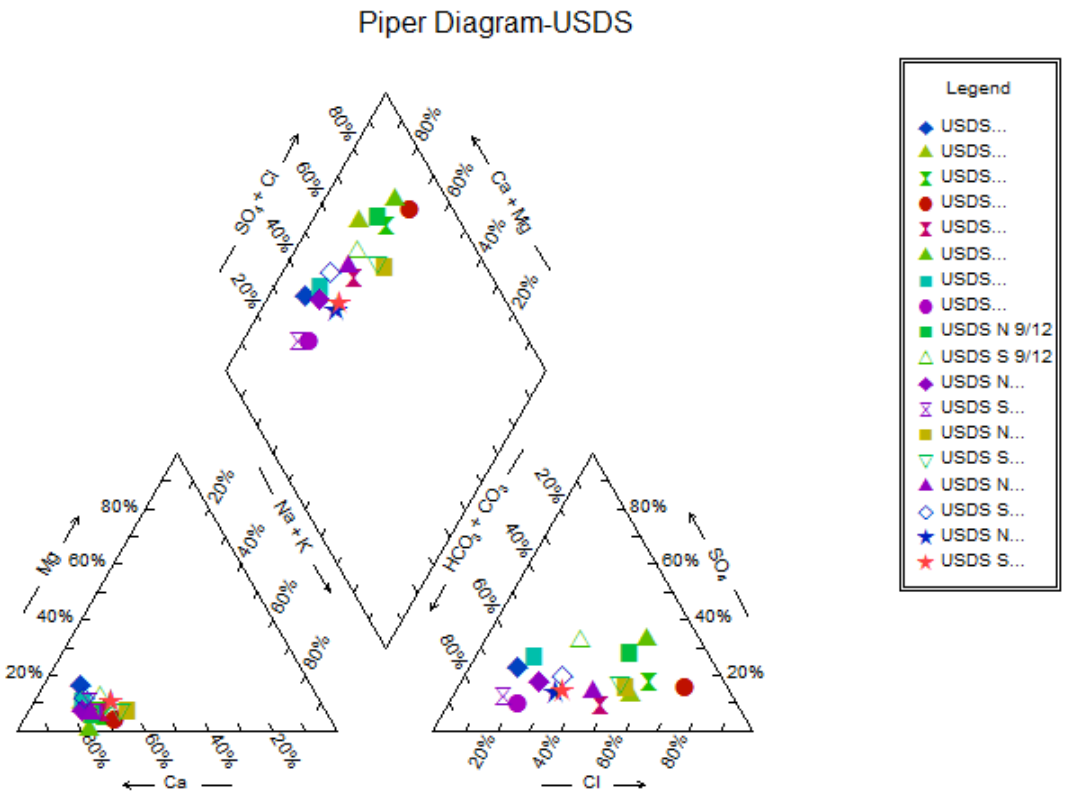


Figure 15. Piper diagram of stormwater data. Red and blue stars, December 2018 data.

Summary

Babylon's GMP report is prepared semiannually. Beginning in 2009 the GMP was expanded to include groundwater monitoring associated with the construction of Cell 7. Preoperational sampling of Cell 7 occurred from 2009 through September 2012. The initial sampling for the operational phase of the GMP occurred in December 2012. This report focuses on data accrued for the March and June 2019 GMP.

TOBDEC reviewed the laboratory data package as part of the GMP QA/QC program which is outlined within the introduction to this report. Each data package was certified by the laboratory (Pace Analytical, Envirotest Laboratories Inc and Eurofins TestAmerica) as being in compliance with the laboratories quality assurance manual both technically and for completeness. Any issues, deficiencies or flagging of results were summarized in the narratives prepared by the laboratory and can be found in appendix 1 of this report.

Review of the historical and laboratory data from the June 2019 for the traditional GMP:

- The June 2019 laboratory results largely conform to recent datasets with the following notations:
    - Indicators from monitoring points GM-6 and 7 remain variable during sampling for the GMP.
        - Leachate indicators (chloride, alkalinity and calcium) for June 2019 at GM-6 were notably reduced from recent values.
        - Chloride at GM-7 is erratic but has been observed at background 4 of the past 5 samples.
        - Calcium remains elevated at GM- 7.
        - TKN had been elevated at GM-6 and was reduced for June 2016. TKN at GM-7 remains at background.
    - A number of indicators for traditional GMP were observed at or near background for June 2019.
        - Chloride at well GM-7 and 17 were at background and slightly above background at GM-16. Chloride at Well 7 has been highly variable.
        - Calcium at wells GM-4, 5, 16, 17 and 19 (slightly above) were at background.
        - TKN was observed at background at wells GM-4, 5, 7, 16, 17,18 and 19. TKN at GM-6 and GM-15 remain the only wells within this network with measurable values for TKN. TKN at GM's 6 and 15 remain variable and are within their historical range.
        - TDS at wells GM-4, 15, 16 and 17 were observed at background. TDS at GM-15 (6 mg/l) are well below its historical range and are questionable.
        - Alkalinity at monitoring points GM-4, 5, 16,17 and 19 were observed at or near background.
    - Piper diagrams have been updated at GM-4, 5, 6, 7, 15, 16,17,18 and 19 (figures 6-14).
        - The Piper diagram depicted in figure 8 continues to illustrate that the data accrued for GM-6 coincides with the historical data from this monitoring point. The Piper diagram at GM-6 does not share a geochemical fingerprint as established by leachate.
        - The Piper diagrams for GM's 4 and 5 display random values where the lower right segment of the Piper diagram illustrate a greater concentration of chloride migrating to the area of the diagram occupied by leachate and the final data points falling within the area designated as groundwater and leachate mix on the Grosser diagram (figure 1). AGM-5 the shift in the lower left quadrant from 2017-2019 was likely due to increase values of sodium, and the shift in the lower right portion of the diagram from 2017-2019 was likely due to increase chloride.
        - The Piper diagram for GM-7 illustrates no easily decipherable pattern.
        - The Piper diagrams for the second row of monitoring points did not include any notable observations for June 2019. These

diagrams at times include random shifts to their fingerprints. These shifts were noted on December 2013, 2015 and 2016 at GM-15, June 2016 and 2017 at GM-16 (elevated sodium and reduced value of calcium) and December 2018 and June 2019 at GM-19 (elevated chloride).

- Overall, the concentration of leachate indicators at GM's-4, 16, 17 and 19 continue to be reduced from pre-remedial values and are consistently observed at or near background values (note, location GM-19 observed elevated values for chloride for December 2018 and June 2019). Since 2015 indicators at GM-6 had been exceeding their historical range until June 2019, however it is noted that the Piper diagram for GM-6 has not shifted nor does the diagram share the leachate geochemical fingerprint (figure 1). Indicators at GM's 7 and 15 have been erratic displaying random elevated and background values.

Leakage rate values (appendix 2) from the SA, Cell 7 and ONU (west) are generally within their historical range. Leakage rates at the ONU east have increased since 2016 from the average values observed from 2005-2015. Leakage rates at the NNU facility have been consistently monitored and since 2017 the leakage rate has been observed to exceed the prior average leakage rate by approximately 2 orders of magnitude. The cause was previously believed to be a check valve malfunction/failure that allowed leachate being pumped from the ONU pump station to backflow into the secondary liner of the NNU facility. This repair was made and ALR values have not decreased. The current condition warrants a need to take action which entails procuring an engineering services firm to review the conditions at this facility and offer a course of action. Solutions may entail an interim or permanent cap at the NNU facility. The leakage rates from Cell 7 have been observed at + /- ~0.2 – 4 g/a/d[5].

Upon review of the March and June 2019 GMP data for the Cell 7 facility:

- The average leakage rate for January-June 2019 at Cell 7 is 3.83 gallons/acre/day.
- As previously noted the updated leachate indicator STV's for the downgradient monitoring points as provided in the GMP addendum are: hardness 1158 mg/l, chloride 1277 mg/l, sodium 414 mg/l, potassium 122 mg/l and calcium 375 mg/l. TKN and ammonia are no long classified as leachate indicators but will continue to be observed. Their updated STV's are TKN 58 mg/l and ammonia 53 mg/l.
- Hardness and Calcium exceeded their STV for March 2019 at GM-28 and were below their STV for June 2019. This was the first exceedance of an STV since March 2015 when hardness exceeded its STV at GM-28. These results did not trigger any of the action/notification thresholds outlined in the GMP Addendum referenced above and illustrate the occurrence of a "random spike" as discussed in previous reports and memorialized in the GMP Addendum. No other STV was breached during this monitoring period.
- Numerous indicators have exceeded their preoperational sampling range (mean plus 3 (sd)) at the upgradient wells (Wells 26 and 26I).
    - At GM-26:

[5] Excludes data from April 2014 impacted by a broken valve.

        - Chloride and sodium exceeded their mean plus 3(sd) for parts of 2015, 2016. Chloride exceeded its mean plus 3(SD) for December 2018 and March 2019, sodium for March 2019.
        - Elevated sulfate at GM26 during December 2018 shifted the Piper plot at the bottom right triangle of the diagram. The fingerprint of the data plot at the combined portion of the diagram was not impacted. The Piper plot remained within its historical configuration for March and June 2019.
    - At GM-26I :
        - Hardness and calcium exceeded their mean plus 3(sd) values for parts of 2015 and 2016. Chloride exceeded its mean plus 3(sd) values for parts of 2015-2017.
        - Sodium exceeded its mean plus 3(sd) value for March 2015 and September 2015 through March 2017.
        - The Piper plot remains in its historical configuration for March and June 2019.

At the downgradient well clusters:

- At monitoring point GM-27:
    - No leachate indicator has exceeded their STV at GM-27 during the GMP.
    - TKN and ammonia are no longer included as leachate indicators, however each continue to be monitored for continuity. TKN and ammonia continue to exceed their mean plus 3(SD) value.
    - Hardness exceeded its mean plus 3(SD) for December 2014 and has not exceeded its mean plus 3(SD) value since.
    - Piper plot for 27 continues to remain within its historical configuration.
- At monitoring point 27I:
    - No leachate indicator has exceeded their STV at 27I during the GMP.
    - Chloride exceeded the mean plus 3(SD) value for December 2018 and March and June 2015.
    - Sodium exceeded its mean plus 3(sd) for June 2019, December 2018 and March 2015.
    - TKN and ammonia have exceeded their mean plus 3(SD) value since June 2013 (TKN did not exceed its m-3SD for March 2019) It is noted that these parameters are no longer classified as leachate indicators for the GMP and are monitored solely for continuity.
    - Piper plot for 27I continues to remain within its historical configuration.
- At monitoring point 28:
    - Hardness and calcium exceeded their STV for March 2019 and for June 2019 were below their STV. Hardness previously exceeded its STV at this monitoring point in June 2015. This is the first time calcium exceeded its MCL for the GMP. No action or notification thresholds were triggered by the March 2019 result.
    - No other indicators have been observed exceeding their STV at this monitoring location.

    - The Piper diagram remains within the general area delineated for well 28. Elevated sulfate in March 2018 produced the only overt breach into the stormwater fingerprint included on the diagram.
- At monitoring point 28I:
    - No leachate indicator has exceeded their STV at 28I during the GMP.
    - Chloride was observed above its mean plus 3(SD) value for March and June 2019. Chloride has been observed intermittently above its mean plus 3(SD) value since March 2014.
    - Sodium and calcium were observed above their mean plus 3(SD) values for June 2015 and March 2017.
    - Hardness was observed above its mean plus 3(SD) during September 2014, December 2014, June 2015 and March 2017 sampling.
    - TKN exceeded its mean plus 3(SD) during April 2017 and December 2018. TKN is no longer classified as an indicator and is monitored solely for continuity.
    - The Piper diagram for 28I remains within its historical configuration.
- Review of the tables and graphs comparing upgradient and downgradient monitoring points:
    - As noted in previous reports an increase in leachate indicators is noted in preoperational data circa 2008/2009, coinciding with the filling in of Lake Wyandanch during construction of the Cell 7 ash facility.
    - Leachate indicators from up gradient monitoring points (well cluster 26/26I) include a number of values exceeding pre-operational data. Leachate indicators from the downgradient monitoring points generally remain within preoperational thresholds and thereby do not exhibit evidence indicating a failure to the liner system.

Based upon analysis of all of the above information gathered for the March and June 2019 GMP, it can be reasonably concluded that the liner system in place for the Cell 7 ashfill is functioning as designed.

The next GMP report will include groundwater data collected for September and December 2019.

Appendix 1

Laboratory Data from Pace Analytical Services Inc.

See attached disc

BABYLON LANDFILL - FIELD DATA - 3/20/2019

Wells GM-26 to GM-28 / Groundwater Sampling Data

WELL #	Well Survey Elevation	Well Size	Metal or PVC	TPVC (in ft) (Top of PVC)	TOC (in ft) (Top of Casing)	BOC (in ft) (Bottom of Casing)	One Well Volume (Gallons)	Three Well Volumes (Gallons)	Groundwater Contour Levels
GM-26		4"	*PVC	16.85		32.50	10.17	30.52	
GM-26I		4"	*PVC	16.49		42.50	16.91	50.72	
GM-27		4"	PVC	23.77		36.70	8.40	25.21	
GM-27I		4"	PVC	23.11		47.50	15.85	47.56	
GM-28		4"	PVC	22.52		37.50	9.74	29.21	
GM-28I		4"	PVC	22.76		46.91	15.70	47.09	

WELL #	Start Purge	Stop Purge	Well Notes For Sampling
GM-26	823	850	Turbid, Orange Color, No Odors
GM-26I	825	908	Sl. Turbid, Yellow Tint, No Odors
GM-27	935	1015	Clear, Yellow Tint, No Odors
GM-27I	938	1000	Clear, Yellow Tint, No Odors
GM-28	1038	1120	Clear, No Odors
GM-28I	1040	1113	Clear to Slightly Turbid, Grey Particles, No Odors

Water Quality Parameters

WELL #	Sampling Date	Sample Time	pH (SU)	ORP (mv)	Conductivity (umhos/cm2)	Temp. (oC)	Turbidity (NTU)	Dis. Oxygen (DO) mg/L
GM-26	3/20/2019	905	7.35	-71.3	1069	12.1	340.0	5.18
GM-26I	3/20/2019	915	7.15	-62.7	986	12.8	70.0	4.70
GM-27	3/20/2019	1028	8.66	-138.3	1054	11.7	22.0	1.30
GM-27I	3/20/2019	1008	8.35	-125.5	1065	11.5	27.0	4.10
GM-28	3/20/2019	1125	7.78	-95.0	982	14.4	13.0	3.14
GM-28I	3/20/2019	1115	9.46	-187.2	978	14.7	8.9	2.44

Field Notes: **Duplicate performed on GM-27I @ 1010**
Equipment Blank @ N/A w/new bailer
MS/MSD performed on GM-28 @ N/A
GM-28I did not have a cover to the flush mount well

Notes: **N/F** : Not found due to high grass or deep snow.
N/S : No sample due to dry well or frozen well from extreme cold temps.
*PVC ABOVE TOC

BABYLON LANDFILL - FIELD DATA - JUNE - 2019

Wells GM-26 to GM-28 / Groundwater Sampling Data

WELL #	Well Survey Elevation	Well Size	Metal or PVC	TPVC (in ft) (Top of PVC)	TOC (in ft) (Top of Casing)	BOC (in ft) (Bottom of Casing)	One Well Volume (Gallons)	Three Well Volumes (Gallons)	Groundwater Contour Levels
GM-26		4"	*PVC	16.68		32.50	10.28	30.85	
GM-26I		4"	*PVC	16.30		42.50	17.03	51.09	
GM-27		4"	PVC	22.70		36.70	9.10	27.30	
GM-27I		4"	PVC	23.02		47.50	15.91	47.74	
GM-28		4"	PVC	22.40		37.50	9.82	29.45	
GM-28I		4"	PVC	22.68		46.91	15.75	47.25	

WELL #	Start Purge	Stop Purge	Well Notes For Sampling
GM-26	855	915	Cloudy to turbid, no odors
GM-26I	850	920	Cloudy, no odors
GM-27	956	1035	Slightly cloudy, no odors
GM-27I	948	1025	Clear, no odors
GM-28	1115	1138	Clear, no odors
GM-28I	1110	1140	Clear with grey tint in color, no odors, small black particles

Water Quality Parameters

WELL #	Sampling Date	Sample Time	pH (SU)	ORP (mv)	Conductivity (umhos/cm2)	Temp. (oC)	Turbidity (NTU)	Dis. Oxygen (DO) mg/L
GM-26	6/10/2019	932	7.44	-76.5	1002	14.9	230.0	5.49
GM-26I	6/10/2019	925	6.78	-45.6	1072	15.5	68.0	3.45
GM-27	6/10/2019	1040	8.83	-149.0	1030	14.2	54.8	1.13
GM-27I	6/10/2019	1044	9.26	-171.1	1040	13.9	13.0	0.00
GM-28	6/10/2019	1203	7.89	-100.0	982	16.2	26.4	0.00
GM-28I	6/10/2019	1145	9.25	-171.9	959	16.7	28.5	0.96

Field Notes: **Duplicate performed on GM-27I @ 1044**
Equipment Blank @ 1040 on 6-11-2019 w/new bailer
MS/MSD performed on GM-28 @ NA
GM-28I did not have a cover to the flush mount well

Notes: **N/F** : Not found due to high grass or deep snow.
N/S : No sample due to dry well or frozen well from extreme cold temps.
*PVC ABOVE TOC

BABYLON LANDFILL - FIELD DATA - JUNE - 2019

Leachate Sampling Data

WELL #	Date	Start Purge	Stop Purge	Gallons Purged	Well Notes For Sampling
NNU-PLCRS	6/10/2019	1309	1310	~ 40	Clear, grey tint, odors
NNU-SLCRS	6/10/2019	1321	1323	~ 40	Clear, grey tint, odors
ONU-SLCRS	6/10/2019	1343	1345	~ 60	Clear, no odors
SA-SLCRS	6/11/2019	Direct Sample	Direct Sample	0	Turbid, black particles, black in color
CELL - 7	6/11/2019	Direct Sample	Direct Sample	0	Clear, no odors

Leachate Parameters

WELL #	Sampling Time	pH (SU)	ORP (mv)	Conductivity (umhos/cm2)	Temp. (oC)	Turbidity (NTU)	Dissolved Oxygen (DO) mg/L
NNU-PLCRS	1310	7.77	-96.0	698	31.3	8.25	0.00
NNU-SLCRS	1323	6.94	-47.3	236	38.7	6.03	0.00
ONU-SLCRS	1345	7.22	-65.2	778	25.6	7.25	3.00
SA-SLCRS	1015	8.00	-106.4	298	16.8	224.00	0.42
CELL - 7	915	7.81	-96.3	876	21.1	6.49	0.00

NNU-PLCRS: New Northern U Primary * One Tap Location for Primary/Secondary (Top Road)

NNU-SLCRS: New Northern U Secondary * One Tap Location for Primary/Secondary (Top Road)

ONU-SLCRS: Old Northern U Secondary *One Tap Location for Primary/Secondary (Lower Road)

SA-SLCRS: Southern Ash Secondary *Use Bailer / Square Metal Door

CELL 7: Primary System * Use Bailer / First Round Black Cover (Left Cover)

BABYLON LANDFILL - FIELD DATA - JUNE - 2019

Traditional Wells - Groundwater Sampling Data

WELL #	Well Survey Elevation	Well Size	Metal or PVC	TPVC (in ft) (Top of PVC)	TOC (in ft) (Top of Casing)	BOC (in ft) (Bottom of Casing)	One Well Volume (Gallons)	Three Well Volumes (Gallons)	Groundwater Contour Levels
GM-2D	69.25	4"	PVC	24.02	24.68	86.00	39.86	119.57	44.57
GM-4D	62.43	4"	PVC	15.85	16.46	91.40	48.71	146.13	45.97
GM-5D	62.35	4"	PVC	16.32	16.75	91.80	48.78	146.35	45.60
GM-6D	63.84	4"	PVC	17.93	18.11	92.80	48.55	145.65	45.73
GM-7D	63.23	4"	PVC	17.05	17.74	91.10	47.68	143.05	45.49
GM-15D	50.74	4"	PVC	9.78	10.22	84.50	48.28	144.85	40.52
GM-16D	?	4"	PVC	6.42	6.83	87.00	52.11	156.33	?
GM-17D	52.09	4"	PVC	11.83	12.27	87.70	49.03	147.09	39.82
GM-18D	?	4"	PVC	11.98	12.43	78.00	42.62	127.86	?
GM-19D	53.34	4"	PVC	11.56	12.00	87.40	49.01	147.03	41.34

WELL #	Start Purge	Stop Purge	Well Notes For Sampling
GM-2D	1240	1309	Clear, no odors
GM-4D	1018	1043	Clear, no odors
GM-5D	1035	1118	Slightly cloudy, orange tint, orange particles, no odors
GM-6D	1105	1157	Slightly cloudy, orange tint, orange particles, no odors
GM-7D	1140	1231	Slightly cloudy, orange tint, no odors
GM-15D	1445	1508	Cloudy, orange tint, orange particles, no odors
GM-16D	1420	1448	Cloudy, orange tint, orange particles, no odors
GM-17D	1348	1434	Clear, no odors
GM-18D	1340	1406	Clear, no odors
GM-19D	1315	1335	Clear, no odors, small particles

Water Quality Parameters

WELL #	Sampling Date	Sample Time	pH (SU)	ORP (mv)	Conductivity (umhos/cm2)	Temp. (oC)	Turbidity (NTU)	Dis. Oxygen (DO) mg/L
GM-2D	6/11/2019	1310	7.45	-32.5	3290	14.0	7.67	2.55
GM-4D	6/11/2019	1045	8.00	-103.0	3120	16.7	4.61	0.96
GM-5D	6/11/2019	1120	7.30	-68.6	982	15.5	61.30	2.76
GM-6D	6/11/2019	1200	7.79	-95.9	884	18.0	94.30	3.36
GM-7D	6/11/2019	1235	8.42	-127.9	896	15.5	33.10	5.77
GM-15D	6/11/2019	1510	7.62	-86.4	1123	13.9	45.20	3.29
GM-16D	6/11/2019	1450	7.30	-66.2	2950	13.0	121.00	4.39
GM-17D	6/11/2019	1435	7.23	-64.2	2340	13.6	3.20	2.05
GM-18D	6/11/2019	1410	7.47	-78.9	1130	13.9	5.18	2.91
GM-19D	6/11/2019	1340	6.13	-10.4	1420	14.5	7.09	4.57

Appendix 2

Action Leakage Rate Values

Facility	January	February	March	April	May	June	July	August	Sept	October	November	December	AVERAGE	
2005														
Precip (in)	3.11	1.96	3.43	5.3	3.52	1.98	5.91	1.79	1.17	18.42	4.47	3.63	54.69	
NNU (g/a/d)	2.03	2.53	3.11	3.84	3.08	2.21	1.68	0	0.96	0	0.65	0.9	1.75	
2006														
Precip (in)	5.38	1.43	1.6	6.32	4.46	6.72	5	4.03	3.2	7.28	5.44	2.13	52.99	
NNU (g/a/d)	0.042	42.3	50.2	1.58	0.76	0	1.78	1.09	0.96	1.8	1.82	1.71	8.67	Broken valve Feb/March
2007														
Precip (in)	4.05	1.8	3.63	6.92	1.99	6.6	7.19	4.45	1.42	2.7	2.44	4.32	**47.51**	
NNU (g/a/d)	4.48	3.44	3.82	0.82	1.09	1.28	6.25	7.32	8.1	2.3	1.48	1.87	3.52	
2008														
Precip (in)	3.01	5.87	5.51	4.29	3.62	3.49	4.32	3.85	8.63	4.45	3.62	5.71	**56.37**	
NNU (g/a/d)	2.67	2.35	2.23	3.35	2.51	2.35	0.56	0.59	0.48	0	0.45	0.99	**1.55**	
2009														
Precip (in)	3.09	1.05	1.78	4.3	4.74	8.54	5.86	2.24	3.16	4.34	2.01	6.73	**47.84**	
NNU (g/a/d)	2.8	4.9	4.8	3.2	4.6	1.01	1	1.02	1.03	1.25	1.29	1.13	2.34	
2010														
Precip (in)	2.08	4.57	9.43	3.43	2.26	1.66	2.76	2.2	1.95	3.36	2.5	3.37	39.57	
NNU (g/a/d)	3.9	4.4	4.2	3.3	2.8	2.2	2	2	2.4	2.53	2.48	2.37	2.88	
2011														
Precip (in)	1.09	2.87	2.18	4.64	4.43	3.78	2.73	11.1	3.04	5.99	2.84	3.2	47.89	
NNU (g/a/d)	2.51	2.71	2.53	2.74	2.68	2.76	2.47	2.56	3.42	3.33	3.59	3.4	2.89	
2012														
Precip (in)	2.02	0.99	1.46	3.89	4.52	7.86	5.03	5.34	5.98	2.39	1.64	5.56	46.68	
NNU (g/a/d)	3.46	7.13	9.41	3.26	3.17	3.34	3.46	3.25	3.74	3.74	5.17	4.96	4.51	bad check valve Feb/March
2013														
Precip (in)	2.51	2.93	2.68	1.83	3.89	9.3	2.35	2.39	1.28	0.22	2.69	5.14	3.100833	
NNU (g/a/d)	4.4	5.16	5.01	4.73	4.67	4.86	4.29	2.92	2.41	1.39	1.32	1.1	3.52	
2014														
Precip (in)	2.28	0.4	2.74	2.51	4.51	2.65	2.8	6.67	2.15	3.58	4.49	6.6	41.38	
NNU (g/a/d)	1.28	0.65	2.01	1.86	1.37	0.99	1.98	1.61	1.69	1.91	2.14	1.29	1.565	
2015														
Precip (in)	1.89	0.71	3.71	1.48	0.62	5.33	1.67	1.62	4.94	4.24	1.95	5.49	33.65	
NNU (g/a/d)	3.43	4.05	3.89	4.74	2.86	3.4	3.2	3.54	2.97	3.89	3.62	3.33	3.576667	

Facility	January	February	March	April	May	June	July	August	Sept	October	November	December	AVERAGE	
2016														
Precip (in)	2.06	2.88	3.17	2.4	4.11	1.68	3.86	1.01	4.53	3.3	3.25	3.8	36.05	
NNU (g/a/d)	3.86	3.95	4.7	4.23	4.01	3.31	2.59	1.61	1.48	2.53	3.16	3.22	3.220833	
2017														
Precip (in)	3.63	0.85	4.13	5.2	5.81	3.62	2.75	3.24	2.72	6.72	2.39	1.45	42.51	
NNU (g/a/d)	166.48	431.02	316.19	273.08	299.37	230.68	185.31	163.78	128.71	421.5	862.37	399	323.1242	check valve malfunction cause of iincrease ?
2018														
Precip (in)	1.65	3.74	5.74	3.6	4.47	3.02	4.09	3.74	7.28	6.31	8.27	6.03	57.94	
NNU (g/a/d)	478.09	309.06	98.83	42.59	147.72	766.27	575.32	582.86	72.8	47.3	539.15	700.08	363.3392	
2019														
Precip (in)	5.23	3.9	1.77	6.92	5.67	4.86	2.91	4.56	0.75				36.57	
NNU (g/a/d)	875.56	882.51	952	557.78	534.16	361.82							693.9717	

Facility SA	January	February	March	April	May	June	July	August	Sept	October	November	December	AVERAGE
2004													
Precip (in)	1.14	3.16	3.07	6.87	4.49	2.67	3.57	4.35	8.88	1.68	4.22	4.31	**48.41**
SA (g/a/d)	5.11	5.31	4.54	5.92	6.01	4.75	3.22	2.41	4.06	3.38	4.79	4.45	**4.49**
2005													
Precip (in)	3.11	1.96	3.43	5.3	3.52	1.98	5.91	1.79	1.17	18.42	4.47	3.63	54.69
SA (g/a/d)	3.36	4.77	4.92	4.65	3.59	2.94	2.13	1.89	2.4	4.31	5.82	6.34	**3.92**
2006													
Precip (in)	5.38	1.43	1.6	6.32	4.46	6.72	5	4.03	3.2	7.28	5.44	2.13	52.99
SA (g/a/d)	7.05	11.74	9.14	7.58	0.61	4.84	3.83	2.74	2.3	2.84	1.95	3.03	**4.08**
2007													
Precip (in)	4.05	1.8	3.63	6.92	1.99	6.6	7.19	4.45	1.42	2.7	2.44	4.32	**47.51**
SA (g/a/d)	2.37	2.62	2.23	2.63	2.18	1.71	1.75	1.66	1.37	1.18	1.66	2.08	**1.95**
2008													
Precip (in)	3.01	5.87	5.51	4.29	3.62	3.49	4.32	3.85	8.63	4.45	3.62	5.71	**56.37**
SA (g/a/d)	2.26	2.27	1.89	2.54	2.55	2.05	1.8	1.73	1.95	2.41	2.25	4.13	**2.32**
2009													
Precip (in)	3.09	1.05	1.78	4.3	4.74	8.54	5.86	2.24	3.16	4.34	2.01	6.73	**47.84**
SA (g/a/d)	4	3.8	2.5	2.9	2.2	2.4	2.51	2.75	2.45	2.84	2.98	2.79	**2.84**
2010													
Precip (in)	2.08	4.57	9.43	3.43	2.26	1.66	2.76	2.2	1.95	3.36	2.5	3.37	39.57
SA (g/a/d)	3.4	4.4	5.1	5	4.5	5	3.7	3.2	3.7	4.3	5.1	5	**4.37**
2011													
Precip (in)	1.09	2.87	2.18	4.64	4.43	3.78	2.73	11.1	3.04	5.99	2.84	3.2	47.89
SA (g/a/d)	5.07	5.4	4.83	4.35	4.35	3.74	3.4	3.98	4.79	4.68	4.52	3.93	4.42
2012													
Precip (in)	2.02	0.99	1.46	3.89	4.52	7.86	5.03	5.34	5.98	2.39	1.64	5.56	46.68
SA (g/a/d)	3.7	3.78	3.46	3.43	3.22	2.99	3.03	3.65	3.33	4.93	4.7	3.51	3.64
2013													
Precip (in)	2.51	2.93	2.68	1.83	3.89	9.3	2.35	2.39	1.28	0.22	2.69	5.14	3.100833
SA (g/a/d)	5.21	4.93	4.93	5.48	5.26	5.14	4.89	4.55	4.11	3.86	4.5	3.62	5.16
2014													
Precip (in)	2.28	0.4	2.74	2.51	4.51	2.65	2.8	6.67	2.15	3.58	4.49	6.6	41.38
SA (g/a/d)	4.98	5.35	4.41	4.7	3.88	3.58	3.98	3.88	4.7	4.33	4.37	5.32	4.456667

Facility SA	January	February	March	April	May	June	July	August	Sept	October	November	December	AVERAGE
2015													
Precip (in)	1.89	0.71	3.71	1.48	0.62	5.33	1.67	1.62	4.94	4.24	1.95	5.49	33.65
SA (g/a/d)	6.07	5.72	5.03	4.51	3.54	2.68	4.08	3.88	4.75	4.5	4.26	3.78	4.4
2016													
Precip (in)	2.06	2.88	3.17	2.4	4.11	1.68	3.86	1.01	4.53	3.3	3.25	3.8	36.05
SA (g/a/d)	5.46	5.51	4.45	3.84	3.53	3.45	1.35	1.74	1.24	3.03	3.38	2.98	3.33
2017													
Precip (in)	3.63	0.85	4.13	5.2	5.81	3.62	2.75	3.24	2.72	6.72	2.39	1.45	42.51
SA (g/a/d)	3.23	4.03	3.69	5.11	6.36	5.73	4.23	4.3	3.16	3.36	4.34	3.06	4.216667
2018													
Precip (in)	1.65	3.74	5.74	3.6	4.47	3.02	4.09	3.74	7.28	6.31	8.27	6.03	57.94
SA (g/a/d)	3.82	4.56	5.35	4.96	4.9	4.07	4.04	4.47	3.42	4.13	3.45	3.79	4.246667
2019													
Precip (in)	5.23	3.9	1.77	6.92	5.67	4.86	2.91	4.56	0.75				36.57
SA (g/a/d)	2.9	3.62	4.31	4.42	3.79	4.14							3.863333

Facility(g/a/d)	January	February	March	April	May	June	July	August	Sept	October	November	December	AVERAGE
2005													
Precip (in)	3.11	1.96	3.43	5.3	3.52	1.98	5.91	1.79	1.17	18.42	4.47	3.63	54.69
ONU west	154	188	101	95	198	33	5	7	7	57	45	65	79.41
ONU east	156	133	137	148	147	120	30	13	17	77	192	205	114.58
2006													
Precip (in)	5.38	1.43	1.6	6.32	4.46	6.72	5	4.03	3.2	7.28	5.44	2.13	52.99
ONU west	145	21	24	36	43	19	10	5	4	113	127	16	46.91
ONU east	288	279	279	176	196	120	107	102	273	172	163	60	184
2007													
Precip (in)	4.05	1.8	3.63	6.92	1.99	6.6	7.19	4.45	1.42	2.7	2.44	4.32	**47.51**
ONU west	55	48.9	95.2	49.4	47.3	55.7	51.6	35.4	33.5	13.6	14.8	12.5	42.74
ONU east	55.7	57.5	85.8	83.1	85.3	96	73.7	49.3	45.1	52.1	42.7	95.3	68.4
2008													
Precip (in)	3.01	5.87	5.51	4.29	3.62	3.49	4.32	3.85	8.63	4.45	3.62	5.71	**56.37**
ONU west	32.35	24.34	28.83	21.06	17.59	23.16	14.13	10.22	9.31	12.01	11.05	17.28	18.7
ONU east	60.85	76.56	105.59	83.87	72.09	95.73	71.55	57.05	75.21	75.28	98.53	113.51	82
2009													
Precip (in)	3.09	1.05	1.78	4.3	4.74	8.54	5.86	2.24	3.16	4.34	2.01	6.73	**47.84**
ONU west	31.6	37.5	51.6	38.5	50.36	106.5	80.58	68.72	80.94	53.68	37.81	41.3	56.59
ONU east	92.7	70.2	76.7	60.2	77.7	95.4	75.72	67.43	84.13	60.57	51.03	54	72.15
2010													
Precip (in)	2.08	4.57	9.43	3.43	2.26	1.66	2.76	2.2	1.95	3.36	2.5	3.37	39.57
ONU west	37.6	55.2	72.4	42.4	25.1	24.5	38.4	43.8	26.4	21.88	26.74	41.18	37.97
ONU east	47.1	53	116.6	80.1	50.9	76.3	44.6	49	53.2	36.12	36.88	38.03	56.81917
2011													
Precip (in)	1.09	2.87	2.18	4.64	4.43	3.78	2.73	11.1	3.04	5.99	2.84	3.2	47.89
ONU west	47.07	41.18	50.5	53.57	54.12	56.72	39.08	51.51	91.18	47.84	35.41	30.21	49.87
ONU east	48.38	49.4	55.2	52.02	54.14	58.33	51.91	66.37	110.83	45.19	22.65	29.5	53.66
2012													
Precip (in)	2.02	0.99	1.46	3.89	4.52	7.86	5.03	5.34	5.98	2.39	1.64	5.56	46.68
ONU west	38.83	32.53	32.35	37.5	31.85	29.93	30.48	28.37	48.09	44.72	63.84	35.85	37.86167
ONU east	49.09	47.75	50.58	52.83	43.32	61.07	70.21	49.49	48.9	65.65	76.93	66.49	56.85917
2013													

Facility(g/a/d)	January	February	March	April	May	June	July	August	Sept	October	November	December	AVERAGE	
Precip (in)	2.51	2.93	2.68	1.83	3.89	9.3	2.35	2.39	1.28	0.22	2.69	5.14	3.100833	
ONU west	36.87	40.95	37.4	65.83	51.58	54.2	29.35	25.63	24.29	23.37	19.97	22.82	36.02	
ONU east	53.69	50.83	60.18	57.77	46.61	49.41	33.28	27.38	24.78	24.7	18.75	20.86	39.02	
2014														
Precip (in)	2.28	0.4	2.74	2.51	4.51	2.65	2.8	6.67	2.15	3.58	4.49	6.6	41.38	
ONU west	46.84	45.8	49.18	61.14	59.73	59.76	55	51.03	54.78	58.66	41.67	61.82	53.78417	
ONU east	33.04	33.51	35.95	45.74	39.35	41.39	44.63	39.34	43.1	38.59	34.74	44.63	39.50083	
2015														
Precip (in)	1.89	0.71	3.71	1.48	0.62	5.33	1.67	1.62	4.94	4.24	1.95	5.49	33.65	
ONU west	24.43	63.97	121.35	85.37	109.2	62.47	63.77	51.51	62.98	59.52	45.67	65.33	67.96417	
ONU east	12.64	46.48	85.09	64.47	55.63	37.03	42.68	42.65	33.67	36.86	23.31	21.62	41.84417	
2016														
Precip (in)	2.06	2.88	3.17	2.4	4.11	1.68	3.86	1.01	4.53	3.3	3.25	3.8	36.05	
ONU west	61.08	29.44	75.76	70.36	72.63	61.13	42.97	29.44	21.16	68.9	80.52	91.66	58.75417	
ONU east	20.8	53.43	37.79	64.03	84.48	69.08	19.34	24.58	18.66	56.63	72.29	85.52	50.5525	
2017														
Precip (in)	3.63	0.85	4.13	5.2	5.81	3.62	2.75	3.24	2.72	6.72	2.39	1.45	42.51	
ONU west	57.49	77.03	78.35	100.3	32.38	18.12	59.18	30.37	27.82	15.93	27.47	27.04	45.95667	
ONU east	55.52	85.65	118.4	87.47	112.17	90.53	74.7	91.99	98.75	65.26	87.11	85.77	87.77667	
2018														
Precip (in)	1.65	3.74	5.74	3.6	4.47	3.02	4.09	3.74	7.28	6.31	8.27	6.03	57.94	
ONU west	12.77	16.68	**359.62**	28.52	43.96	54.74	40.26	36.34	30.1	16.15	27.51	10.77	56.45167	meter failure
ONU east	69.27	111.32	123.36	67.1	103.42	128.81	92.59	89.26	63.72	150.52	92.17	110.03	100.1308	
2019														
Precip (in)	5.23	3.9	1.77	6.92	5.67	4.86	2.91	4.56	0.75				36.57	
ONU west	28.48	29.83	28.49	68.73	**185.74**	46.4							64.61167	
ONU east	**299.08**	**271.9**	**256.97**	110.09	143.38	99.41							196.805	

Facility	January	February	March	April	May	June	July	August	Sept	October	November	December	AVERAGE	
2013														
Precip (in)	2.51	2.93	2.68	1.83	3.89	9.3	2.35	2.39	1.28	0.22	2.69	5.14	3.100833	
Cell 7(g/a/d)	1.07	0.86	0.94	1.16	0.95	1.03	0.95	0.8	0.81	0.44	0.94	0.34	0.86	
2014														
Precip (in)	2.28	0.4	2.74	2.51	4.51	2.65	2.8	6.67	2.15	3.58	4.49	6.6	41.38	
Cell 7(g/a/d)	2.42	1.25	1.07	**47.51**	0.31	0.48	3.21	2.63	3.35	2.8	5.41	6.8	6.436667	2.702727
	Apr-14 bad valve cause of elevated value.													
2015														
Precip (in)	1.89	0.71	3.71	1.48	0.62	5.33	1.67	1.62	4.94	4.24	1.95	5.49	33.65	
Cell 7(g/a/d)	0	0	0	0	0	2.05	15.54	0	0	15.26	0	0	2.7375	
2016														
Precip	2.06	2.88	3.17	2.4	4.11	1.68	3.86	1.01	4.53	3.3	3.25	3.8	36.05	
Cell7(g/a/d)	0	0	0	0	0	0.88	0	0	6.75	0	18.53	0	2.18	
2017														
Precip	3.63	0.85	4.13	5.2	5.81	3.62	2.75	3.24	2.72	6.72	2.39	1.45	42.51	
Cell7(g/a/d)	0	0	0	0	2.71	0	0	0	0	5.47	6.68	4.54	1.616667	
2018														
Precip	1.65	3.74	5.74	3.6	4.47	3.02	4.09	3.74	7.28	6.31	8.27	6.03	57.94	
Cell7(g/a/d)	0	0	0	0	0.48	0	0	8.1	4.88	0	3.9	0	1.446667	
2019														
Precip	5.23	3.9	1.77	6.92	5.67	4.86	2.91	4.56	0.75				36.57	
Cell7(g/a/d)	1.9	2.21	1.7	6.65	5.67	4.83							3.826667	